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EDITORIAL

SIR HECTOR CAMERON'S VISIT TO TORONTO.

It must have been a great pleasure to every one who met Sir Hector during his stay in Toronto. He proved himself to be a fine type of the cultured British professional gentleman.

Sir Hector addressed the Academy of Medicine on the subject of abscesses. This would seem to many to be a homely topic for so experienced a surgeon to discuss. But in his hands it was by no means such. He threw upon the topic his long and ripe experience and it became most interesting. Step by step he showed how our knowledge of the treatment of abscesses had reached its present position, due to the introduction of antiseptics. He dealt especially with psoas and mammary abscesses.

He also delivered the inaugural lecture of the medical session of the University of Toronto. This lecture is a positive addition to medical literature and history. Sir Hector began the practice of surgery prior to the days of Lister and has watched its growth to the present moment. He is, therefore, in the position of being able to compare "then" and "now"; and what a revelation that comparison is!

We advise our readers to carefully read Sir Hector's address, which appears in this issue. Nowhere else in such vivid form and in such choice language can one find a better account of the growth of antiseptic surgery. The picture of the sad conditions of hospitals before the days of antiseptics is held up before one's eyes, and that sad picture compared with the bright and happy condition now reigning in all the surgical wards the world over. Sir Hector's lecture will take a place in the history of surgery.

To the student we commend his wise words of advice. It has often been said that there is nothing so common as advice, and nothing else that one can get so much of for nothing. But such advice as fell from the lips of Sir Hector is not common, nor can it be secured for nothing.

His words were words of great wisdom, and cost him a long life of study, observation and self culture to acquire. He gave these words to the students, and let us hope they fell upon hearing ears and took root in receptive minds. Time is short and art is long, said a great ancient. This golden thread ran through the lecture. To achieve distinction the student of medicine must be industrious, observant, a careful listener, and, above all, courageously honest. From a tree planted in such rich soil he will in due time gather good fruit in plenty.

Of Sir Hector we can truly say, in the words of Shakespeare:

He is a scholar, and a ripe and a good one,
Exceeding wise, fair spoken and persuading.

CHILD WELFARE CONGRESS.

It is with much pleasure that one notices the change of opinion that has come over many countries on the matter of the care of the child. It is only a few years ago, when practically nothing was said or done on this important branch of social study and national welfare.

Just recently there was held in Montreal a very successful gathering of earnest ladies and gentlemen in whose minds the care of the child held a prominent place. These social reformers gave freely of their time and their best talents to those who are unable to devise ways and means for their own safety and comfort.

It is only a step, after all, from the boy or girl to the man or woman, and the men and women of the future will rule the country, as the men and women of to-day are charged with this great responsibility. Sound bodies, sane minds, and good morals will then count for much. Of the assets that one may possess in this world we may mention first as of least value, national wealth. Of more importance is good health. Still more valuable is intellectual culture, and, far above these, is moral stamina. These were the topics discussed at the child's welfare congress.

One topic that claimed special attention, as it well deserved, was that of infant mortality. This has long been a live subject. It has been a standing disgrace to many large cities that such a large percentage of children should die in the early years of life, and particularly in the first year. This is still more painful when one remembers that this is due to the unfavorable environments under which so many children must struggle for an existence, and the bad methods of feeding. Two words largely tell the tale, ignorance and dirt. Ignorance on the part of those who have the care of the child, and dirt

around the child and in its food. But there is an awakening going on. This will lead to the spread of knowledge and the making of better laws.

The air is full of the spirit of light and improvement. The spirit of knowledge is abroad. Strong men and women are at work, and are bending the bow of public opinion in order that they may send forth the arrow of truth. In the words of Shelley all this is:

Like a spirit, hastening to its task
Of glory and of good, the light springs forth,
Rejoicing in its splendour till the mask
Of darkness rolls from the awakened earth.

THE INTERNATIONAL HYGIENIC CONGRESS.

Some five thousand physicians and hygienists were in attendance at the Congress of Hygiene, which was held in Washington a few weeks ago. Those who were present on that occasion have returned to their own countries with much new information to think over and put into some concrete form in their own lands.

Health is now becoming an international problem. There are many diseases that call for the strong arm of united effort to suppress them. This is matter for rejoicing to all who have the philanthropic instinct at heart. There can be no greater question brought before the mind of man than the elevation of the human race. The vastness and importance of this is seen when one thinks of the multi-millions still in ignorance and barbarism, and mowed down by all sorts of pestilences. The history of the epidemics that have swept over Europe in the past, and how these have been placed in chains by sanitary laws, tells of one of the most brilliant achievements of man for the good of man.

It is to be hoped that these educated physicians and hygienists will go home to impress on their respective countries the arts of peace and social reform. It is to be hoped that they will urge that more money be spent on education and health and less on swords and guns. If such should be one of the outcomes of the Congress the words of Longfellow would have a chance of coming true:

Were all the power that fills the world with terror,
Were all the wealth bestowed on camps and courts,
Given to raise the human mind from error,
There were no need for arsenals and forts.

THE POLLUTION OF WATERWAYS.

A couple of weeks ago Dr. McLaughlin, speaking before the joint Commission on Waterways, said that to compel cities to treat sewage in such a manner as to sterilize would bankrupt these cities. He further said that the feeling against dumping sewage into the lakes was largely sentimental.

We cannot agree with these views. It is well known that contamination can be carried many miles by the currents in the lakes and rivers. One city may in this way pollute the water supply for another city and cause a great deal of sickness. At the American Public Health Association, Dr. M. P. Ravenel, who has charge of Wisconsin State Hygienic Laboratory, stated that the waters of Lake Michigan are more or less polluted for a disease of seven miles from the shore.

It is to be hoped that the views expressed by Dr. McLaughlin of the Bureau of Health of the United States will gain no foothold in this country. There is a very great danger in pouring raw sewage into the lakes.

HOSPITAL DEVELOPMENT IN CANADA.

Thirty years ago the hospital conditions in this country were not such as one could boast of. In very few of the small towns and cities were there any places where the sick or injured could be taken for proper nursing and treatment; while in the large cities, the hospitals were small, badly arranged and poorly equipped. Steadily, and, one might say, rapidly, this state of affairs has given place to one that appeals to the imagination of even the careless and thoughtless.

All over the land in the small cities and towns there have sprung up modern and well-arranged institutions for the care of the sick. The wealthy have given of their means and, in some instances, the municipalities have voted liberal sums. This is especially true of the western cities, where many of the hospitals are municipal in character, and have been built by money voted by the people.

The hospital work in Canada has become one of its most important fields of public enterprise and progress. It has become a great utility—that of restoring people to health, and, where such cannot be done, alleviating their suffering. There are hospitals in Canada that cost all the way from a few thousand dollars to three millions. These institutions are in many instances fireproof structures and the tendency is going this way steadily.

Then, again, there is a study given to the management of hospitals. The feeding, the furniture, the sanitation, the nursing, are all

being reduced to a science. In this work we cannot refrain from mentioning the splendid work that has been done by the Canadian Hospital Association. The annual meeting of this association, and the valuable papers that are read at it, and the discussions thereon, have done very much to spread the good gospel of how to manage our hospitals to the best interests of both patients and the public. These papers and discussions are of the most practical character.

That there is a growing liberality in this matter is evidenced by the fact that from time to time the various cities are voting grants to hospitals. A few days ago a deputation waited on the council of Victoria, B.C., to ask for a grant of \$200,000 for the purpose of enlarging the Jubilee Hospital, which can now only accommodate about one-half those seeking admission.

All this is most gratifying and should be encouraged. This country is now becoming a wealthy one. It has now in its midst many very wealthy citizens. May it ever be true that we shall be able to boast of many generous ones as well. There must ever be many who toil hard and save but little, and who have small homes. For these hospitals must be furnished. It is a noble work and appeals to the best that is in humanity. So in Love's Labor's Lost we read:

Charity itself fulfils the law,
And who can sever love from charity?

THE VICTORIAN ORDER OF NURSES.

When Lady Aberdeen organized the Order of Victorian Nurses, there were not wanting those who found fault with the movement; but it has gone on and prospered. That it has done much good there is no doubt. But in this work, as with everything in life, mankind may be divided into two classes, as Oliver Holmes has said: "Those who do things, and those who say it should be done some other way."

The Duchess of Connaught has become the head of the order, and has issued an appeal for money for the Victorian Nurses. It is to be hoped that this appeal will be prompt and generous. There are good reasons why this cause should receive support.

1. The Victorian Order depends almost solely upon voluntary contributions. The amount collected from patients is quite inadequate to support the order. The money required, therefore, for the homes the nurses live in and the payment to them of their salaries must come from donations.

2. The nurses in the large cities visit the homes of people who could not afford to pay a nurse, and yet require proper attention. In these cases the nurses do good service and do not compete with nurses who make a living by taking charge of patients for a fee.

3. But the most important work of the Victorian Order is to be found in remote districts. In these newly-settled centres of population there are many poor people, many of them are foreigners, their homes are of the rudest kind, and there are no hospitals, and often no medical practitioner of near call. In these remote places the lone Victorian nurse is doing her great work—work that cannot be valued in money.

So the case is proven, and the needs are great. The poorest can do a little and the rich can do much, but the result of the efforts of all would be such a fund as would place the Victorian Order of Nurses in a position to go on and do its work in a way that has never been possible in the past. To those who are doing so much work free of charge by way of managing the organization, the least that the rest can do is to give some money. These nurses are uplifting many a lowly being. In the Bard of Avon we read:

Things base and vile, holding no quality,
Love can transpose to form and dignity.

THE DOMINION MEDICAL ACT.

The Canada Medical Act of 1906, as amended in 1910, now comes into effect. The Dominion Medical Council has been duly constituted by the various bodies named in the Act, having appointed their representatives to the council. The Act in a word provides for the following:

1. The fixing of the qualifications for registration, and who may be eligible for examination, and the creation of a board of examiners. The Dominion Council does not interfere with matriculation standards, as these are provincial.

2. The council shall consist of three appointed by the Government; two from each provincial medical council; one from each active teaching medical college, and three homeopathic members.

3. The conduct and management of the examinations required, but only on the professional subjects, not the preliminary ones. The council may admit to the examinations holders of degrees from accepted foreign universities or colleges.

4. No Canadian is eligible who does not possess a license or degree that would be accepted by the council of his own province.

5. Any practitioner holding a license of his province at the time of the formation of the Dominion Council may register after ten years from the date of such license. Those who have been ten or more years in practice may register at any time—while those who have not been ten years in practice may register when they have made up this period.

6. The Dominion diploma entitles the holder to practice in any Province.

OPENING ADDRESS.

AT THE FACULTY OF MEDICINE, UNIVERSITY OF TORONTO, 4TH OF OCTOBER, 1912

BY SIR HECTOR C. CAMERON, F.R.F.P.S., LL.D.

Emeritus Professor of Surgery, University of Glasgow, Scotland.

I ESTEEM it a very high honor to have been invited to address you to-day at this opening of the session of your Medical School, but although my acceptance of that invitation was immediate and without hesitation, I confess that I felt and still feel some misgiving as to my ability to select and adequately to deal with any topics which may possess the interest of being more or less cognate to the educational pursuits in which you are engaged, or related to the profession which it is your ambition in future to serve.

Moreover, this duty of delivering an introductory address is one, the discharge of which is apt to be regarded by those of us who have grown old in academic life, and have frequently been officially present on similar occasions, as very trite and even tiresome in its repetition. But I desire to remember that it is to the students and not to the older members of the audience which honors us with its presence that my remarks are to be specially addressed. To some at least of the students such an occasion must necessarily be novel; while all of you, I trust, are sufficiently ingenuous to be able to suffer for a little words of exhortation from one who has travelled to the very end of the road upon which you are now only setting out.

And you are setting out, gentlemen, at a point of time in the history of the healing art of good auspices and big with the promise of progress, because its work is now more and more becoming based upon sure and stable foundations. If I contrast its present position and prospects with those it possessed when I became a student of medicine in the early sixties, language can hardly exaggerate the difference. At that time such boast of comparatively recent progress as existed centred around the use of the stethoscope and anaesthetics, but general blood-letting was not yet wholly abandoned, while the use of leeches and other means of abstracting blood locally was a daily routine. Pathology, as a science, was only beginning to be cultivated, and, except in the University of Edinburgh, I question whether in Great Britain there was any professorship or lectureship, and certainly there was no equipped laboratory, established for its teaching. No separate instruction on the subject was given at all in my own University—that of Glasgow—except such teaching as was connected with the making of post-mortem examinations and with the demonstration of the gross evidences of disease to be found in different parts of the dead body.

The microscope was in the hands of experts, but few students were trained in its use. Then, and for many years to come, the methods of diagnosis, of differentiation between the hitherto apparently similar states of ill-health, as well as the means of successfully treating and preventing many formidable and most fatal diseases, which have of late years flowed in so full a flood of the still very young bacteriology were, as a matter of course, unknown and undreamt of. The only guides for the physician and surgeon in charge of acute and dangerous illness were the pulse rate, the state of the tongue, and the general aspect and behavior of the patient, for even the clinical thermometer and the temperature chart were not yet devised. That pedantic word *gynaecology* was still uninvented, and the diseases of women were dealt with almost entirely by the physician with the aid of the drugs of the pharmacopoeia. Typhoid was only beginning to be generally differentiated from typhus fever; both were abundant in all large centres of population, and the latter claimed among its victims large numbers of medical practitioners and students, for the subject of public health was in its infancy and was neither known, practised nor taught, as we now understand it. Every wound, whether accidental or made by the surgeon, with extremely few exceptions, discharged pus freely; and putrefactive changes occurring in all of them, produced in the atmosphere of every surgical ward, no matter how spacious and well-ventilated, a fetid sickening odor which tried the student on his first introduction to surgical work more even than the unaccustomed sights of the operating theatre. In every surgical clinique death held perpetual court, for wound-begotten diseases—hospital gangrene, pyaemia, tetanus, and the rest of that fatal brood, which, thank God, are now to all intents and purposes banished from surgical practice—were never entirely absent, at any time, from the hospitals of that day. No matter how carefully and skilfully an operation was performed, the issue was looked forward to with anxiety and dread. Few of those who did recover did so without serious episodes in their illnesses and disquieting complications of some sort. All suffered from pain and fever, more or less severe, and convalescence was only reached after weeks or months of distressing experiences of many kinds. I have myself, when a student, seen no fewer than five patients suffering from pyaemia which followed amputation for injury, die in the course of one week in a single ward of twenty beds, while other instances of the same disease and of hospital gangrene lay around them. Probably few of you may see more than five amputations of injured limbs during all your studentship—so great has been the progress of conservative surgery—and those which you do see, if only the patients survive the shock of their original injuries, will probably all recover.

For our complete emancipation from the dreadful evils of those dark days of surgery and for no small part of the remarkable advance made also in the domain of the physician, we are indebted to the life and work of that great man, Lord Lister, who died only last February, and whose career has since been commemorated as the boast and the blessing of our profession in every civilized land and nowhere more heartily and warmly than in this city of Toronto. Great in character, as well as in achievement, he will ever remain an exemplar for all of us; and I feel inclined to suggest to you one or two lessons—we have no time for more—to be derived from facts, lessons which may have special interest for you now and may be of value hereafter. And first, I should like to recall and to relate to you a little chapter of medical history, which concerns him and must always be of interest to every teacher and student of clinical medicine, surgery and midwifery.

I have indicated to you the awful mortality which occurred in surgical hospitals at the time of which I have been speaking. Equally appalling was that to be met with in all maternity charities. At least one other than Lister was working actively and earnestly, although in a very different direction, with a view, if possible, of furnishing a remedy. I refer to the late Sir James Simpson, the celebrated Professor of Obstetrics in the University of Edinburgh.

He had been long struck by the great maternal mortality then prevalent among the patients of the lying-in hospitals, as compared with that which obtained in the case of women delivered in their own homes, and knowing how analogous were the circumstances of the newly-emptied uterus with that of the newly-inflicted wound, and how similar were the dangerous and often fatal sequelae of each, he was prepared to find a little disproportion between the number of deaths of those operated on in private practice and those treated in what he spoke of as "palatial hospitals." It was the unfavorable environment, therefore, of the patient which he regarded as the real cause of disaster, and it was the practice of collecting together many wounded persons under one roof of which he set himself, with all his accustomed energy, to denounce, and, if possible, to alter and supersede. He wrote and spoke on the subject with the frequency and force of an earnest agitator, so that much attention was aroused by his views and not a few influential converts adopted his creed. In a pamphlet entitled "On Our Existing System of Hospitalism and Its Effects," he wrote as follows:

"Above twenty years ago in speaking of the effects and evils of our large hospitals—as these hospitals are at present constructed—I took occasion to remark: 'There are few or no circumstances which

would contribute more to save surgical and obstetric patients from phlebotic and other analogous disorders than a total change in the present system of hospital practice. I have often stated and taught that if our present medical, surgical, and obstetric hospitals were changed from being crowded palaces—with a layer of sick in each flat—into villages of cottages with one or, at most, two patients in each room, a great saving of human life would be effected; and if the village were constructed of iron—as is sometimes done for other purposes—instead of brick or stone, it could be taken down and rebuilt every few years—a matter, apparently, of much moment in hospital hygiene.’ ‘Since the date mentioned,’ he continued, ‘I have conversed on many occasions with many medical men on this subject. I have found, however, that to most professional men it seemed to be altogether a kind of medical heresy to doubt that our numerous and splendid hospitals for the sick poor could by any possibility be aught than Institutions as beneficial in the practical results as they were benevolent in their practical objects. When acting in 1867 at Belfast as President of the Public Health Section of the National Association for the Promotion of Social Science, I spoke on the subject of Hospitalism at some length in my Inaugural Address and propounded the questions—to what extent are hospitals, as at present constructed, banes or blessings? and, how can they be changed so as to convert them from the former to the latter? I concluded my remarks on this point by again suggesting publicly that to render our hospitals as healthy and useful as possible, and in order to acquire sufficient space and air and isolation for their sick inmates, they should be changed from wards into rooms, from stately mansions into simple cottages, from stone and marble palaces into wooden, or brick and iron cottages. On the same occasion, after speaking of the relative treatment of some diseases such as fevers, etc., in and out of hospitals, and after showing—chiefly from the large statistics of Mons. Lefort—that as a general rule, parturient women recovered in a much larger proportion when delivered in their own homes than when delivered in Lying-in Hospitals, I proceeded to ask: ‘In regard to surgical patients in hospitals, does the same law hold good as in respect to obstetric patients? At the present time medical science is, I believe, in want of any sufficient data to determine the question. The general mortality in hospitals after operations is confessedly very great, far greater than was believed a quarter or half a century ago, when no sufficient statistics had been collected on the matter. The man laid on an operating table in one of our surgical hospitals is exposed to more chances of death than the English soldier on the field of Waterloo. Some authors have collected on a large scale the statistical results of some operations and particularly of amputa-

tions of the limbs. Out of 1,656 cases of amputation performed in the hospitals of Paris and collected by Messieurs Malgaigne and Tielat, 803 died, or nearly one in every two. Dr. Fenwick has collected together from various sources 4,937 cases of amputations of the limbs. Of these, 1,562 died, or nearly one in every three or four. 'The assertion, observes Dr. Fenwick, 'that one person out of every three who suffers an amputation perishes would have been repudiated a few years ago as a libel upon the profession, and yet such is the rate of mortality observed in nearly 5,000 cases.' 'Are the results of amputation,' in conclusion asked Sir James Simpson, 'in dispensary, private or country practice as deplorable?' Adequate data have not been collected. Certainly the general belief of the profession is that in country practice amputations are not so frightfully fatal."

In order to settle this point, if possible, he collected extensive statistics of the results of amputation in rural practice. These he obtained by addressing a circular letter, with an accompanying schedule to a great number of medical men practising in the provincial and rural parts of England and Scotland, requesting them to furnish him with the results of the limb amputations which had been performed by them in their private practice. The returns obtained from these applications numbered altogether 2,098 cases of amputation. The total number of deaths was 226, i. e., one in every 9.2 died or 10.8 in every 100. He compared with this mortality that of a similar number of limb amputations performed in the Royal Infirmaries of Edinburgh and Glasgow, and in nine of the leading London Hospitals. In these 2,089 limb amputations performed in eleven great hospitals by surgeons of skill and experience he found that no fewer than 855 had died, i. e., 1 in 2.4. In other words, almost one half of the patients operated on, died. Simpson concludes his pamphlet thus:

"This excess in about 2,100 limb amputations, of 629 deaths in hospital practice as compared with our rural villages and cottages; in large wards as compared with isolated rooms, is certainly much greater and more pronounced than I myself expected when I began the present inquiry. But must the calling of this dismal death-roll go on unchallenged and unchecked? Shall this pitiless and deliberate sacrifice of human life to conditions which are more or less preventable be continued or arrested? Do not these terrible figures plead eloquently and clamantly for a revision and reform of our existing hospital system?"

The pamphlet from which I have thus freely quoted was published and scattered in great profusion and in all directions in the Spring of 1869, and if it did not succeed in bringing about the reform of hospitals which its author desired, it was not because he died only a year after its publication. There were many ardent disciples who would gladly have

carried on the propagandism. But happily, the difficulty was to be solved in a very different way. Just after leaving Glasgow in 1869, and only a few months before Simpson died, Lister published a paper entitled "On the Effects of the Antiseptic System of Treatment upon the Salubrity of a Surgical Hospital." His first experience as a hospital surgeon began in the Royal Infirmary of Glasgow, at that time one of the most unhealthy of hospitals; but, ere he left it, the effects of his new treatment on the health of the wards was manifest to all who witnessed them. As he himself declared, that treatment was in the highest degree beneficial, converting the wards from some of the most unhealthy in the kingdom into models of healthiness. I shall read to you the concluding sentence of his paper:

"The result of this great change has been to demonstrate conclusively that the exhalations from fowl discharges are the essential source of the insalubrity of surgical wards and, when this is effectually suppressed, other conditions, which we are accustomed to regard as most pernicious, become powerless to produce serious evil. It is obvious that the facts recorded in this paper are of extreme importance with reference to the vexed question of hospital construction. With a view of assimilating the atmospheric conditions of our large hospitals with them altogether in their present form, and to substitute for them congeries of cast-iron cottages, capable of being occasionally taken down, cleansed and reconstructed—a plan which, besides involving enormous expense, would interfere most seriously with the proper supervision of the patients and with the teaching of students at the bedside. From what has been related above it is plain that no material alteration will be required. We have seen that a degree of salubrity equal to that of the best private houses has been attained in peculiarly unhealthy wards of a very large hospital by simply enforcing strict attention to the antiseptic principle. And, considering the circumstances of these wards, it seems hardly too much to expect that the same beneficent change which has passed over them will take place in all surgical hospitals, when the principle shall be similarly recognised and acted on by the profession generally. The antiseptic system is continually attracting more and more attention in different parts of the world; and whether in the form it has now reached or in some other and more perfect shape, its universal adoption can only be a question of time. The noble Institutions of which our country is justly proud, admirably adapted alike for the treatment of the sick and the instruction of the student, will then be cleared of the only blot that now attaches to them—the malignant influence of impure atmosphere."

How amply these anticipations have been fulfilled is probably

known to all of you. The very word "hospitalism" died an early death and has entirely dropped out of medical literature. Our splendid opportunities of successfully prosecuting clinical practice, research and instruction have by Lister's instructions been more fully preserved to us. It requires no great power of imagination to realise how entirely they would have been destroyed and lost by any scheme which scattered our patients over many roods of ground and housed them in camps or villages of two-roomed cottages. Instead, fortunately, they are still accommodated and compactly housed in flats even more numerous than Sir James Simpson ever saw, and with even larger "layers of sick" on every floor. No outcome of the antiseptic system of treating wounds occasioned Lister more pleasure and pride than this one. The Royal Infirmary of Glasgow, in which he had such unhappy surgical experiences when he joined its staff in 1861 has yielded almost from the time he left it until its recent reconstruction, although composed of the same walls and floors as in his day, as good results as any other hospital in existence. He himself had always practised in very old hospitals and operated in theatres of old-fashioned construction, but he knew that he could depend on securing the best results in his wounds; and so he proved the fact that it was not necessarily change in the environment of the patients, but the avoidance of sepsis in their wounds, which was required to ensure salubrity and a low death-rate in surgical hospitals. To that discovery you owe the continuance of your splendid and convenient opportunity of clinical study. You owe also a sense of gratitude to the memory of the man who made the discovery in the face of much hostile and often bitter criticism and at a most serious crisis in the history of hospital administration and construction.

One fact in his own education, which Lister often referred to in conversation, with much satisfaction, was the excellent knowledge which he acquired from his teachers of the preliminary scientific subjects of biology, chemistry and physics. The former he regarded as the best and, indeed, the proper introduction to the scientific study of human anatomy and physiology, while he recognized that the knowledge which he had gained early in life of the two latter proved his best equipment for the work which he afterwards undertook. To the great importance of these early studies, therefore, I venture to direct your attention, and I do so the more readily because there is not wanting at the present day, a certain tendency towards minimizing their value to the medical student. I thoroughly realize how crowded is your curriculum even although five years are allotted to its completion, and how constantly your attention is enchained and your energies dissipated by preparation for frequently recurring examinations. Many persons who guide

opinion in matters relating to medical education, at all events in Great Britain, have been led to advocate that the congestion in the medical curriculum should be relieved by relegating these subjects entirely to the period of school life. Already the Conjoint Board of England accepts from candidates for their licenses certificates of study in these subjects from various public schools, whose laboratories and means of teaching have been inspected by visitors from that Board, and whose instruction they recognise for that purpose. For a time a majority of The General Medical Council of Great Britain and Ireland resisted this innovation, but have now apparently accepted it. Of this change Lister strongly disapproved and often expressed the hope that, at all events, the Universities would never give their countenance to it. If the student must be relieved of some of the burdens which weigh so heavily upon him, I believe it will be wiser to seek for that relief in the lessening of the number of his examinations rather than that of the subjects of study which now find a place in his curriculum. When I was a student, Lister was Professor of Systematic Surgery in the University of Glasgow and he always exempted those who had conducted themselves creditably in the surgery class-examinations, from further examination in that subject in the final trial for their degree. In some such direction I think that relief for the overburdened student is to be sought in our Universities rather than in adopting any course which might appear to minimize the importance of the preliminary scientific subjects. Their value to the medical profession may, in some degree, be gauged by the enormous increase of power which has accrued to its practitioners from the labours of special cultivators of those fields of Science. It was upon the discoveries of Pasteur, a chemist and not a medical man, that Lister based the researches and work which have renovated the whole practice of Surgery, and converted it from an empirical and disappointing into a scientific and reliable art. A great, useful, and permanent addition to our resources has lately been given to us by a physicist, Professor Röntgen, in X-ray photography; while the real cause of syphilis, for the discovery of which medical investigators have been straining their eyes for generations, has recently been identified in the form of a protozoal organism, by one who was not of their number—Schaudinn, a biologist. Surely no facts could better indicate the part these sciences may play in the advancement of Medicine and Surgery, and nothing could more clearly point out to the Medical student the wisdom of acquiring a thorough acquaintance with such parts of them, at least, as bear, or may even give the promise of possibly bearing, upon the future work of his life.

I have referred to the hostile and at times rather bitter criticism which assailed Lister in the earlier days of his life-work from many

influential quarters. This opposition was due probably not to any disregard for progress and development in the surgical art, but rather because someone felt that they were suddenly asked, by a young and comparatively unknown teacher, to give up cherished beliefs and modes of practice to which they had been long accustomed. They had been used, from time to time, to welcome and adopt newly devised operations, improved methods of treating individual diseases, or classes of diseases, recently invented instruments and apparatus of all sorts, as well as novel additions to their resources of even such wide-reaching consequences as in the case of anaesthetics. But here was a change, a complete revolution in the whole practice of the art, and their conservative instincts forbade them, at first, to follow a lead so unexpected and so much at variance with all former experience and usage. "One man knew a secret way into the city" says a Spanish proverb, "but the besiegers said, why should we who are so many, follow one man?" This was the spirit of large numbers of those who resisted any acknowledgment of the value and of the originality of the new treatment, for those who offer opposition to any new advance always first dispute its value and when proof of its value begins to accumulate, try to cover their retreat by questioning its originality. This attitude of many of the leading practitioners and teachers of surgery was often most discouraging and depressing to Lister, although it never made him relax his enthusiasm and industry. One sustaining consolation which he constantly spoke of at that time, was the support which he received from his own students and from the young practitioners who frequented his wards. "I have always had youth on my side," he used to say with great and joyful satisfaction, when he felt discouraged by the coldness of his colleagues and contemporary practitioners. In this connection it may not be uninteresting if I read to you a sentence or two from a letter which I received from a distinguished surgeon of America, acknowledging a copy I had sent to him of an account I published a few years ago of the history of the evolution of antiseptic surgery.

"Your book carries me back," he wrote, "to the spring of 1869, when as a student I had spent three years in Europe, after taking my medical degree at Harvard. I was then on my way home, thinking I had acquired all there was to know of up-to-date surgery. I had heard, for the first time, of a man in Glasgow who healed wounds without suppuration. I remember attending a meeting of the Pathological Society in London and hearing some surgeons laughing about this report. I cut away from a delightful four-in-hand trip through the south of England to put in a last week of my three years with Lister.

"I was most cordially received and remember well his saying

after a discussion: 'I do not expect my contemporaries to accept this doctrine; I look to you, the coming generation, to adopt it.' It did, indeed, take a generation to establish it in all its present perfection, as you have so interestingly shown."

In the introductory address which Lister delivered to the students of Edinburgh on "The Causation of Putrefaction and Fermentation," when he entered there upon his duties as Professor of Clinical Surgery, in the winter of 1869, he concluded in the same strain of confidence to their ability to draw just conclusions in matters of fact. "I commend these facts," he said, "to your candid and impartial judgment, beseeching you to form your own opinion regarding them. The minds which you bring to bear on this subject to-day are very much the same as they will be throughout your lives. An observation which any one of you may make now will serve, in after life, to illustrate a course of lectures, should he occupy a position corresponding to that which I have now the honor to hold. And you are as competent as you ever will be to draw logical conclusions from established data. Do not let any authority shake your confidence in knowledge so obtained."

From these various references to the history of the time, you will see that Lister always entertained a high opinion of and reposed much trust in the ingenuousness of the youthful mind. Well-educated and thoughtful youth possesses always a strong, I am almost tempted to say, an unerring instinct to detect the spirit of the age in which its lot is cast. "With every generation," it has been well said, "there springs up a new order of ideas. The earlier the age at which a man seizes the idea that will influence his own generation, the more he has a start in the race with his contemporaries. Now, the ideas that influence the mass of the rising generation never have their well-head in that generation itself. They have their source in the generation before them, generally in a small minority, neglected or condemned by the majority which adopts them later." It was the consciousness of such a truth as this which made Lister confident and satisfied when he realized that Youth was on his side. It is well, therefore, for you to remember that you are as well qualified now as you will ever be to observe facts and to treasure them up in your memory; nay, more, even to draw such deductions from them as logic and common sense will enable you to draw. But here I desire to offer you a warning. You will be wise if you refrain from attempting to go further than this in the meantime. You are not qualified and must not deem yourselves yet qualified to generalize and to form and express final opinions on matters relating to medical and surgical practice. Your duty is now to gain and gather knowledge; but you must realize that it is a knowl-

edge which is not at once power, because you have not yet learned the mode of applying it; have not yet progressed towards converting your knowledge into wisdom by adding to it, experience. You are necessarily still in the stage when "knowledge comes, but wisdom lingers"; a stage will come later when you will realize that "learning may wiser grow without its books."

"Knowledge and Wisdom, far from being one,
 Have oft-time no connection. Knowledge dwells
 In heads replete with thoughts of other men;
 Wisdom in minds attentive to their own:
 Knowledge, a rude unprofitable mass,
 The mere materials with which wisdom builds,
 Till squared and smoothed and fitted to its place,
 Does but encumber when it seems t'enrich—
 Knowledge is proud that he has learned so much,
 Wisdom is humble that he knows no more."

While, therefore, you will do well to remember that in the pursuit of knowledge you are as free as you ever will be to make observations, whether in the science laboratory or in the hospital ward, and even to draw such conclusions as any well-educated mind may suggest to itself, you are not safe to form and adopt final opinions. I offer you this warning because I know that many persons are ready to say to the student: "Maintain at all hazards your independence of judgment. Accept little or nothing as fixed and settled, and pay the slightest possible deference to authority and tradition. Call no man your master. *Nullius addictus jurare in verba magistri*. Prove all things, but hold fast only to those which appear to you to be good." Such persons, on the other hand, tell the teacher that his only legitimate function is to give a full and faithful account of his subject; to bring before the minds of his students with what vividness he may, its principles and details, sinking all pet opinions, all personal bias, all dogmatic doctrine; to describe, without feud or favor, the conflicting views of its cultivators, remembering that when he reaches matter which has been or still is the battle-ground of contending parties, his office is not one of advocacy, but one rather of judicial summing up, leaving each of his hearers to arrive at a verdict for himself. But persons who tender such advice as is here indicated appear to forget a very important fact, viz., that, while a tyro in the subject is quite able to observe for himself, he is not in a position to generalize. In matters of opinion it is necessary for him to take much upon trust. It, therefore, becomes the duty of a teacher, in my humble opinion, where he holds convictions, to let them be heard with no uncertain sound. Im-

PLICIT belief in them is not required and cannot always be expected, but they serve to fill up gaps, so to speak, in the view which the individual is expecting to get of the subject, and they at all events do service until confirmed, modified or displaced by his own experience. There is nothing so hopelessly bewildering, so completely unsatisfying to any one learning the details of a subject, either from a book or a teacher, as the enumeration of a great variety of opinions, without the slightest hint with which, if any, lies the sympathy of the writer or lecturer. I have never heard a complaint from a student that he found a book or a teacher too opinionative; but I have heard this other complaint that the one contained or the other taught the opinions of too many people.

From all of these considerations it will be obvious that each stage of life has its own duties and its own limitations, and that he will probably best guide and realize his destiny who most truly and fully appreciates these as they successively arrive. Robert Louis Stevenson writes in one of his short essays, "To love playthings well as a child, to lead an adventurous youth, and to settle, when the time arrives, into a green and smiling age is to be a good artist in life and to deserve well of yourself and your neighbors." To recognize the limitations which surround your present stage of life, to apprehend fully that its chief end is the acquisition of knowledge, and that your present training has or ought to have for its object, to teach you to learn from your future experience; to submit gradually your knowledge to the test of that experience, until it has grown into wisdom by being "squared and smoothed and fitted to its place"; to use the wise skill thus obtained, conscientiously and industriously during your active life for the good of your fellowmen, and—hardest of all, perhaps—once more to recognize the limits of your powers when age approaches and natural force abates, is to be a good artist in a medical career, and to deserve well of yourselves, of your brethren and of the public. There is a French saying, "*Si jeunesse savait, si vieillesse pouvait.*" Would that youth were endowed with experience and old age with vigor! But the aspiration is a foolish one except in so far as it emphasizes the fact that the contrary is the truth. We shall make the best of our lives if we plan them so that we learn well while young, work hard and strenuously during our manhood and are content cheerfully to withdraw from the struggle as old age approaches.

But it is a struggle in which something more is needed for success than accurate knowledge and wise skill. The practitioner must recognize that a high moral standard of conduct is required of him. It is difficult to convey, in a few sentences, what such a standard should be. I once made the attempt to indicate this to an audience much the same

as that which I have now the honor to address and, perhaps, I cannot do better than repeat to you the words I then used. "The practitioner of medicine," I said on that occasion, "however ably he cultivates both its science and art, will fall far short of its highest ideal unless he also tries to illustrate, in his daily round, what one may call, for want of a better term, the moral side of his profession. To devote himself to a daily and often self-denying personal service of the sick; to render that service truthfully, soberly and chastely; to resist all temptations to self-advertisement and the depreciation of rivals—for the depreciation of others is only another form of self-appreciation; to be silent in regard to much of what he sees and is told in the houses into which he enters; to be chivalrously regardful of the modesty of women, sympathetic with the easily-aroused fears of little children, and patient with all manner of men; to feel on many an occasion much more anxiety than he shows; not to be untruthful to the sufferer from hopeless disease and yet to remember, as Sir Thomas Browne, himself a physician, has said, that 'it is the heaviest stone that melancholy can throw at a man to tell him that he is at the end of his being'—these, and many other difficult duties and acts of self-discipline like these, are incumbent upon every medical practitioner."

Gentlemen, the ideal of conduct such as I here endeavor to indicate is far from being easy of attainment and there are few of us, perhaps, who completely and adequately fulfill its requirements. But all its essentials may be learned and practised even during your student life. The formation of your character is in process as surely as is your acquisition of knowledge, and in wishing you all success in your work here and hereafter, I conclude by impressing upon you that he who faithfully pursues his studies now, who gradually acquires skill by the fusion of his knowledge with his growing experience and who guides all by a high ethical standard in respect both of his patients and of his professional brethren is the man who, in the struggle of the coming years, will be found amid the sunshine and the hope of the van and not amidst the dust and fatigue of the rear.

ILEO-SIGMOIDOSTOMY: ITS INDICATIONS AND FUTURE.

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THE storm centre of surgery to-day hovers around the large bowel, while the causation of degeneration seeks expression in that ever-widening term, auto intoxication. Human progress is always dearly pur-

chased, and in no department is this more clearly evident than in the conflict between the forces of development and the organs whose usefulness has been outlived.

The surgeon has co-operated with Nature's forces, and kept pace with her purposes, and amid the carnage of the effete and unfit he has stood by the unfortunate individual while the process of evolution rolls ever onward. From the vantage ground of conquered appendiceal pathology he views the unconquered fields of the larger vista, he surveys the regions beyond, and looking upwards, transversely and downwards, sees a kingdom yet unconquered—that dark continent of the abdomen—the colon.

Binnie says, "Toxemia from Stasis is much more common than is usually taught, in fact, I believe it to be one of the commonest conditions met with by the physician."

Lane has recently stated, "In every case of tubercular or rheumatoid arthritis in which simple means have failed, the bowel should be short-circuited without hesitation.

"This operation produces the maximum benefit with a minimum risk, and is readily borne without evidence of any shock by children as young as two years of age."

It is no longer a question as to the necessity of the colon as an organ of digestion. The experience of the writer, with the wider experience of not a few others whose facilities were greater, have shown that the removal or the sidetracking of the colon does not perceptibly diminish bodily nutrition. Neither is it a question as to the colon being frequently the seat of constipation, with its almost innumerable train of ills. Autointoxication, which of late has been given such a place in disease causation, has herein its chief toxin depot, while fullness of life and length of years also find in the colon their energetic enemy. Over the colonic curve evolution has written "mene mene tekel upharsin," and the handwriting within the abdomen is to-day interpreted in terms of colonic exclusion or extirpation—"weighed in the balance and found wanting."

Some two years ago in a report in *The Canada Lancet* of two cases of removal of the colon, I suggested the extension of this operation, or that of defunctionating the colon, to other conditions than that of intestinal stasis. One year ago I reported in the *Western Medical News* two cases of severe intestinal nephritis, both considered hopeless under medical treatment and both recovering after ileosigmoidostomy. Since that time I have operated upon 14 others with varying degrees of success. The histories of these cases I shall very briefly place before you for consideration and discussion.

The question seems to be: Is the colon in our present stage of

evolution an advantage or a menace to the organism? In the effort to answer this question in all its bearings we are taken beyond the bounds of practical surgery.

That savant of the Pasteur Institute, Metchnikoff, in his studies in connection with the prolongation of life, found that the duration of life in mammals is relatively shorter than in birds and cold-blooded vertebrates. In the organs of digestion only did he find sufficient difference to afford an apparent solution to the problem, mammals being the only group in which the hind gut is comparatively large. Fishes show but little enlargement in the large intestine. In reptiles there is some increase in size. In birds it is relatively but little developed, but many have at the junction of the small and large intestines a pair of ceca, which in some, especially in running birds, become very large. With these two facts before him, viz., that mammals have a greater development of the large intestine than birds, and are relatively shorter lived, Metchnikoff asked if there was any casual relation between these facts.

In quest of a solution he turned to an examination of the function of the large intestine in vertebrates and found that in the lower forms it is but a reservoir for the waste matter in the food, with no share in digestion; only the cecum can be considered as having any digestive function, and that very slight, so slight that no evil has followed the removal of the ceca in fowls and ducks. In the horse the cecum is an enormous bag. It is also in many other herbivora. In many carnivorous mammals the cecum is absent, while in the cat and dog it is very small.

Stragasco working under Pawloff has concluded that in mammals digestion and assimilation are confined almost exclusively to the small intestine, and that it is only in certain diseases of the intestinal tract in which the contents of the small intestine are passed quickly into the large bowel that some digestion takes place in the latter.

Metchnikoff then goes on to say, "The large intestine cannot then be considered as an organ of digestion, although absorption of the liquids which have been formed in the small intestine may take place within its walls."

At this point the question will arise as to the absorption of nutrient enemata if the function of the colon as a digestive organ is eliminated. Cevny and Lantschenberger state that the entire human colon can absorb only six grams of albumen in twenty-four hours. Hull has shown by experiments upon dogs, and upon a man who suffered from a colonic fistula, that the colon does not absorb undigested white of egg, and absorbs water, cane sugar, and glucose only very imperfectly.

As you well know, Metchnikoff was deeply interested in the studies of Mr. Lane's cases at Guy's Hospital and his investigations and results go far toward placing the work of the London surgeon upon a scientific basis. In the English translation of his last work issued this year, Metchnikoff states, "The accumulation of waste matter retained in the large intestine for considerable periods, becomes a nucleus for microbes which produce fermentations and putrefaction harmful to the organism. Those which are in a feeble state that some other cause are especially susceptible to damage of the kind referred to. Those who suffer from affections of the heart, liver or kidneys are especially susceptible to the evil results of retained fecal matter. . . . Some of the products of the intestinal flora are undoubtedly toxic, such as the benzol derivatives (phenol, etc.), ammonium and other salts. It is well-known that certain of these toxins can be absorbed by the wall of the gut and act as poisons. Moreover, analysis of the urine in cases of constipation shows an excess of the sulpho-conjugate ethers, which are known to be the products of intestinal putrefaction. Not only is there autointoxication from the microbial poisons absorbed, but microbes themselves may pass through the walls of the intestine and enter the blood.

Now let us turn from French literature to that of America, and hear what Morris, of New York, has to say as to the colon bacillus as a regulator of population. "It is becoming apparent that the colon bacillus group of bacteria stands among the most active malefactors." Here is a list of the depredations which Morris ascribes to the colon bacillus: Appendicitis, pyloric and duodenal ulcer, gall stones, pancreatitis, hepatic sclerosis, arteriosclerosis, neurasthenia, acute peritonitis, anaemia, kidney infections, cystitis, salpingitis, local pulmonary consolidation, and choroiditis, ending with this statement, "My view that the colon bacillus ranks along with the tubercle bacillus as an agent for preventing over-population, and regulating the character of the population by means of poison, might have been given special attention by Darwin or Malthus had they been in possession of our present data, which open such an interesting new vista." In a personal communication to the writer with reference to the defunctionating of the colon, Dr. Morris said, "The subject is one which is to receive more and more attention. Temporary relief from colonic poisoning can be obtained in a very satisfactory way by colonic flushing, but even this part of the subject has not as yet been developed. In patients with fundamental tendency to intestinal putrefaction, operative work, such as you have done so successfully, is desirable."

In a report by Distaso of the Royal Institute of Public Health, published in the *Lancet* of February 24, 1912, an exhaustive study of

the intestinal flora is given. His method was by a microscopical study of the different organisms to recognize the predominance of one micro-organism over another and the action of such flora upon the function of the bowel.

The results of Distaso's investigations may be summarized in the statements that the large bowel does not contain either albumen or peptone, but only derivatives of the latter, and that the indol forming organisms predominate.

He also states "the flora of the normal adult is certainly harmful, and far from defending the organism against infection it may be said to help it. The substances elaborated by these bacteria may be a factor in disease of the bowel. Unlike the intestinal flora of breast-fed babies, these substances are not able to produce intestinal peristalsis, and may have an inhibitory effect upon the intestinal muscle, or may even irritate the mucous membrane.

Distaso was twice sent by Metchnikoff to study cases under Mr. Lane, of London. Of his researches there he states that he found the bacteria existing in the proximal part of the large intestine identical with those found in the distal part, but in the latter they were far less abundant, and hence he concluded that a process of putrefaction goes on in the intestine of a constipated person which is similar to that which goes on *in vitro*.

The following results were compiled from 36 cases. Before the operation the intestinal flora of these patients was typical of constipation. After the operation the flora suddenly changed and resembled that of infants. He then draws the following conclusions:

1. That constipation and the resulting intoxication are caused by intestinal flora.

2. And that the large intestine is the seat of this process.

In conclusion he states: "Doubtless the products of intestinal bacteria, by increasing secretions capable of inhibiting the sub-mucous plexus, give rise to stasis."

The accumulation of feces in the colon causes the viscus to fall downward, dragging the organs which are attached to it.

The ileum especially is affected, so that it may be almost occluded, or the ileo-cecal valve may become inflamed and thus the passage of feces be further impeded.

These observations tend to confirm the opinion that constipation is due to the intestinal flora, which causes the feces to be unduly retained. Putrefaction follows with the production of soluble poisons on the one hand and the extraction of the poisons retained by the dead microbes on the other, giving rise to autointoxication.

In 1907-8 Groves performed three ileo-sigmoid anastomoses, and

subsequently resected the colon in two of these cases, removing all that portion from the ileum to within a few inches of the anastomosis.

From a study of these cases in one of which there was a cecal fistula, he reached the following conclusions:

1. The colon absorbs about 10 to 20% of the water from the feces.
2. This absorption takes place rapidly and is quite efficiently performed in the rectum and pelvic colon alone.
3. The absorption of solids in the colon is so slight as to be negligible.
4. The greater part of the large intestine is therefore functionally unnecessary.
5. As the adult passes about 8 gms. of bacteria in the feces daily, or about one-third the weight of the solids of the feces, the absorption of soluble bacterial products probably occurs in all cases of colic stagnation.

The bacterial content varies from 2.6 gms. in constipation to 20 gms. in diarrhoea. The fasting individual passes 3.47 gms. of solid material in the feces daily.

6. Jacobi, Cammon, Elliott and Barclay Smith showed that anti-peristaltic movements predominate in the proximal parts of the colon of animals. That is considered by some physiologists to occur normally in man, having been observed by Hertz, and may account for the slow progress of the colic contents. Certainly it occurs in the pathological conditions, and is a factor to be reckoned with. Under these circumstances the anti-peristalsis may commence as far distal as the pelvic colon.
7. In normal patients the whole of the colon can readily be irrigated by rectal enemata, but this is doubtful when the colon is much dilated and kinked.
8. In one-third of normal individuals, food passes through the alimentary tract in 24 hours. After ileo-sigmoidostomy this period is shortened to 16 hours or thereabouts.
9. The operation of ileosigmoidostomy or partial colic exclusion is in normal cases followed by no metabolic disturbance. Although an abnormally high percentage of water is passed in the feces, there is abundant absorption by the pelvic colon and rectum when plenty of fluid is taken, and the absorption of nitrogen, fat and carbohydrates is practically normal.

There was much discussion before gastro-jejunostomy was given the place of security which it now occupies. Many mistakes were made and some lives apparently sacrificed before the indications for the operation were definitely stated and the technique brought to its present state of perfection. The experience of yesterday in the upper abdo-

men is to-day being repeated in the lower abdomen, and I hope that out of this discussion may arise a concensus of opinion as to the indications for and methods of this procedure.

I shall now give a very brief report of the cases that have come under my care.

Case 1. Fireman, suffered from indigestion and constipation for years, became melancholic at times, took black sand upon advice from a travelling quack and became worse. Although frequently urged, I refused to operate upon him until having seen Mr. Lane's work at Guy's Hospital three years ago. Upon my return in November, 1909, I removed the colon. Patient sat up in wheel chair on the eleventh day, convalescence uneventful, constipation relieved and apparently all that Mr. Lane states was fulfilled. About a year ago he wrote me from San Francisco complaining of colicky pains in the abdomen, possibly adhesions. I have not heard from him since.

2. Epileptic, suffered from constipation since childhood. Increase of the constipation was generally associated with increase in frequency and severity of the convulsions. I removed the colon. On the third day he died in an epileptic fit. Post mortem showed obstruction at ileo-sigmoid junction. I had made an end-to-side anastomosis, and in order to make assurance doubly sure had placed a second row of sutures. This resulted in an infolding of the ileum, in fact, a partial intussusception, with occlusion.

Case 3. Ho Shat, a Chinese boy of 11 years, acute parenchymatous nephritis. No history could be obtained. After exhausting all ordinary methods of treatment, the boy becoming more and more edematous and losing strength, I decapsulated both kidneys in May, 1911, with slight improvement lasting only a few days. Ascites rendered frequent tapping necessary. After a few weeks with no improvement, I severed the ileum three inches from the cecum and grafted the proximal end into the sigmoid. A copious diarrhoea followed the operation, the bowels moving every half-hour or oftener. The ascites was relieved for a few weeks, but returned, necessitating tapping as frequently as before the operation. He made little progress and was removed from the hospital to his home with a gloomy prognostic. I did not see him again until three months afterwards, when I found the edema and ascites gone, the general condition much improved, but the urine still loaded with albumen.

Case 4. Girl of 14 years had three severe attacks of nephritis during last eight years. When I saw her in the summer of 1911 she was edematous with ascites. Although she had been under the care of one of our most skilful physicians she was making no improvement. I exhausted my medical resources, and then suggested anastomosis of ileum

and sigmoid as a last resort. There was no shock apparent from the operation. Improvement began immediately, and to-day her condition is satisfactory. The operation was somewhat different from that of the first case, in which the ileum was severed. In this case I placed a silk ligature around the ileum between the anastomosis and the valve just tight enough to occlude the bowels. Diarrhoea was absent, the bowels not moving until a cathartic was given, and at no time was there spontaneous diarrhoea.

The position of the sigmoid anastomosis in these cases is the upper bend of the loop, which in the majority of cases lies adjacent to the terminal portion of the ileum. By taking advantage of the juxtaposition there is no tension upon the bowel at the point of union.

For the clinical history of this case and the report of urinary analysis I quote Dr. Bryant, the house surgeon of St. Joseph's Hospital, Victoria: "Patient, female, J. R., aged 14, admitted to hospital suffering from parenchymatous nephritis of some seven years' standing. When admitted patient was very edematous, features all swollen, legs edematous and abdomen greatly distended with ascitic fluid. Examination of urine showed presence of heavy trace of albumen, with granular and hyaline casts.

Medical treatment apparently had little effect and patient's symptoms were not relieved, one prominent symptom being difficulty in breathing. The treatment was continued for two weeks, then the abdomen was tapped with trochar and canula and about two washbasins of fluid taken off. It continued to run, so a tube was put in, which gravitated the fluid into a receptacle for one week. It ceased to run, and the operation was decided upon. Patient was opened in median line below umbilicus and a large quantity of fluid escaped. Tissues and intestines very edematous. Clamps were put on the intestines and a lateral anastomosis done. A ligature of silk was passed around the ileum just above the illo-cecal valve tight enough to occlude the bowel lumen without interfering with the circulation. Intestines were replaced and abdomen well flushed out with saline. Incision was closed with drainage. Patient stood operation very well, and the post-operative discomfort was no greater than with any abdominal operation. Bowels were opened next day with calomel and Epsom salts.

Urinary examination showed abundant albumen and hyaline casts. Bowels were kept very free with Rochelle salts and edema gradually lessened, until after about ten days patient's face and limbs appeared normal.

Patient was allowed up two weeks after the operation, felt no pain on moving about or upon movement of bowels. The amount of urine passed steadily increased, and examination showed a trace of

albumen with a few casts, principally hyaline. Complete analysis as follows:

Color, amber.

Reaction, acid.

Specific gravity, 1.022.

Albumen, trace.

Sugar, none.

Deposits, some epithelial cells, a few cells, hyaline casts, and a few short granular casts.

Patient left hospital apparently cured of the parenchymatous nephritis."

This case after almost a year remains in perfect health, the bowels moving once or twice daily.

Case 5. Mrs. F., constipated all her life, pain in right abdomen, general symptoms of autotoxemia. On February 19th, 1912, the ileum was tied and a lateral anastomosis done with appendectomy. Convalescence was normal, and she has enjoyed excellent health since.

Case 6. Miss P., aged 43. School teacher, nervous break-down three years ago, gradually became melancholic with delusions. Pelvic organs normal. Had been constipated as long as she can remember. During the last year the mental trouble was more marked when bowels failed to act. Operation February 5th, 1912, end-to-side anastomosis with formation of valve, the method described in *Western Canada Medical Journal* of March, 1912, and in *Surgery, Gynecology and Obstetrics*

Recovery from operation normal, no mental improvement, and in a month we were compelled to send her to the hospital for the insane. She was allowed out on probation, and is now under the care of Dr. O'Brien, of Nanaimo, who has recently written me as follows:

"Miss P. has been twice to see me lately. Mentally she seems normal, though a little excitable. She tells me she has had no trouble in regard to bowel movement since her operation."

Case 7. Mrs. I., aged 37, from Manitoba. Osteo-arthritis four years, dating from birth of last child. Obstinate constipation. Examination showed deep rupture of cervix. This was repaired and ileo-sigmoid anastomosis done by the valve method on February 13th, 1912. Four days after the operation the soreness and swelling of the wrists began to lessen. In three weeks the arms had gained a great freedom of movement, and in six weeks she was all but reconstructed. A recent letter from her husband states she is not quite so well. In this case, in spite of the valve formation, I would suspect retroperistalsis, with a recurrence of the toxemia.

Case 8. Mrs. K., aged 61, given up to die six years ago from

chronic nephritis, obstinate constipation for five years, colon greatly lessened and patient feeling better. One week after leaving the hospital she died, apparently from exhaustion. In this case the ascending colon was immensely dilated, the coats very thin and dark colored.

Case 9. Mrs. H., aged 39, severe constipation all her life, nervous, frequent periods of mental depression, frequently expressed a desire to die, and hoped when she went into hospital that she would not recover. I have learned to beware of these cases, not that I wish to excuse any failure upon my part. During my tenure with the late Dr. Joseph Price, the only unfortunate case was one woman who brought her shroud with her to the hospital.

On February 29th, 1912, I did an ileo-sigmoid anastomosis.

The operation in this case was rapid and so far as I can tell there was no flaw in the technique, the end-to-side valve method being employed. In five days the symptoms of obstruction were so definite that I decided to reopen, and found intense edema of the whole region of the anastomosis, with complete obstruction. I relieved the obstruction by a longitudinal section stitched transversely, but the whole area subsequently suppurated with fatal results. Had I inserted a rectal tube from the anus through the anastomosis into the ileum at the time of operation, as recommended by Lane, or had I at the second operation made an additional anastomosis above the stricture and also below, the unfortunate fatal result might have been avoided. At the first operation I must have ligated some of the largest veins, thus causing the edema. I hold the operation responsible for this woman's death.

Case 10. Sometimes we look for cases and at other times we have them thrust upon us. This belongs to the latter class. Mr. J., aged 49, in March, 1912, suffered from severe pain in lower abdomen with fecal vomiting. Section showed the ileum constructed by Meckel's diverticulum four inches from the valve, ruptured, and the contents flooding the abdomen. A Murphy button anastomosis between the ileum three inches above the rupture and the sigmoid was done, and the two free ends of the ileum brought out into the wound. The button passed during the second week, the artificial anus closed in two months, and a healthier, ruddier man is rarely seen than this one who through a desperate method has side-tracked his colon.

Case 11. Mr. A., aged 65, this man suffered from inactivity of the bowels and autointoxication with cardiac dilation and mitral regurgitation. Ascites necessitated frequent tapping. Ileo-sigmoidostomy was suggested for bowel drainage and lessening the volume of the portal circulation. On March 26th the operation was performed, a Murphy button being used, but he succumbed to cardiac disease within a week.

Case 12. Mr. M., aged 53, a patient of Dr. McNeill, of Prince Rupert, a prospector, drank a pint of whiskey every day for twenty years, until two years ago, when he gave it up, constipated all his life. Six years ago he began to suffer from cramps in his legs, weakness and vomiting of frothy fluid, especially at night, a choking sensation on chest, at throat, and girdle sensation on chest, with tingling in fingers and extreme constipation. No blood count was made. Urine gave 20% albumen by volume, no casts. The diagnosis was uncertain between pernicious anaemia and syringomyelia. Dr. McNeil gave him *Liq. arsenicales M. 5*, three times a day, increasing it until he took *M. 24*, with great improvement in color and strength, as well as improvement in the heart. This medicine was stopped a few days before the operation, which was done June 11th, in the Prince Rupert Hospital. I give Dr. McNeil's report of this case, received but a few weeks ago:

"He got along very well after the operation. He developed a fecal fistula for a few days, but otherwise he had an uninterrupted recovery. His bowels now move two or three times a day—liquid—color of skin normal, no medicine. Sleeps well and eats well, no vomiting. He got very thin after the operation, but is gaining flesh rapidly now. Twenty-four hours after operation there was no albumen in the urine, nor has there been any since. He breathes better than at any time since I first saw him, and complains very little about the choking sensation, though his fingers still bother him a good deal. He was up on July 2nd for the first time, being 21 days after the operation, and says he feels better than he has for several years."

Case 13. Mrs. C., aged 58. For several months complained of pain in the gastric region. Examination showed stomach and gall bladder normal, but a chronic appendicitis, with adhesions and nodular liver. The appendix was removed and unfavorable prognosis given. Some weeks later ascites developed, necessitating repeated tapings. She grew weary of the procedure and expressed a preference for death than such treatment. With a full understanding of her condition, and the small hope of some drainage through this operation, she accepted it. Early in June I made a simple lateral anastomosis with ligature of the ileum between the opening and the cecum.

While a review of these thirteen cases is neither convincing upon the one hand nor discouraging upon the other, yet it suggests untold possibilities in the adaptation of this simple procedure to a vast array of conditions. Further experience will, I think, convince us that in the vast majority of cases this anastomosis will be but the first step towards removal of the large bowel to the sigmoid flexure. Although many cases show no ill results from the remaining colon, it seems to

me that a part of the bowel divested of its regular current of fecal matter, with a secretion of mucous, must lend itself to bacterial development and fermentation, even if no retro-peristasis were present, but when added to this is the known frequency of retro-action into what is constituted a blind sac, we can but expect in many cases a recurrence of autointoxication after this operation. To minimize this, Groves advocates bringing the distal end of the ileum to the surface or implanting it into the sigmoid a few inches below the proximal end of the ileum. I believe a better method would be to invigorate the distal end of the ileum into the cecum and make an anastomosis between the cecum and sigmoid, below the proximal end of the ileum.

Previous to removal of the colon, or part of it, ileo-sigmoidostomy should receive consideration. Even in malignant cases, the drainage and removal of intestinal fermentation would decrease the intense toxemia so frequently present, and would also improve nutrition, thus adding materially to the success of the radical operation. Another point not to be forgotten is the fact that in secondary operation the surgeon has to deal with a functionless organ with a lessened blood supply, and with one-half the operation previously performed—the anastomosis—the patient has the double advantage of less shock and one-half the anesthetic, both factors of utmost importance in debilitated subjects. In this we are following a most valuable surgical precept, that wherever possible, we should divide all complicated operations in which there is risk of life into proceedings of lesser risk.

In conclusion, I may ask, have we not in ileo-sigmoidostomy a method of relieving over-taxed kidneys, of facilitating portal circulation, of lessening, at least temporarily, bacterial putrefaction, the absorption of toxins, and facilitating their excretion, a method applicable to the treatment of that endless list of conditions, in the causation of which medicine gives autointoxication a prominent place? And finally, we must give it place as the first part of the operation for removal of the colon to which some of us yet look, not without a sensation of apprehension.

The Toronto Home for Incurables held its annual meeting a few days ago. The amount of attendance on patients is steadily increasing. There were 183 patients in the institution at the date of the meeting. The daily average cost is steadily increasing, and it was stated that there was a deficit of over \$10,000. It is noted with satisfaction that the city has agreed to increase the grant on poor patients.

Over thirty thousand dollars has been raised for a new hospital in the town of Cochrane. The hospital is to cost about \$50,000, and will be erected next year.

RADIUM IN GYNAECOLOGICAL CONDITIONS.

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RADIUM has recently been used with varying success in certain gynaecological conditions, and in some of these, which are usually more or less refractory to other forms of treatment, the results have been most encouraging, and indicate the possibility that its use may in future prove of still greater value in this branch of therapeutics.

Among the conditions which are reported to have been favorably influenced by the application of radium are included cancer of the uterus, cancer of the vagina, fibroma of the uterus, metritis, chronic urethritis, inflammation of Bartholin's glands, and pruritus of the vulva. Jacobs, also recommends radium treatment for membranous dysmenorrhœa, chronic pelvic cellulitis, chronic salpingitis, and epithelioma of the vulva, but Finzi's² experience indicates that in the latter condition its beneficial results are problematical, and he is of opinion that in some of the cases which have come under his observation the growth of the neoplasm, instead of being favorably influenced, has even been accelerated by radiation.

The histological changes, which have been demonstrated in malignant growths after intense radiation, are in the first place invasion of the neoplasm by the leucocytes, with accentuation of the normal cell changes. This is followed by disappearance of some of the cancer cells, which are replaced by fibrous stroma, and finally by fibrous tissue. There is also cell degeneration, especially in the superficial portion of the growth, and proliferation of the endothelium of the blood vessels. Wickham and Degrais,³ are of opinion that these changes are of a curative nature, and that there is invariably definite proportion between the intensity of the radiation and the number of cells destroyed. Histological investigations have demonstrated that these degenerative and destructive changes extend to a depth of nine centimetres from the surface.

An important consideration in regard to radium therapy, as applied to malignant disease, is the fact that both the Röntgen and radium rays have been shown to exert an elective influence on cancerous

growths, the superiority of radium in this respect being due to its action on the deeper tissues by means of the gamma rays. This action results in degeneration and destruction of the neoplastic cells only, the normal cells remaining unaffected, and it varies enormously in different varieties of tumors. It is accentuated by increased intensity of radiation, and the use of larger quantities of radium, so that a growth which has proved refractory to small doses for a prolonged period may possibly yield within a comparatively short time to larger doses. The action of the penetrating radium rays is considerably more selective than that of the Röntgen rays, so that they are much more likely to influence deep-seated growths. In this connection it should be borne in mind that, in addition to this selective action varying in different varieties of neoplasm, it may also vary to a certain extent in the same type of growth in different individuals, so that they will not require applications of the same degree of intensity.

This action on certain pathological cells is of the greatest importance in relation to radium therapy, applying, as it does, to the entire series of malignant growths, whatever their histological characteristics, and including rodent ulcer, epithelioma, carcinoma, lympho-sarcoma, round, spindle-celled and myeloid sarcoma. Certain pathological cells appear to possess a definite susceptibility to the action of the rays, in that the latter have a much more powerful influence on them than upon healthy cells, this special susceptibility leading ultimately to their destruction. Dr. Louis Wickham points out that this elective action means only that these pathological cells are less resistant to the influence of radium. The results of experience indicate that malignant growths which run a comparatively slow course are as a rule more susceptible to this influence than those which tend to more rapid development.

It will be obvious that the intensity of the dose should be carefully regulated in individual cases, in order that the destructive action should be superior to the normal resistance of the cell, and that this careful regulation is absolutely essential has been proved by the fact that it has been demonstrated that too small a dose may under certain conditions even accelerate the evolution of the cell, and thus do positive harm instead of good.

Cancer of the Uterus.—The first reference in literature to the employment of radium in the treatment of cancer of the uterus is in a paper published in 1905 by Dr. Abbé, of New York, who has since done a considerable amount of work in this connection. Of the various gynaecological conditions which have from time to time been treated by this method, carcinoma uteri is the most important, and many cases have now been reported in which radium has been of very great service. Dr. Wickham reports several cases which were considered to be

inoperable, but after intense radiation operation was rendered possible, histological examination of the growths removed indicating that they were undergoing progressive retrogression. In two of these cases the patients are reported to be living and in a satisfactory condition three and a half and four years respectively after treatment. In cases of this kind radium has also been found effectual in removing recurrences in the scar tissue after operation, and Dr. Wickham also recommends its use after operation for cancer in this region, as well as in other parts of the body, with the object of preventing recurrence. Applications of radium before operation result in thinning of the neoplastic tissues, and thus facilitate operation.

With the improved instrumental technique which we now have at our command, by means of which radium tubes can be introduced directly into the body of the uterus, a large and suitable field for utilizing the therapeutic qualities of radium has been opened up.

The apparatus which has been recently designed is very adaptable to this region, and as it can be fixed and kept in position for many hours it has the great advantage of allowing of long-continued application of the rays. These technical improvements, and the fact that clinical experience has now shown us the physical qualities of the rays and the quantities of radium which are necessary if we desire to obtain certain definite results, render the treatments of the greatest value in uterine conditions, and indicate the possibility of its taking a still more important position in the future. The small size and convenient shape of the apparatus allows of complete saturation of a uterine cancer with the rays, which are therefore superior to the X-rays in this connection.

Nammacher₄ recommends a combination of radium treatment with curettement in deep inoperable carcinoma of the uterus. He is also in the habit of using radium in operable cases, when operation has to be postponed for any reason, with the object of preventing the growth from becoming inoperable. He reports 16 cases of carcinoma of the uterus, in which he applied radium after removal of the growth. Some of these cases were operated on more than eight years ago, and not one of them has had a recurrence. During the last few years he has adopted as a routine measure a three weeks' post operative course of radium, and is of opinion that it is owing to this practice that his permanent results have been better than those reported by other writers.

Rubens-Duval and Charon₅ state that they have had very satisfactory results from radium treatment in many cases of cancer of the cervix uteri. In some cases the patients remained without recurrence for several months, and in others the beneficial results may possibly be permanent, one patient having been well for one and a half years.

During the course of the applications the tumors diminished in size, ulcers healed, the general condition improved and the patients gained in weight. If possible hysterectomy was performed as soon as retrogression was sufficiently advanced to allow of this, but if the case did not become operable the radium treatment was continued until no cancer cells could be demonstrated in the cicatricial tissue on histological examination. In several cases still under observation the treatment has been discontinued, owing to the fact that the cancer has apparently disappeared. In four specimens, two removed after death and two by hysterectomy, microscopical examination showed retrogression and destruction of the cancer cells. Some of the cases indicate that in an inoperable case it is unsafe to trust an apparent cure, as even after perfect cicatrization, and when the uterus appears to the naked eye to be perfectly free from cancer, it may still contain a disease focus, which may eventually lead to recurrence of the growth. They emphasize the imperative necessity of performing hysterectomy immediately the growth becomes operable.

In very severe malignant cases, especially when associated with profuse hæmorrhage, the patient's condition is frequently so grave that the surgeon is doubtful as to the advisability of incurring the risk of an operation. In such cases preliminary treatment with radium often results in cessation of hæmorrhage, thus improving the general health of the patient sufficiently for removal of the growth to be undertaken under more favorable circumstances. Oudin and Verchère, in a publication on the treatment of uterine fibromata by radium, state that in their experience the applications have often resulted in cessation of obstinate hæmorrhage, which has resisted other forms of treatment, and that this has been accomplished by a certain amount of diminution in the size of the tumors and subsidence of the surrounding inflammatory infiltration, together with restoration to a certain extent of mobility to the fundus of the uterus, so that the patient has been in an excellent condition for a radical operation. They have arrived at the conclusion that in cases in which there is any contra-indication to immediate surgical intervention there is every justification for a trial of radium treatment, as it does not involve any risk, and in the majority of cases its results are beneficial.

N. S. Finzi, states that in his opinion carcinoma of the cervix is certainly relieved by radiation, and that in some cases inoperable growths are rendered operable. He thinks that whether in such cases it is advisable to recommend operation followed by radium treatment or radium treatment alone should be dependent on the conditions in the case under consideration and the rapidity of the improvement which has resulted from the preliminary radiation.

Wickham and Degrais report the following results from treatment by radium in cancer of the uterus: Excoriation of neoplastic nodules, cessation of hæmorrhage and secretion, relief of pain, diminution in and disappearance of foetidity, and retrogressive evolution in the deeper portions of the growth. They report two inoperable cases of this nature, one associated with severe and intractable hæmorrhage, and the other with intolerable pain. In the first case a few series of applications of radium resulted in cessation of hæmorrhage and disappearance of foetidity, and the patient lived until a year later, when she died from cancerous cachexia. In the second case, in which large quantities of morphia had been given for relief of pain, there was complete cessation of pain after two months' radiation, and the general condition had greatly improved. In a case of recurrence of cancer after operation, twenty-three applications of radium resulted in complete cessation of discharge, and the local conditions were so much improved as to allow of the assumption of cure. There had been no recurrence when the patient was seen four years later.

It will thus be seen that radium has already proved of great service in disease of the uterus, and that it is a most useful adjunct to surgery in this region, as well as in other parts of the body. In inoperable cases it often facilitates surgery by reducing the thickness of the neoplastic tissues and diminishing the malignity of the field of operation, and from a prophylactic point of view most satisfactory results have been obtained from post-operative radiation of cicatrices. Even if operation is not rendered possible, in the majority of cases of malignant disease of the uterus radium treatment is beneficial to a certain extent in relieving intolerable pain and diminishing discharge. In some cases the "cross fire" method, namely, a combination of internal and external applications, is of great service. Owing to the facility with which radium tubes can be introduced into the body of the uterus, uterine conditions are very suitable for treatment, and in addition to this the analgesic, hæmostatic and decongestive properties of the rays are adapted to meet the requirements in the treatment of malignant disease of this organ. It is advisable to select apparatus by means of which applications of the greatest possible intensity can be given, in order to avoid the disadvantage of too long continued applications.

J. H. McLeod, states that in his experience the destructive action of radium in relation to the cancer cells has not apparently been so marked in cancer of the uterus as in more superficial conditions, but he thinks that this peculiarity may very possibly be explained by the difficulty of access to uterine growths, of watching and controlling the radium applications, and also by the great rapidity of malignant proliferation.

In this connection we would report three inoperable cases where the use of radium has been of distinct benefit. The first of these cases was reported by us in January, 1911, and the improvement has been continued.

Case 1. A patient, aet. 53, referred by Dr. Tuttle, of Tweed, Ontario, first noticed a bloody uterine discharge in January, 1910. She did not consult a physician until June. The cervix was cauterized, but serious hæmorrhage recurred, and in July she underwent an operation at the hands of a leading gynæcologist in Toronto, when the uterus was curetted, and the cervix amputated. This was all that was done, as, in the surgeon's opinion, the left ureter and bladder were involved, and hysterectomy would not be justified. A very grave prognosis was given.

On August 15 she consulted regarding radium treatment. The discharge, pain, and irritability of the bladder had continued. Dr. F. A. Cleland, gynæcologist at St. Michael's Hospital, Toronto, was called in consultation, as it was felt that the treatment should be surgical, if possible.

The condition at that date, as reported by Dr. Cleland, was as follows: "On August 15th, in the vault of the vagina, and where the cervix had been removed, was a raw, bleeding, granular surface, about two inches in diameter, extending into the vaginal wall. The left side was more involved than the right, and in order to remove the growth completely, an extensive dissection would have been required, and probably the removal of the left ureter.

"The uterus was fixed on the left side, and examination by bimanual method caused a good deal of pain. The body of the uterus was not enlarged.

"In view of the extensive operation which would have been necessary, and the uncertainty of complete removal, radium treatment was advised."

This patient has been under observation for over two years. Her general health has much improved, and she has increased in weight. At intervals, prolonged exposures to the radium rays, from tubes placed against the cervix, have been given. Local examination at present (September, 1912) would indicate that there has been no extension of the disease. The uterus is, if anything, more movable than at first, and there are no bladder nor bowel symptoms. The ulcerated area of the cervix has decreased, and now presents a small central ulcerated area, surrounded by firm fibrous tissue. There is no odor to the slight discharge.

Case 2. First came under observation on June 15th, 1911. The disease was considerably more advanced than the first case. She had been curetted as a palliative measure, but had had considerable bleeding since. Dr. Cleland was consulted as to the possibility of surgical treatment. He found the uterus fixed to the surrounding parts, and considerable extension on to the bladder. The cervix presented a large area of ulceration, which bled readily. Encouraged by the results obtained in Case 1, we decided to try radium. Almost from the first the bleeding stopped and the patient put on weight. She was able to be about, and enjoys a comfortable life. She has been continuously under observation since. There is an occasional slight bleeding, and some abdominal pain, no doubt caused by the adhesions to the surrounding organs. Dr. Cleland has also seen her from time to time, but has not advised further curettage or other operative measures, as the radium treatment seems to be holding the disease process well in check.

Case 3. Patient, 52 years of age, referred by Dr. Brandon, of North Bay. Came under observation March 3rd, 1912. She suffered from a cancer of the cervix, and had been curetted some weeks before. She was having almost continuous hæmorrhages, was confined to bed, and the condition was regarded as so desperate that her husband was told by a surgeon in consultation, that nothing could be done but wait for the end. When seen the condition was most assuredly a grave one. She was weak and exhausted from constant loss of blood. On examination the cervix was quite excavated, forming a crateriform ulcer, and the growth had extended on to the vaginal walls. Dr. F. A. Cleland, who was called in consultation, agreed as to the inoperable character of the case, and advised that radium treatment should be tried. She was given a very heavy exposure, much more than either of the previous cases. The bleeding soon ceased, and has only reappeared occasionally since. She put on weight, and was soon able to be about each day. The area of ulceration has steadily lessened, and all macroscopical evidence of cancerous growth in the vaginal walls has disappeared. In the past six months she has received four heavy exposures to radium, with apparent arrest of the process.

Metritis.—A fairly large number of cases of chronic catarrhal metritis have now been treated by radium, and the various writers on the subject are unanimous in the opinion that there is no doubt of its favorable influence on the condition. The instrumentation which has recently been devised has great advantages in this connection, and corresponds perfectly to the essential requirements. It is advisable, as far as possible, to avoid any irritation to the mucosa, and radium tubes capable of giving an intense degree of radiation are the most useful.

In some cases it may be found necessary to modify the technique in the course of the applications, owing to the pain caused by the mechanical pressure. Radiation results in retrogression of the diseased tissues and cessation of the hæmorrhage and pain.

Dr. Wickham reports an extremely severe case of metritis in which operation was not undertaken. Two months after discontinuing radium treatment the general condition was good, the cervix apparently normal, and the symptoms of metritis had disappeared. In several other cases which have come under his observation the metritis has been completely cured in a month to six weeks after the end of the course of treatment, and in all these cases hysterectomy has shown that atresia of the cervix has never been produced. He concludes that in metritis radium treatment, with or without curettage, is absolutely indicated, but should be tried only when the case has failed to respond to other forms of treatment.

Chronic Urethritis.—Although the results of radium treatment in this condition have so far been very uncertain, it has been beneficial in several cases, and it is therefore justifiable to undertake it when the usual therapeutic measures have been tried without success.

Pruritus and Vulvar Vegetations.—Good results have been obtained from the use of radium in such cases, chiefly owing to its analgesic properties. Wickham reports the case of a woman aged 62, who suffered from vulvar and perineal pruritus of ten years' standing. After two series of applications the patient had long intervals of comparative comfort, and the pruritus gradually disappeared altogether.

Lupus of the Vulva.—Improvement has also been reported in cases of obstinate lupus of the vulva, and in chronic ulceration, presumably due to blenorragia.

Dr. Wickham strongly emphasizes the imperative necessity of the association of radium treatment with surgery whenever possible, and that it should not be regarded as an independent form of treatment, but merely as an adjunct to surgery. Up to the present it has been chiefly employed in inoperable cases, but it has an extensive field of usefulness in the pre-malignant stage and in post-operative prophylactic treatment, and it has been found of great service to surgery in rendering operable tumors which are inoperable or practically inoperable.

In these inoperable cases, although it does not replace surgery, it may often with great advantage be used in combination with surgery. Wickham and Degraís conclude that it is one of the best forms of pal-

liative treatment which we have up to the present, that it often prolongs life considerably, and even if it does not do this, may enable the patient to pass the remainder of her existence in comparative comfort. Finzi₁₀ is of opinion that, whilst it cannot be regarded as a universal panacea, which will infallibly cure every type of malignant disease, cases may be cured by it which are refractory to all other forms of treatment, and that in future it is certain to take a very prominent place in the treatment of malignant growths, and that where it does not cure it will often relieve. He also emphasizes the importance of prophylactic radium treatment as a routine measure, and of post-operative treatment, with the object of destroying residual neoplastic cells, which may have escaped the attention or have been beyond the reach of the operator. In some cases and in certain forms of growth, it may even supersede surgery and obviate the necessity for operation.

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The seventeenth International Congress of Medicine will meet in London, August 6th to 12th, 1913. His Majesty the King is the patron. H.R.H. the Duke of Connaught will open the congress on 6th August at 11 a.m. Sir Thomas Barlow is president; G. H. Makins, F.R.C.S., and Sir Dyce Duckworth are treasurers. Sir A. P. Gould and Dr. W. P. Herringham are the secretaries. The central office is 13 Hinde Street, London, W.

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE TREATMENT OF PAROXYSMAL TACHYCARDIA.

Rudolph Kaufmann (*Wien, klin. Wochenschr.*, No. 28, 1812) has carefully studied the action of physostigmine in a few cases of paroxysmal tachycardia. Although the instigation to this study was in fact partly accidental, it should occasion some surprise that investigation of this subject has not already been made. The case which by chance inaugurated Kaufmann's research was one of post-operative meteorism, in which tachycardia and low blood-pressure were prominent features. The meteorism for which physostigmine was given was reduced but slightly—so slightly that Kaufmann was disposed to consider the relatively much greater improvement of pulse-rate and pulse tension as a primary action of the physostigmine. Further, in accordance with this view was the fact that the alimentary symptoms were in some respects made worse. Difficulty in swallowing set in simultaneously with pulse improvement. There was a sensation that food, even fluids, were retained somewhere at the level of the upper half of the cardiac region owing to œsophageal spasm. He regarded these as signs of a co-ordinate physostigmine action on the vagus. [It might here be noted that Winterberg, Loewi, and Mansfield have shown that physostigmine stimulates the vagus nerve-endings.] Following upon this observation Kaufmann studied the action of physostigmine in cases of long-standing paroxysmal tachycardia. He administered physostigmine alone, and also in combination with digitalis and strophanthus. The object of the combined administration was to ascertain whether the stimulating action of strophanthus and digitalis on the vagus can be increased by the sensitising action of physostigmine on the vagus endings.

Some of the cases treated were examples of atrio-ventricular tachycardia, and a considerable part of Kaufmann's paper is concerned with a minute study of cardiac, radial artery, and jugular vein tracings, necessary for the elucidation of the action of physostigmine. Kaufmann regards this procedure as a desirable preliminary to the therapeutic administration of the drug, for reasons which will be given hereafter.

It is not needful to refer at length to the details of Kaufmann's experiments, except to say that the exact diagnosis was established, and

the effect of the treatment shown graphically by a Jaquet's kymograph. Many interesting curves are reproduced to illustrate the main points of the contribution, which, at least in the clinical therapeutic sense, breaks entirely new ground. The results obtained are briefly as follows:—In three cases of the atrio-ventricular form of tachycardia, physostigmine gave most satisfactory results after all other forms of treatment had completely failed. Of the latter, digitalis, digalen, strophanthus, morphine, opium, rest in bed, ice applications, and others are mentioned in the case reports.

In one case of the auricular form of tachycardia, and in one of the ventricular form, physostigmine had no apparent effect. Kaufmann has also tried physostigmine in numerous other cases of tachycardia, in such varieties as arrhythmia perpetua, the tachycardia of exophthalmic goitre, and in the reflex form, with the following results:—In several cases of exophthalmic goitre small doses were ineffectual, and larger doses (over $1\frac{1}{2}$ mgrms. by the mouth) have not yet been tried. This finding corresponds with that of the writer, who has used pilocarpine.

In two cases of reflex tachycardia Kaufmann has experience of a satisfactory kind with physostigmine. One of these cases has already been mentioned in the introduction to this abstract. In the second case digalen treatment completely failed to reduce the pulse frequency after large doses (45 drops daily, injection of 2 c.cm. daily), while the administration of 3 mgrms. physostigmine, combined with three digipuratum tablets, reduced to the frequency from 130 to 80 within 24 hours. After the further administration of two tablets and one mgrm. of physostigmine the rate was reduced to 56. Treatment was then stopped, and the pulse rose immediately to 108. The cessation of treatment was partly for experimental reasons, but also because of the possible risk of pushing physostigmine after obtaining so decided an action as the above figures indicate. Eight days later the administration of two tablets of digipuratum had no effect on the pulse-rate. Kaufmann mentions this case as an example of others for which he regards the combined treatment as of the very highest value—*lebensrettend*.

In cases of arrhythmia perpetua he has never seen any important effect from treatment by physostigmine alone. The results obtained were merely such as are observed after the patient has rested in bed and has otherwise been removed from harmful influences. In this class of case he has also used the combined treatment above referred to, but is unable to say whether it has any advantage over treatment by digitalis alone. Some of his observations indicate, however, that a good result is more quickly and fully attained.

The number of observations made do not afford a basis for determining absolutely which cases are most suitable for physostigmine treatment. On the other hand, those treated with satisfactory results are all of a certain type.

So far as can be said at present, physostigmine is effective only in cases in which by vagus stimulation a diminution of the pulse frequently can be expected. This statement applies above all to cases of the atrio-ventricular type of paroxysmal tachycardia. Hering, Rothberger, and Winterberg have produced a similar condition in animals by paralysing the vagus with atropine and stimulating the accelerator. By stimulating the vagus Lewis was able to inhibit the experimentally-produced atrio-ventricular tachycardia, and the clinical form has been suppressed by pressure-stimulation of the vagus (Belski and Hering). Kaufmann's observations on the treatment of atrio-ventricular tachycardia by physostigmine are nearly analogous to these experimental observations.

The pathogenesis of peritoneal tachycardia is sufficiently obvious to permit some explanation of the beneficial action of physostigmine. When vascular paralysis of the peritoneal area occurs, blood-pressure falls, with consequent lessening of vagus tone and increase of pulse frequency. Physostigmine, by stimulating the vagus nerve-endings, renders them more sensitive to the action of digitals. It is thus theoretically suited to counteract the reduction of vagus tone occurring in cases of peritoneal tachycardia. As to the dosage, Kaufmann gave 3 mgrms. subcutaneously in the course of twelve hours in the first case. In another he gave by the mouth three minims thrice daily of physostigmine salicylate (1:000) equals 0.5 mgrms. The dose was gradually increased to 1.5 mgrms. daily. By this method of administration Kaufmann observes that the symptoms slowly but definitely improved. Thus on 22nd January there were 16 attacks, lasting for 128 minutes. On 23rd treatment was begun in the form just described. On 31st January there were 4 attacks, lasting for 4 minutes. Thereafter, until 11th February, with the exception of a few slight symptoms, partly owing to the excitement arising from clinical demonstration, there were no attacks of tachycardia. On 11th February the patient went home on his own request. He was advised to continue the treatment, and did so for weeks with interruptions. No disagreeable by-effects occurred, but when the treatment was stopped for a time the patient returned to hospital for a renewal of his prescription to obtain relief from slight attacks. He reports this year that no attacks have occurred "*set langer Zeit.*" Single doses of 10 minims 1:1000 were given with digalen in another case. Digalen, morphine, and bromide had previously been given without effect. When physostigmine was

given the pulse dropped from 200-208 to 100-108, and on the following day to 77-80. The further course of this case is somewhat similar to the one already described. During one of the attacks a dose of $\frac{3}{4}$ mgrm. was given subcutaneously with prompt relief. Instances are given of cases (not atrio-ventricular) which responded to comparatively small doses of physostigmine in the course of digitalis treatment which was previously ineffective. The combination is thus a form of treatment which promises to be a valuable addition to our resources in the management of several refractory types of tachycardia, and perhaps especially the atrio-ventricular type.—*Edin. Med. Jour.*

POLIOMYELITIS.

Simon Flexner, New York, (*Journal A. M. A.*, October 12), says that the problem of prevention of infection is more important in the case of poliomyelitis than in that of some other diseases, because at present there exists no specific or curative treatment, and second, when the disease is first recognized it has already caused irreparable damage. An understanding of the mode of infection will lead us to measures of prevention that may be reasonably expected to lessen the spread of the disease. The virus of the disease attacks chiefly the nervous system, and has been found regularly by inoculation experiments on monkeys in the spinal cord and brain. It has also been detected in the mucosa and secretion of the nose, throat, stomach and intestines. Flexner follows up the infection as it occurs in man, and holds the opinion that the nasal mucous membrane is the avenue of ingress and egress in the human species. It must have some external point where it enters, and it is established that the virus passes with readiness and constancy from the intact or practically intact mucous membrane of the nose to the central nervous system, and that this, next to the direct inoculation of the brain, affords the readiest cause of the disease. The clinical evidence is also strong that there are healthy human carriers of the disease, which may account for the sometimes unaccountable spread. "Like epidemic meningitis, it appears in a frank and an abortive or ambulatory form, is transmitted by a virus that enters and escapes from the body in the region of the mucous membrane of the nose and throat, can be transported by active infected carriers, as well as by healthy passive carriers of the specific micro-organism of virus, and fortunately is limited in its extension by a high natural indisposition or insusceptibility to infection existing among persons of all ages."

DANGERS OF SALINE INJECTIONS.

Hort and Penfold do not think that saline injections are by any means so innocuous as is generally supposed. They base their opinion upon the recorded harmful results and upon animal experimentation and bacteriological studies. From these data they conclude that the injection of saline solutions as at present administered is far from free from risk, especially when the quantity used is large; that the toxicity which develops in distilled water which is allowed to stand in sealed sterile vessels is not yet explained; that the fever which follows the injection of salines cannot be prevented by boiling, centrifugalizing, or filtration, even through bacterial filters; and, lastly, that the only trustworthy method of preventing this fever is by distillation of the water immediately before its use in the injection.

CIRRHOSIS OF LIVER WITH ASCITES.

At a recent session of the Berlin Medical Society, as reported in the *Berliner Klinische Wochenschrift*, of March 25th, Bier presented to the society a patient, probably the only known case, who had been successfully operated on for cirrhosis of the liver with ascites by the making of an Eck's fistula. This operation consists in an anastomosis of the portal vein with the vena cava, after which the latter is ligated. Of course, such an operation could only be performed on cases where the portal circulation is already hopelessly obstructed. It is only recently that improvements in technic have made it practically permissible on a human being. Since its introduction in 1877, it has been used in animals for experimental studies of the physiology of the liver. In Bier's case, a woman of 60, although the intervention had been well tolerated and four months had elapsed to the time of his report, still the improvement expected had not been very noticeable. It is probable, therefore, that this case will be well studied before others similar are undertaken.—*Post Graduate*, June, 1912.

TREATMENT OF PAIN IN TUBERCULOSIS.

H. Pallard, in *Progrès Médical* for February 3, 1912, advises the use of subcutaneous injections of boiled water in cases of pain of neuralgic type in pulmonary tuberculosis or other affections. He has given several hundred injections of this kind, and finds that the procedure may be depended upon in all cases to give relief within one-half to one hour, provided that the injection is made exactly at the point

where most pain is elicited by palpation. The discomfort caused by the injection itself is very slight. Not more than one or two c.c. of water should be injected. Generally the pain does not return for several hours. In other instances the injection should be repeated. That the effect of this measure is not a psychic one is indicated by the recent experiments of Surmont and Dubus, who showed in rabbits that injection of distilled water in the vicinity of the sciatic nerve brings about edema of the nerve, with infiltration of fluid between and around the fasciculi and sometimes congregation of leucocytes locally.—*N. Y. Med. Jour.*

TREATMENT OF ACUTE GONOCOCCAL ARTHRITIS.

Felix Ramond, in *Progrès médical* for April 13, 1912, reports having obtained good results in cases of acute gonococcal arthritis of moderate severity by subcutaneous injection of the fluid obtained by puncture from the involved joint. After disinfecting the skin with tincture of iodine, the joint is evacuated and ten c. c. of the fluid obtained set aside. Sterile air is injected into the joint in amount equal to the fluid removed, and also into the periartritic cellular tissues. The subcutaneous injection of fluid from the joint is then given, after which the joint is firmly bandaged and placed at rest in a trough. As soon as pain permits, mobilization and massage of the joint are practised. The puncture and subcutaneous injection of fluid are repeated every six or eight days, if required.

The effect of the treatment is to diminish the pain and swelling, cause the effusion to disappear, and prevent ankylosis and atrophy in all but rare instances. Some cases were cured by a single injection; only exceptionally were favorable results not noted after the third injection.

The danger of infecting the patient by injecting the intra-articular fluid is but slight, as it is well known that the gonococcus disappears from the joint within a few days after its involvement. All risk, however, can be eliminated by heating the fluid to be injected to 45 degrees C. for half an hour; the fluid preserves its biological properties, but contains no more living gonococci.

THE CLINICAL DIAGNOSIS OF RENAL INSUFFICIENCY.

Fulton, *Inter-State Med. Jour.*, July, 1912, in a paper of interest makes the following statements:

The physician should, in bedside work, consider the subject from the functional standpoint rather than as a pathologist.

It does not matter how badly damaged a kidney is so long as it performs its functions; nephritis may exist without renal insufficiency.

Renal insufficiency may be marked even when albumin is absent from the urine.

The use of the sphygmomanometer, ophthalmoscope, stethoscope, and physical examinations, give more reliable data than do the urinary findings.

Physiological tests of the kidney functions are unfortunately of dependable value only in surgical nephritis; in other forms of nephritis they show too great variations.

The measurement of the urea output is of undoubted value, *if the intake of food substances is known.*

SURGERY IN EPILEPSY.

W. A. Bryan, (*South. Med. Jour.*, April, 1912), says that certain cases of true epilepsy are curable by operations. The percentage is small—2 to 8 per cent. Certain other cases may be benefited by surgery in reduction either of the number or severity of the attacks—possibly twice the number susceptible to cure. The majority are not benefited at all, and a very small percentage are made distinctly worse. The greater the ancestral taint and the longer the time since the onset of the disease, the less the chance of cure. Epilepsy is not essentially and wholly a surgical condition. Even when surgery is done it should be understood by all concerned that the treatment is only begun, and the most painstaking regulation of the patient's life must be ordered and supervised by competent attendants for a long period of years afterwards. The correction of all traumatic defects at the time of their occurrence, if they could with reasonable assurance be suspected of initiating epilepsy, would prevent many cases of epilepsy.

CURE OF SEVERAL INOPERABLE CARCINOMATA BY THE USE OF ANTIMERISTEM.

Otto Schmidt (*Zent. f. Gyn.*, Dec. 23, 1911) says that a number of cases of inoperable carcinoma have been treated with the new vaccine called antiméristem, with good results. This vaccine should in no way take the place of a radical operation whenever that is possible, but since one never knows whether all of the growth has been removed,

antimeristem, which is quite harmless, may always be used to assure against recurrence. The author gives the histories of three cases treated by this measure with success. In the first, a case of cervical cancer, the operation was first performed, but there were carcinomatous portions of the parametrium that could not be removed. Under the use of antimeristem all these disappeared and two years later the patient still remained in good health. The second case was also one of inoperable carcinoma of the cervix uteri. Here also the carcinomatous tissue was removed as far as possible and the antimeristem was injected, with a like result after one year of observation. In the third case all signs of the cancer had disappeared when treatment ceased. These cases show that one should first attempt to remove all cancerous tissue, disinfect the site as far as possible and keep it drained and disinfected while making use of the vaccine. By so doing we may prevent recurrence at least for some months or years in an otherwise incurable case.—*Am. Jour. of Obs. and Dis. of Wom. and Chil.*, May, 1912.

Trousseau remarks that certain persons whose bowels never move except by the most energetic purgatives, obtain a daily stool by the smallest dose of belladonna.

Amyl nitrite still remains the most efficient drug in the attack of angina pectoris. Sodium nitrite acts too slowly, but it may be given in the intervals to ward off attacks. Erythrol tetranirate is uncertain in its action. Potassium and sodium iodides are considered useful agents, but I cannot say that I am convinced of their value.

SURGERY

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

RECTAL HINTS.

BY JEROME WAGNER, M.D., NEW YORK.

In operating for fistula in ano do not hesitate to cut the sphincter, provided the line of incision is at a right angle to the muscle fibers. Incontinence will not result unless the muscle is divided obliquely.

Appendicostomy is indicated in inflammatory conditions of colon, knowing as we do, the futility of trying to reach these lesions with high rectal irrigations. The inflammation may be of a severity sufficient to

require shutting off of the fecal current. In these cases an artificial anus is the most effective procedure, giving the affected area a chance to heal without the constant irritation of fecal matter. It is often surprising to see how quickly improvement or a cure takes place.

To control rectal hemorrhage knot together two strips of gauze, twist one in a spiral about the other, and introduce this into the rectum through a speculum, the knotted end first. Remove the speculum and pull the end hanging free, from the anus. In this way a solid plug of gauze is formed in the rectum.

Many fistulae fail to be cured by operation because all the tracts are not opened. To obviate this, inject before operation a 50 per cent. solution of methylene blue and hydrogen peroxide into the fistulous opening. Thus, the smallest ramifications of the tract are stained blue and cannot possibly be overlooked.—*International Journal of Surgery*, Aug., 1912.

FRACTURES AT THE ELBOW IN CHILDREN.

Dr. W. Campbell (*Am. Jour. Obst.*, April, 1912) points out that a child's elbow is not a miniature adult elbow, but is formed by epiphyses in the process of development. An exact knowledge of the development of the elbow is necessary to interpret the radiograph and reduce the fragments. As the child resists a local examination and the muscles are contracted, it is necessary to induce anesthesia just sufficient to relax the muscles and permit free palpation. The localization of ecchymosis should be noted. If it surrounds the elbow supracondylar fracture should be suspected; if it is localized—fracture of the condyles. In palpation the normal anatomical relations of the uninjured elbow should be noted. If the thumb and middle fingers be placed on the internal and external condyles and the index finger on the tip of the olecranon, then when the forearm is fully extended the three bony points lie in the same transverse line. And modification of the normal relations of these three points is due to fracture or dislocation. The head of the radius can be felt in the dimple behind the elbow. Its rotation is manifest when the forearm is pronated and supinated. In injuries about the elbow the determination of the position of the radial head is of prime importance. The "carrying angle" of the two arms—the obtuse angle which the extended forearm forms with the arm should be compared; this angle is modified in certain fractures of the elbow. The movement of the elbow joint, both flexion and extension, should be noted; remembering that there is normally no lateral motion in the extended elbow-joint. Each fracture is a special

problem with its individual needs and its peculiar indications, but the following precepts are considered a safe guide in all cases: 1.—A clinical examination under anesthesia is the first requisite, but it is never sufficient; it must be supplemented by an X-ray examination. The radiographs should be made and interpreted by a radiographer of experience. 2.—Reduce the fracture by such manoeuvres as are efficient in accurately coapting the fragments. Care should be taken to avoid any rough manipulation which only exaggerates periosteal lesions and consequent impairment of function. Firmness and gentleness are always more effective. 3.—Immobilize permanently only when certain that reduction has been obtained, and that the position of the arm and the splint are adequate to maintain reduction. This will be evidenced by (a) normal conformation of the parts; (b) a normal range of flexion and extension; (c) the confirmation of a second radiograph. The procedure should be as follows: After reduction has been obtained and the arm placed in that position which seemingly is most efficient in maintaining reduction, a temporary splint should be applied and a radiograph taken; if the picture confirms the accuracy of reduction and efficiency of immobilization, then the temporary splint should be made permanent. And no permanent immobilization should be attempted until satisfactory evidence has been obtained that the reduction, position of the arm, and splint are as perfect as the character of the injury permits.

HINTS ON FRACTURES.

By JOSEPH E. FULD, M.D., NEW YORK.

It is necessary to watch fractures of the ribs carefully for a couple of days to note the onset of possible pulmonary complications. Localized pneumonitis sometimes occurs.

In strapping the chest for fractured ribs, the straps should pass well beyond the median line. They should be applied during a full expiration. One or two straps passed over the shoulder help much to secure immobilization.

A hematoma of the scalp may simulate a depressed fracture of the skull. If the finger is firmly pressed upon the centre of the swelling, the smooth hard skull can be felt, while in fracture the centre is soft.

Systematic examination of the whole body should be made in every accident case. Thus I have seen a Colles' fracture which had been treated elsewhere for three weeks for something else. One patient, a child, was brought to me with an unrecognized malunited fracture of the

clavicle. This class of cases makes good material for mal-practice suits.

It is to be remembered that fracture of metatarsal bones may be caused by slight injuries. Thus, the base of fifth metatarsal may be fractured by a twist of the foot while walking or dancing.

The value of the X-ray as a means of diagnosis cannot be over-estimated. It is surprising how much information can be obtained from a skiagraph, but it must be remembered that the bones are shown only as shadows and are subject to distortions, and the condition may be misinterpreted unless the examination is made by one experienced in radiography.—*International Journal of Surgery*, June, 1912.

THYROID IMPLANTATION.

We are, indeed, in a wonderful age, and especially has surgery made enormous advances. Lately we find reported a remarkable case by Dr. Payr, director of the Leipsic Surgical Clinic, who attended an idiotic child and on whom he performed an operation consisting of the implantation of a part of a normal thyroid gland in the child's kidney. Mental regeneration is said to have immediately started and within one month the child was dismissed from the hospital practically cured with the implanted thyroid gland maintaining its functional capacity in the new body. Dr. Alapy, director of the surgical section at the Pediatric Clinic in Budapest, says that while the administration of thyroid gland to idiots and cretins is neither new nor altogether satisfactory, because the improvement realized is only temporary, Professor Payr's method promises lasting cure in as much as the alien thyroid gland, if developed in other parts of the body, intrinsically produces the fluid which supplies the blood with that constituent and the lack of which causes idiocy. Professor Payr has before this attracted attention by the successful transplantation of different organs into animals and human subjects.—*Post Graduate*, June, 1912.

THE PAIN SIGNAL IN DIAGNOSTICATING APPENDICITIS.

Leven states that there are gastric crises which simulate appendicitis. These crises are connected with lengthening and dilatation of the stomach when not due to pyloric spasm. Differential diagnosis may be speedily made by means of the pain signal of the author. To elicit this, the patient is placed erect before the physician, who delimits first, on the line between the umbilicus and the xiphoid cartilage, the region where pain is

most acute on deep palpation. When this zone is found, an assistant places his forefingers on the sensitive point and presses down so as to elicit pain. Then from below upwards, beginning above the pubis, the physician raises the abdominal contents by profound pressure with his thumbs placed end to end on the median line till he reaches the umbilicus. The patient states when he ceases to feel pain from the deep pressure; that moment signalizes the lifting of the lower border of the stomach and demonstrates that the pain does not come from an inflamed appendix.

APPENDICITIS: THEN AND NOW.

BY JNO. C. KING, M.D., BANNING.

I report the following case merely as an illustration of the change that has occurred during the past thirty years in the attitude of the profession toward appendicitis. In the summer of 1880 I attended a case of what we then called peri-typhilitis. An abscess formed. The patient became very ill. I requested a consultation with a view to operation. The consultant, an able man of large experience, decided that operation was unjustifiable and advised ointment of iodile of potassium, well rubbed in. Forty-eight hours later, feeling that operation was imperative, I sent to Cincinnati for a well-known surgeon, professor of surgery in a college there. Upon examination he declared the man would die under any circumstances; that he would not risk his reputation by operating; that aspiration of the pus was the only thing good surgery demanded. (He kindly offered to send me an aspirator.) The patient was becoming septic; so, after another forty-eight hours, I insisted upon opening him. He gave consent. I asked a number of physicians to give ether, but, although several of them had anesthetized patients for me for other purposes, none would give ether in this instance, deeming it improper to attempt operation. I finally told the man to get another doctor; that I felt he would die unless the pus could be removed; that none of my friends would assist me in doing what I thought needful. He replied that I could go ahead without an anesthetic; that he could stand it if I could. The patient's brother had threatened to kill any one who would attempt to cut him; so, while his wife stood guard at the door, I cautiously opened the abscess. It is difficult to realize that what we now deem so simple and necessary a procedure should then have been considered so absolutely wrong. The tension in the abscess was such that the pus spurted up not less than an inch when the knife reached it. I evacuated all I could and dressed the wound. Before my return the next day, one of my colleagues, a

leading man, visited the patient unbidden, removed the dressings and examined the wound, notwithstanding the protest of the wife. He declared the man would die; that I had been guilty of malpractice; that he would be glad to be called upon as a witness in the prosecution that he knew must follow; that he had taken the liberty of examining the patient before death with that end in view. A year ago Dr. T. B. Wright, of Pasadena, brought to me a message from the patient, Col. M. V. B. L., of Circleville, Ohio, to the effect that he was still living. This story is amusing and almost incredible now, but thirty-two years ago it meant a real battle for a very young and fairly ignorant surgeon.—*Calif. State Jour. of Med.*, Aug., '12.

TREATMENT OF ABSCESSSES OF THE MIDDLE PALMAR SPACE.

As Kanavel takes pains to emphasize (*Infections of the Hand*, Lea & Febiger, Publishers, Phila.) the middle palmar space is a grave responsibility; the diagnosis is difficult, and, on the other hand, the danger of delay is great. It is probably better to err upon the side of radicalism, however, than conservatism, owing to the liability of complications in the ulnar synovial sheath, the bones, and the joints.

Any method of opening the space exposes certain tissues to injury, and it is a question of choosing the least dangerous route. It cannot be opened upon the ulnar side, owing to the fear of infecting the ulnar bursal sheath; a flap of the palmar fascia should not be dissected up from below, as has been suggested, making a sort of trap-door, as it were, since the infection lies below the tendons, and to make such an opening and then drain anteriorly between the tendons would result in unnecessary adhesions.

The least injury and the most efficient drainage of the middle palmar space can be secured by an incision along one of the three lumbrical canals leading into this space; i.e., the little finger, ring finger, or the middle finger canals. That canal will be chosen which is already markedly infected, either because it has been the atrium of the infection or because it has been secondarily involved. If the surgeon has any choice in the matter, that between the ring and the middle finger gives the most satisfactory drainage. An incision is made into the canal and carried one-half inch above its end up into the palmar space; i. e., one-half inch proximal to a line joining the proximal end of the distal flexion crease with the distal end of the middle flexion crease, or, grossly speaking, a thumb's breadth and a half up into the

palm. This brings the incision between the tendons. An artery forceps is thrust under the group of palmar tendons and the blades opened, satisfactory drainage ensuing. A small strip of gutta percha or gauze saturated with vaseline will keep the opening from closing for a day, after which time it will not be needed. The author credits Dr. F. A. Besley for the suggestion as to this method of incision. It is remarkable how rapidly cases will recover under this treatment.—*Int. Jour. of Surgery*, Aug., 1912.

GYNÆCOLOGY

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

AN EARLY SYMPTOM OF EXTRAUTERINE PREGNANCY.

A. Solowij (*Zentralblatt für Gynäkologie*, February, 1912) calls attention to a symptom which he believes is of value in those cases in which the usual evidences of an extrauterine pregnancy have not yet appeared. He states that the first thing to be noted in the pelvis in such cases is an irregular resistance elicited on examination of Douglas's pouch. This is to be felt on the side in which the abnormal pregnancy has occurred, is slightly painful and of a doughy consistency which gradually invades the Douglas space itself. It is necessary to examine suspected cases repeatedly in order to be able to detect this resistance as soon as it appears. Solowij describes two cases in which this sign was present, that were subsequently operated and the diagnosis confirmed, in which the only thing to call attention to the possible existence of the extrauterine pregnancy was the slight irregular hemorrhage after a period of amenorrhea.—*American Journal of Obs. and Dis. of Women and Children*, May, 1912.

THE ULTIMATE RESULTS OF THE CONSERVATIVE SURGERY OF THE OVARIES.

Edward Reynolds (*Surgery, Gynecology and Obstetrics*, March, contends that in many cases of cystic disease in the ovaries and tuberculosis, it is practically never necessary to remove both ovaries from a woman during active menstrual life. Ovaries that reach the size of, *e.g.*, an English walnut and contain cystic bodies, should, how-

ever, not be regarded as altogether normal. Reynolds' experience has taught him to believe that many such ovaries are productive of symptomatology—*i.e.*, of dysmenorrhœa, nervous phenomena, often of some importance, and frequently of sterility. The normal ovary is a *flattened*, oblong body, whose thickness is much less than the width, and the width is less than the length. In the so-called cystic ovaries Reynolds practises conservative resection and punctures the small Graafian follicle cysts, even splitting the ovary down to the hilum in order to discover small cysts that are otherwise concealed. Out of 110 cases so treated at least 14 months ago, 106 were traced. In 87 (82 per cent.) the results of the operations, as stated by the physician or the patient, were satisfactory. Of the other 13 results none was sufficiently satisfactory to meet this response, and a few of them were entire failures. On the other hand, the conservative operations are not followed by lasting ill effects.—*American Journal of Surgery*, May, 1912.

PREVENTION OF POST-OPERATIVE GYNAECOLOGIC PSYCHOSES.

H. P. Cole (*Jour. A. M. A.*, 1912, lviii., 102) says that permanency of cure in gynaecology cases is frequently determined by the absence of post-operative psychic sequelae. A judicious selection of time and place for the operation, the employment of a tactful nurse, a cool, quiet room, a short and comfortable preoperative hospital residence. A short visit from the operator shortly after the patient regains consciousness, a short visit from one or two tactful relatives on the first day usually suffice to keep the patient in a normal mental condition. Careful attention to the prevention or alleviation of post-operative pain, permitting free motion of limbs, latitude in change of posture, alcohol rubs or at most a mild sedative, will usually eliminate insomnia and thus the inception of far more serious nervous sequelae. Elimination of morphin therapy and early and frequent use of the rectal tube, together with early evacuation of the bowels remove tympanites as a serious etiologic factor of psychic complications. The substitution of soft diet within a day or two after operation and a rapid return to the establishment of the patient's normal preoperative diet and early institution of the back-rest and removal to a chair within a few days after operation continue the dissipation of the "invalid idea." An early removal to the home not only establishes a shorter and more comfortable convalescence but removes the patient from contaminating associations with other female patients.—*American Journal of Obs. and Disease of Wom. and Children*, May, 1912.

REPEATED CESARIAN SECTIONS AND THE UTERINE SCAR.

Harrar (*Bulletin of the Lying-in Hospital*, June, 1912,) calls attention to the necessity for judgment and care in the performance of Cesarean section.

His investigations regarding the status of the uterine scar as noted in patients undergoing a repeated Cesarean operation have led him to make the following suggestions:

First: In undertaking a Cesarean section upon a woman who has been long in labor, with ruptured membranes and who may be infected, in addition to the immediate dangers of septic morbidity and mortality, we must recognize the probability of obtaining a poorly healed scar that will be a bad risk in future pregnancies.

Second: When performing repeated Cesarean section it would be best to excise the old uterine scar, rather than make a new incision parallel to it and avoid the isolation of a weakened strip of uterine wall between two scars.

Third: Intrauterine douches are to be avoided in the treatment of retained lochia after Cesarean section, not only for their immediate dangers, but also on account of the risk of mechanical injury to the uterine wound.

Fourth: In the management of a parturient woman who has been previously Cesareanized for the relative indications, such as moderate pelvic contraction or excessive size of fetus, or certain types of eclampsia and placenta previa, we must be guided by the history of the previous convalescence as well as by the method of suturing employed. Only thus can we be assured of the integrity of the old scar and to what extent it will stand the stress of labor and of vaginal delivery.

Out of fifty instances of the multiple operation, the old scar was either not found at all or when noted was solid in forty-two; four times it was attenuated in form; twice there was partial rupture at the location of the old scar and twice complete rupture of the uterus.

TRANSPLANTATION OF THE OVARY.

E. Engel (*Berl. klin. Woch.*, May 20, 1912) in discussing the treatment of artificial menopause symptoms, reports a case in which these practically disappeared after this operation. The patient, a woman of twenty-seven, never pregnant, had had both ovaries removed, together with a supravaginal amputation of the uterus. Severe climacteric symptoms followed, for the relief of which a healthy human ovary was implanted by the vaginal route in the stump of the uterus. The patient's symptoms gradually subsided, and she is stated to have made a complete recovery.—*Am. Jour. of Obs. and Dis. of Women and Children*, Sept., 1912.

PERSONAL AND NEWS ITEMS

Ontario.

The Dickens Society of Toronto, in honor of the author's centenary, is raising funds to endow a cot in the Home for Incurable Children.

It was reported a few days ago that about 20 patients in the Asylum for the Insane at Hamilton, were ill with typhoid fever. One of the medical staff, Dr. Jeffries, was attacked by the disease.

Judge Latchford recently severely criticized the conditions found in Whitby, where a feeble-minded person was confined in the jail along with criminals.

Dr. Driscoll has been appointed Medical Officer of Health in Trenton. Owing to the increased duties of his office, his salary will be increased.

The National Sanitarium Association is going to erect a building on College Street, Toronto, for head offices, and with accommodation for a free dispensary. There will be opportunities for practical work by both students and medical practitioners.

In an address before the Teachers' Association for the County of Waterloo, Dr. Honsberger, of Berlin, emphasized the fact that medical inspection of schools was far behind that of some other countries.

Dr. Hastings, M. H. O., of Toronto, has traced eight cases of typhoid fever to one dairy, with a death in the list.

At a meeting of the National Societies and Charital Institutions, held recently in Toronto, Mayor Geary's suggestion for a charity commission was not favorably received. Many of the societies do not receive any public money and all their work is voluntary and their income from private sources.

The medical faculty of Queen's University announces the following degrees of bachelor in medicine: F. C. Anderson, Kingston; L. E. Crowley, Kingston; J. M. Laframboise, Vankleeke Hill; A. McIntosh, Williamsburg; W. E. Mulcashy, Holyoke, Mass.; J. A. Stewart, Brockville.

At a meeting of the General Hospital Trust, Niagara Falls, it was decided to build an addition to the hospital, which will cost upwards of \$30,000. This wing will be built with the proceeds of the legacy of Susan Thompson, whose estate will be closed up on or about December 1. She left the hospital a considerable amount of her estate, which is valued at about \$50,000.

Contracts have been let for a new 34-bed hospital, with all modern appliances, to be erected in Cobourg. The contractors are chiefly Cobourg firms. The building will have 90 feet frontage by 70 feet depth. Work will begin immediately.

Dr. William Arrell, who has been in practice in Dunnville for some time, has removed to Hamilton.

Dr. G. W. Spragge, of Toronto, has gone to England for a holiday.

Dr. A. E. Malloch, of Hamilton, has recovered from an attack of sickness and has gone to Scotland for a rest and change.

Dr. William Oldright has retired from general practice and will devote his time in future to consultation work.

Dr. John C. Calhoun, formerly house surgeon to the Manhattan Eye, Ear and Throat Hospital, has located at 16 Bloor Street, West, Toronto.

The Tuberculosis Hospital at Kingston has been formally opened.

Dr. C. A. Hodgetts, of the Dominion Conservation Commission, has been acting for some time as health officer for Ottawa.

The new hospital at Smith's Falls is almost completed and ready for use.

The Strathroy town council has made a grant of \$500 to the local hospital.

Dr. A. C. Campbell and Dr. Perry O. King, both of St. Thomas, are president and secretary, respectively, of the St. Thomas and Elgin Medical Association.

Over 41,000 children were medically inspected in the schools of Toronto. A number of contagious cases were discovered and excluded from the school rooms.

The alumni of the medical department of Western University held a memorable reunion recently, when two of America's foremost scientists were present and gave clinics in the Y.M.C.A. auditorium. Dr. William Mayo, of Rochester, Minn., and Dr. Llewellys F. Barker, of Johns Hopkins University. The clinics attracted an unusually large number of outside medical men, and the visitors were splendidly entertained by the members of the local medical profession, a smoker at Hyman Hall concluding the program.

Dr. G. L. Ord, of 210 Bloor Street East, has returned to the city after an absence of six months in Madoc and Muskoka.

Quebec.

H. Calvin McCallum, captain of the Westmount Academy football team, was injured during a game and died of hemorrhage.

McGill University has put a regulation into force to the effect that all students before entering the University must pass a physical examination for their fitness to stand the fatigue of an academic course. Where any weakness is found the student is placed under proper treatment. The object is to improve the health of the student body.

Dr. F. X. Plouffe, of Montreal, was recently arrested on the charge of performing an illegal operation on a young woman, who was reputed to be in a very serious condition.

Of late there have been a number of cases of smallpox in Montreal and district around it.

Dr. Joseph Labelle has been appointed Medical Health Officer for Hull, Quebec, at a salary of \$500 a year.

The Montreal city council has requested the commissioners of health to have the health regulations printed in Greek, Hebrew, French, Italian and English, and freely distributed for the guidance of all classes.

Montreal has been divided into nineteen districts for the purposes of the proper medical inspection of school children. Each child must be examined twice a year.

At the twenty-first annual meeting of the Montreal Foundling and Baby Hospital, held 21st October, Lieut.-Col. Jeffrey H. Burland announced that he and his sisters, Mrs. Henry Ami, of Ottawa, and Madam H. V. Cathagne, of Paris, would donate \$50,000 towards the purchase of a site and new building for the hospital, if a similar amount would be raised by those interested.

Maritime Provinces.

It is proposed to provide iron balconies for the public hospital in St. John, N.B. These would afford accommodation for the patients and enable the authorities to attach to them proper fire escapes.

The Chipman Memorial Hospital at St. Stephen, N.B., is to be enlarged.

Western Provinces.

The entire staff of the Victoria Hospital, Prince Albert, Sask., resigned some time ago. But almost at once a new staff took charge. This was the outcome of charges made against the discipline of the institution.

Dr. W. C. Acheson, of Vancouver, met with a serious accident on the 2nd of October. As he stepped off a tram car and was passing to the rear of it, he was struck by another car. His right leg and left foot were so mangled that immediate amputation was necessary, which was performed by Dr. Wilson. One of his collar bones was fractured.

The hospital question in Calgary has been in a rather acute condition for some time. The City General and the Holy Cross Hospitals are unable to care for the patients of the city. It has been felt that a grant could not be given to one institution and not to the other, and, as the City General would not give over to the city the control of that institution, the council decided that it would be better to erect a new City Hospital.

It has been suggested that there should be a hospital Sunday and Saturday in Calgary for the purpose of raising money in the churches and factories in aid of the hospital.

Dr. R. H. Smith, of Edmonton, has given \$25,000 towards the erection of a medical college in connection with the West China University.

Dr. A. H. Silverman had Dr. E. R. Grierson arrested for assault. Both are of Winnipeg.

The Provincial University of British Columbia is not likely to establish a medical faculty for some time.

The corner stone of St. Paul's Hospital, New Westminster, was laid recently by Archbishop McNab.

Efforts are being made in Kindersley, Sask., to secure a hospital for the place.

The formal opening of the new municipal hospital of McLeod, Alta., took place some time ago.

At Moose Jaw General Hospital free vaccination against typhoid fever has been in operation for some time.

The school at Stettler, Alta., has been converted into a hospital.

The new hospital at Humboldt, Sask., has just been completed, at a cost of \$30,000.

The hospital in South Vancouver is to be enlarged by an addition that will contain 50 beds.

The Grey Nuns' Hospital, at Regina, has been opened, with accommodation for 80 patients.

The new Vancouver Isolation Hospital has been completed. It contains a large main section and two pavilions, for men and women, respectively. Arrangements have been made whereby visitors may see patients without risk of carrying away infection.

All the plans have been completed for the new General Hospital in Saskatoon. The hospital will consist of four separate buildings, one of which will be for infectious cases.

The Dominion Government has granted \$60,000 for the work of suppressing tuberculosis in Saskatchewan, provided the people raise \$15,000.

The St. Paul's Hospital, in Vancouver, is progressing well. It is to cost about \$400,000. It will have a roof garden and accommodation for 150 beds.

The health department of Regina is to undergo very material changes to render it more efficient. Dr. M. B. Bow is in charge.

The city of Vancouver has made a grant of \$15,000 to the General Hospital to pay off outstanding debts.

A hospital is to be erected at Port Alberni, B.C., to be called the West Coast Hospital.

Dr. A. N. Stafford has been appointed bacteriologist to the Saskatoon Board of Health.

The Hudson's Bay Company decided to donate five per cent. of the sales made on a special day to the Victorian Order of Nurses.

A short time ago out of 204 patients in the Calgary General Hospital, one hundred were ill with typhoid fever.

There has been an airing of divergent views in Calgary on the question of what to do for drug habitues. It arose over several parties being summoned to court for selling cocaine to customers and patients. Some asserted that the proper course is to give some of the drug and gradually break up the habit. Others contended that none of the drug should be furnished.

From Abroad.

M. Droit announced before the Academy of Sciences, Paris, that he had been able to impregnate silk with metallic lead to such an extent that it became impervious to the X-rays. In this way it is now possible for those who operate X-ray machines to so protect themselves that they will not suffer thereby.

The plague appeared on board a vessel at the harbor of Newcastle, N. S. W., Australia. One member of the crew died and several were ill with the disease. The strictest quarantine was enforced.

A large Berlin hospital has placed in the operating rooms about 20 sand glasses timed to run for five minutes. The surgeons rush their times for this length of time, and are guided by the flow of the sand.

Dr. Alexis Carrel, of the Rockefeller Institute, has been awarded one of the Nobel prizes for his work on the arteries. The prize is a cash one of \$40,000.

Dr. Franz Ullstein, who visited America with the physicians attending the Congress of Hygiene, is one of the most extensive newspaper publishers in Germany. While on this continent he paid special attention to the American methods of managing newspapers.

A new building is to be added to Johns Hopkins Hospital for the treatment of private patients. It is the gift of the heirs of Charles L. Marburg, and is to be named after him. It is to be built after the approved standards.

There is an agitation in England to the effect that the study of hypnotism should be added to the medical curriculum. It is felt that the laws of suggestion should be better understood.

In India last year no less than 24,264 persons lost their lives through the bites of venomous snakes. An effort is being made to clear the country of these reptiles.

Good ventilation is a good thing. Some have lived to old age in very stuffy rooms, as in the case of Lord Brampton. The British House of Commons is most carefully ventilated and kept constantly at a temperature of 62 F.

Dr. Charles W. Fritch, a native of Canada, and for some time living in Detroit, Mich, was acquitted on 11th October on the charge of murdering Mabel Millman.

Japan has published an official account of the loss of life during the Russo-Japanese war. In round numbers 40,000 were killed and 135,000 wounded.

Millie and Christine, the wonderful negro twin freak, died a few days ago at Wilmington, N.C. The possessed two distinct personalities in one body. They were 60 years of age.

There are now 175 qualified women medical practitioners in Germany. Most of these practice as specialists in the diseases of women and children.

A youth, aged 15, was killed at Watertown, N.Y., while playing football. He was kicked in the stomach.

The French are discussing freely the national evil of drinking Absinthe. So far no efforts have been made to control the traffic. The sale of absinthe in France is very extensive and the evils are said to be most serious.

The University of North Carolina is asking for legislation to make hazing a criminal offence. A short time ago a student was killed by four hazers.

Dr. E. F. Bashford, of London, Eng., the noted authority on cancer, states that the disease kills one man in every seven. In one hundred families of six each, sixty-four will die of cancer. It is becoming more common among the young. The age at which it appears is lowering, and it steadily increases in frequency with age.

OBITUARY

WILLIAM REAR.

Dr. W. Rear, of Toronto, died a short time ago, at the age of 73. He was in Vancouver, B.C., at the time and was taken to the Nicola Street Hospital. For some time prior to his death he had resided on a ranch in Okanogan Valley. He left his widow and a daughter in Toronto. He was buried with Masonic honors.

JOHN COULSON HOWIE.

Dr. John C. Howie, a noted physician, of Glasgow, Scotland, died in the General and Marine Hospital, St. Catharines, on 3rd October. He was in his 43rd year, and, owing to ill health, had been living with his parents in this country for some time.

THOMAS QUIRK.

Dr. Thomas Quirk, of Calgary, was killed on 2nd October. He was driving his automobile when it ran into one of the iron sprinklers. He was driven forward with such violence that the steering post was broken. His chest was crushed in. Several of his ribs were driven in, and one penetrated his heart. He was removed to the Holy Cross Hospital, but died as he was being lifted from the ambulance. Dr. Quirk was very popular in the city and surrounding country. He was born in Virginia City, Nevada. He leaves a widow.

JAMES P. McQUERNEY.

Dr. McQuerney died at his home in St. John, N.B. He was the son of Hon. Owen McQuerney, and was born in 1859. He graduated from McGill in 1884 and located for practice in St. John. He was an able and energetic physician. A widow and seven children survive him.

J. O. POITRAS.

Dr. Poitras, of Ste. Cunegonde, Que., died a few weeks ago, in his 48th year. He was a graduate of Victoria University. He was well known and highly respected. Three daughters and two sons survive him. He devoted much time to charitable work.

BOOK REVIEWS

WEBSTER'S NEW INTERNATIONAL DICTIONARY.

Webster's new International Dictionary of the English Language, based on the International Dictionary of 1890 and 1900, now completely revised in all departments, including also a dictionary of geography and biography, being the latest authentic quarto edition of the Merriam Series. W. T. Harris, Ph.D., L.D., editor-in-chief, and F. Sturges Allen, general editor. Published by Messrs. G. & C. Merriam Company, Springfield, Mass., U.S.A. 1912 edition, price \$12 in leather.

The first edition of this dictionary was published in 1828. Since that date it has appeared in a number of new editions until the present one, which contains about 2,700 pages, and defines over 400,000 words and phrases, and supplements this with 6,000 illustrations. The volume is a quarto page, and strongly bound in leather. A thin but superior paper is used and the typography is clear. There is a thumb index for ready reference to the alphabetical order of the words and phrases. The pages are divided by a horizontal line. Above this are the more important, and below it the less important, words. This facilitates the search for the meaning of words, terms and phrases. In the matter of the spelling and pronunciation, the best usages, both American and English, have been followed with regard to common expressions from the people and slang terms. This edition has opened its pages so as to admit such as are found in accepted publications. This is proper, as any word that conveys a meaning should find a place in a reference dictionary. Experts in the various branches of science

were given the task of overseeing the words and definitions in their particular subject. In this way the utmost accuracy has been secured. The etymology of the words was made the special care of eminent men in the science of philology. There is a long list of the authors quoted in the book. This is followed by a very carefully-written history of the English language. A most valuable portion of the volume is that devoted to the consideration of pronunciation. There is a very exhaustive list given of those words that have two or more accepted pronunciations and the authority quoted for each. This is an extremely useful section of the dictionary. The principal cities and territorial divisions of the world are given up to the year 1910, with their populations. This is followed by a pronouncing gazetteer or geographical dictionary of the world, giving the spelling, location and size of every known name. Another important feature of the book is the list of biographical names. Here is found the name, date, country and occupation of persons who have a recognized claim to find a place in history. All the illustrations found in the dictionary are gathered together at the end. This is most convenient and useful. One more feature should receive mention. There is a complete list of the arbitrary signs used in writing and printing, with an appropriate illustration of these. We feel that in recommending the New International Dictionary no disappointment will come to our readers. For the doctor, the lawyer, the minister, the business man, this volume should be at his command continuously. Every effort that honest and able scholarship can put forth has been made to render this volume as perfect an example of lexicography as it is, humanly speaking, possible to make it.

ENCYCLOPAEDIA OF MEDICINE AND SURGERY.

The Practitioner's Encyclopaedia of Medicine and Surgery, in all their branches, Edited by J. Keogh Murphy, M.C., F.R.C.S., surgeon, Miller General Hospital for Southeast London; senior assistant surgeon to Paddington Green Children's Hospital. 1,443 pages, with illustrations. Price \$8.00. London: Oxford University Press; Toronto: D. T. McAinsh & Co., 1912.

This large volume is designed to place in the medical practitioner's hands the latest information on the various subjects of his profession. For this purpose the editor has enlisted the assistance of large corps of writers who contribute articles upon topics with which they have much to do, or to which they have given special attention. The first part of the work deals with general medicine, diseases of children, life insurance, clinical pathology, medical legal points in practice, and mental disorders. The second part takes up surgery under the heading of

anaesthetics, hospital construction, and general surgery. The third part is devoted to obstetrics and gynaecology; part four to the special regions and subjects, and part five to special forms of treatment.

In the planning of this work the author sought to collect the knowledge and experience of an extensive group of specialists in very carefully prepared short articles. A careful examination of the pages of this volume reveals the fact that he has succeeded to an extent that one could hardly have expected. The highest living authorities on almost every subject have given of their best to assist in building up this fine volume for the use of the busy general practitioner who has so little time to read and digest many books. To assist in elucidating the text there are scattered throughout the volume many illustrations and diagrams, and drawings. While due attention is given to etiology, diagnosis and pathology, the main trend of the writers is towards the practical side of treatment, and herein lies its merit for that large class for whose benefit the book has been prepared.

In looking over the book we cannot help giving full praise to the publishers. In every detail it is a fine specimen of the bookmaking art. The binding, the paper, the printing, all vie with each other for first place. A thing of beauty is a joy, but a thing of usefulness is a power. In this volume we have both in full perfection.

X-RAY DIAGNOSIS AND TREATMENT.

By W. J. S. Bythell, B.A., M.D., Hon. physician to the Ancoats Hospital, Manchester; medical officer to the X-ray department of the Manchester Children's Hospital, and A. E. Barclay, M.D., M.R.C.S., medical officer to the electrical and X-ray departments, Manchester Royal Infirmary. Illustrated with 115 full-page radiographs. Price \$4.50. London: Oxford University Press. Toronto: D. T. McAinsh & Co.

This has now become a very important department of practical therapeutics. Much has been learned during the past few years regarding the action of X-rays. They have a curative power in certain diseases, and they may also do much harm in the hands of the inexperienced. The present volume, coming as it does from two authors who have unusual opportunities of studying this subject, should attract some attention. When those who have an efficient set of apparatus, a large clinic, and long experience, give us the benefit of their observations, one naturally expects that their views will carry weight. In this instance the reader will not be disappointed. The whole subject is discussed under the following headings: The X-rays and their uses in medicine, injuries of bones and joints, diseases of bones and joints, examination of bones and joints, examination of the head, the

detection of foreign bodies, examination of the thorax, the examination of the abdomen, examination of the urinary system, X-ray apparatus and technique. Under these captions a very full account is given of the value of X-rays in medicine and surgery. We have examined this volume with care and have pleasure in recommending it to all who wish a reliable treatise upon this subject. It is well written, copiously illustrated, and sound in its teachings. It can be called a thoroughly scientific and practical work.

MALFORMATIONS AND DISEASES OF THE FOETUS.

A clinical manual of the malformations and congenital diseases of the foetus. By Professor Dr. R. Birnbaum, chief physician to the University Clinic for Women at Göttingen, Nauslated, and annotated by G. Blacker, M.D., B.S., F.R.C.P., F.R.C.S. obstetric physician to University College Hospital, and the Great Northern Central Hospital, teacher of practical midwifery at University College Hospital Medical School, etc. With 58 illustrations in the text, and 8 plates. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street, 1912.

The subject of the development of the foetus and its diseases and malformations are interesting topics. The author takes sound ground when he states that maternal impressions cannot cause malformations, but that mental worry on the part of the mother may interfere with the health and growth of the foetus. Step by step the author goes through the various forms of deformity known to occur. He has a lucid explanation for these. It is on the lines of embryology that the author develops his arguments. His statements are clear and concise. The book is superbly illustrated. The paper and typography are of the best. This book will take its place among those that make a substantial addition to our medical knowledge.

INTERNATIONAL CLINICS.

A quarterly of illustrated clinical lectures, and especially prepared original articles on treatment, medicine, surgery, neurology, paediatrics, obstetrics, gynaecology dermatology, ophthalmology, otology, shinology, hygiene, and other subjects of interest to students and practitioners. Edited by Henry W. Cottell, A.M., M.D., Philadelphia, and John A. Witherspoon, M.D., Nashville, Tenn. Vol. iii., 22nd series, 1912. Philadelphia and London: J. B. Lippincott & Company. Price, \$9 per annum.

As usual, this volume of International Clinics comes as a welcome visitor. It makes more addition to a long and most useful series. In this volume there are articles on diagnosis and treatment, medicine,

surgery, ophthalmology, obstetrics and gynaecology, and occupational diseases. No less than twenty-six distinguished physicians, surgeons, and specialists contribute articles. The volume is got up in uniform style with the others that have preceded it in the series. This volume is particularly well illustrated. We like these clinical lectures and read them often. There are no weak spots.

HOUSE FLIES.

House Flies and How They Spread Disease. By C. G. Hewitt, D.Sc., Dominion Entomologist, Ottawa, Canada. Cambridge, at the University Press. London: Cambridge University Press, Fetter Lane, E.C., H. K. Lewis, 156 Gower street, W.C. Edinburgh: 100 Princes street. Price, 1s.

This is one of a series of shilling books that are being issued under the auspices of the Syndics of the Cambridge University Press. The general editors are P. Giles, Litt. D, master of Emmanuel College, and A. C. Seward, M.A., F.R.S., Professor of Botany in the University of Cambridge. The volume before us gives a good account of the house fly. It tells how this insect propagates itself and how it spreads disease. There are a number of excellent illustrations, and the paper is good and the printing clear. A most interesting chapter in the book is that one which deals with prevention and control. This is a small book that should have a very wide distribution. It is impossible to estimate the good that would come from a study of its pages. It should be placed in every library, college and school. Its contents should be given the widest possible publicity.

THE BLOOD OF THE FATHERS.

A play in four acts by G. Frank Lydston, M.D., of Chicago. The Riverton Press, Chicago. 1912.

This play is a plea for marriage control, matrimonial discrimination, protection of the unborn, sterilization of the degenerate, the underdog, for the salvation of the young prospective criminal, and for the education of laymen in matters sociologic. This is a heavy task to attempt in a comparatively small volume; but those who know Dr. G. Frank Lydston will expect something strong and outspoken. The author has no use for the one who sees a wrong and has not the courage to condemn it, nor who knows of an evil and does not expose it. This play sets forth in dramatic form the effects of inherited degeneracy. Page by page one reads on impelled by what has been said

and lured on to find out what is still to be said. It is based on the facts well known to medical science. This book is a new and most interesting way of teaching some of the great truths of heredity.

THE PREVENTION OF TUBERCULOSIS.

The Canadian Association for the Prevention of Tuberculosis, Twelfth Annual Report, with transactions of the annual meeting, held in Toronto, in May, 1912. Toronto: William Briggs.

This volume contains the addresses, discussions and resolutions of the association for the prevention of tuberculosis, and a report on the work that is being carried on in many of the sanatoriums of the country. It is a useful book and gives much valuable information. We can recommend the profession to read it carefully.

MISCELLANEOUS MEDICAL NEWS

AN ACT RESPECTING VACCINATION AND INOCULATION.

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Vaccination Act*.
2. The trustees, governors, directors or other officers or persons having at any time the control and management of any hospital or dispensary receiving aid from the public funds of Ontario, shall keep at all times in such hospital or dispensary an adequate supply of vaccine matter for,
 - (a) The vaccination, by a legally qualified medical practitioner attached to such hospital or dispensary, at the expense of the same, of all poor persons, and at their own expense of all other persons, who attend at such hospital or dispensary for that purpose, during one day in every week; the fee to be charged for such vaccination not in any case to exceed fifty cents, and to be used and applied for the benefit of the hospital or dispensary;
 - (b) Furnishing, on application, to every legally qualified medical practitioner, such reasonable quantities of vaccine matter as he from time to time requires;

(c) Furnishing, on application, to the Superintendent-General of Indian Affairs, such reasonable quantities of vaccine matter as he may from time to time require for the use and benefit of any settlement of Indians. R.S.O. 1897, c. 249, s. 1.

3. No warrant shall issue for the payment of any money granted by the Legislature to any hospital or dispensary, unless a certificate has been filed in the office of the Clerk of the Executive Council, signed by a medical officer of such hospital or dispensary, to the effect that there is actually on hand therein a supply of vaccine matter which is believed to be sufficient for the purpose mentioned in section 2 from the date of such certificate, or setting forth reasons in explanation of any deficiency in such supply to the satisfaction of the Lieutenant-Governor in Council, nor unless, nor until a certificate so signed has been filed to the effect that at no time since the date of the then last certificate, has the demand upon such hospital or dispensary for vaccine matter for such purposes, exceeded the supply in hand in such hospital or dispensary, or setting forth reasons in explanation of any deficiency in such supply, to the satisfaction of the Lieutenant-Governor in Council. R.S.O. 1897, c. 249, s. 2.

4. The trustees, governors, directors or other officers or persons having for the time being the control and management of any hospital or dispensary to which aid has been granted during any session of the Assembly, shall cause to be transmitted to the Provincial Secretary, in time for copies thereof to be laid before the Assembly, during the first fifteen days of the then Session, a statement certified by the proper officers of such hospital or dispensary, showing the number of persons who have applied for and received free vaccination, the number of persons who have applied for and received vaccination at their own expense, and the number, amount and application of fees charged and received for vaccination. R.S.O. 1897, c. 249, s. 3.

5.—(1) The corporation of every city, town, township and village shall contract with one or more legally qualified medical practitioners, for the period of one year, and so from year to year, as such contract expires, for the vaccination, at the expense of the corporation, of all poor persons, and at their own expense of all other persons resident in such municipality, who come to such medical practitioners for that purpose.

(2) It shall be a condition of every such contract, that the amount of the remuneration to be received under the same shall depend on the number of persons who, not having been previously successfully vaccinated, are successfully vaccinated by such medical practitioners. R.S.O. 1897, s. 4.

6.—(1) If the corporation neglects to make such contract and such

neglect continues for one month after the attention of the council has been called in writing by the local board of health to such neglect, and to the powers which, in case of such neglect, it may exercise under the authority of this Act, the local board may contract with the medical health officer of the municipality, or other legally qualified medical practitioner, to perform all the duties which may be performed by, or are incumbent upon a medical practitioner under this Act, if appointed or contracted with by the corporation under the next preceding section, and the corporation shall be liable to the medical practitioner for the fees for vaccination or for duties performed to the extent provided for by this Act as if the contract had been made by or with the corporation.

(2) The local board of health may also, unless the council has already done so, appoint the place and give the notice where and when such vaccination shall be performed, as is required by the next succeeding section, to be done by the council. R.S.O. 1897, c. 249, s. 5.

7. The council of every city and town shall appoint a convenient place in each ward, and the council of every township and village shall appoint a convenient place therein, for the performance, at least once in each month, of such vaccination, and shall take effectual means for giving, from time to time, to all persons resident within each such ward or within the township or village, due notice of the days, hours and place at which the medical practitioner or one of the medical practitioners contracted with for such purpose shall attend, to vaccinate all persons not successfully vaccinated who may then appear there, and also of the days, hours and place at which such medical practitioner will attend to inspect the progress of such vaccination in the persons so vaccinated. R.S.O. 1897, c. 249, s. 6.

8.—(1) The father and mother of every child born in such city, town, township, or village, shall, at some appointed time, within three months after the birth of such child, or in the event of the death, illness, absence or inability of the father and mother, then the person who has the care, nurture or custody of the child, shall at some appointed time, within four months after the birth of the child, take or cause to be taken, the child to the medical practitioner in attendance at the appointed place, according to the provisions of the preceding sections, for the purpose of being vaccinated, unless the child has been previously vaccinated by a legally qualified medical practitioner and the vaccination has been duly certified; and the medical practitioner so appointed shall thereupon, or as soon after as it can conveniently and properly be done, vaccinate the child. R.S.O. 1897, c. 249, s. 7 (1).

(2) Upon the eighth day following the day on which any child has been so vaccinated, the father or mother, or other person having

the care, nurture or custody of the child, shall again take or cause to be taken the child to the medical practitioner by whom the operation was performed, or the other medical practitioner in attendance, in order that he may ascertain by inspection the result of the operation. R.S.O. 1897, c. 249, s. 8.

(3) Immediately after the successful vaccination of a child born in any city, town, township or village, the medical practitioner who performed the operation shall deliver to the father or mother, or other person having the care, nurture or custody of the child, a certificate under his hand, Form 1, that the child has been successfully vaccinated, and shall transmit a duplicate of the certificate to the clerk of the municipality in which the operation was performed.

(4) Such certificate shall, without further proof, be admissible as evidence of the successful vaccination of the child in any information or complaint brought against the father or mother, or the person who had the care, nurture or custody of the child, for noncompliance with the provisions of this Act. R.S.O. 1897, c. 249, s. 9.

(5) If the medical practitioner is of opinion that a child brought to him is not in a fit and proper state to be successfully vaccinated he shall deliver to the father or mother of the child, or the person having the care, nurture or custody of the child on demand and without fee, a certificate under his hand, Form 2, that the child is in an unfit state for successful vaccination

(6) Such certificate or a similar certificate of a legally qualified medical practitioner, shall remain in force for two months from its delivery; and the father or mother, or the person having the care, nurture or custody of the child, unless within each succeeding period of two months a renewal of such certificate has been obtained from a legally qualified medical practitioner, shall within two months after the delivery of the certificate, and if the child is not vaccinated by the termination of such period, then during each succeeding period of two months until the child has been successfully vaccinated, take or cause to be taken to the medical practitioner, so appointed, such child to be vaccinated by him.

(7) If the medical practitioner deems the child to be then in a fit and proper state for successful vaccination, he shall forthwith vaccinate it, and shall immediately after the successful vaccination of the child, deliver to the father or mother, or the person having the care, nurture or custody of the child, a certificate under his hand, Form 1, that the child has been successfully vaccinated.

(8) If the medical practitioner is of opinion that the child is still in an unfit state for successful vaccination, he shall again deliver to the father or mother, or to the person having the care, nurture or

custody of the child, a certificate under his hand, Form 2, that the child is still in an unfit state for successful vaccination, and the medical practitioner, so long as the child remains in an unfit state for vaccination and unvaccinated, shall at the expiration of every succeeding period of two months, deliver, if required, to the father or mother, or to the person having the care, nurture or custody of the child, a fresh certificate under his hand, Form 2.

(9) The production of such certificate or a similar certificate from a legally qualified medical practitioner, shall be a sufficient defence against any complaint brought against the father or mother, or person having the care, nurture or custody of such child, for non-compliance with the provisions of this Act. R.S.O. 1897, c. 249, s. 10.

(10) If a medical practitioner employed under the provisions of this Act, or any other duly qualified medical practitioner, is of opinion that any child vaccinated by him is insusceptible of the vaccine disease, he shall deliver to the father or mother, or to the person having the care, nurture or custody of the child, a certificate under his hand, Form 3, and the production of the certificate shall be a sufficient defence against any complaint which may be brought against the father or mother, or person having the care, nurture or custody of the child, for non-compliance with the provisions of this Act. R.S.O. 1897, c. 249, s. 11.

(11) This section shall also apply to all children over the age of three months who become resident in a municipality, and such children shall for the purposes of this section be considered as children born in the municipality at the date on which they became resident within it. R.S.O. 1897, c. 249, s. 7 (2).

9. In all contracts made under the provisions of this Act the sums contracted to be paid shall not be more than twenty-five cents for each person successfully vaccinated, including all or any of the certificates required by this Act. R.S.O. 1897, c. 249, s. 12.

10. If the father or mother, or person having the care, nurture or custody of a child does not cause the child to be vaccinated within the periods prescribed by this Act, or does not, on the eighth day after the vaccination has been performed, take or cause to be taken the child for inspection, according to the provisions of this Act, the father or mother, or other person so offending, shall incur a penalty not exceeding \$5. R.S.O. 1897, c. 249, s. 13.

—(1) After the expiration of two months from the conviction of any person for an offence against this Act, in respect of any child, no plea of such conviction shall be a sufficient defence against any complaint which may then be brought against the same or any other person for non-compliance with the provisions of this Act in respect of the

same child.

(2) The production of a certificate, Form 1 or 3, under the hand of a legally qualified medical practitioner, shall be a sufficient defence against such complaint; but the production of a certificate, Form 2, shall not be a sufficient defence, unless the vaccination is thereby postponed to a day subsequent to that on which the complaint is brought. R.S.O. 1897, c. 249, s. 14.

12.—(1) In every municipality where smallpox exists, or in which the Provincial or local board of health has notified the council that in its opinion there is danger of its breaking out owing to the facility of communication with infected localities, the council of the municipality shall order the vaccination or re-vaccination of all persons resident in the municipality who have not been vaccinated within seven years, and that such vaccination or re-vaccination shall be carried out in so far as the same may be applicable in the same manner as the vaccination of children, except that a person of fourteen years of age or over, but under the age of twenty-one years, who is not in the custody or under the control of his father, or mother, or of any other person, and every person of twenty-one years or over, shall present himself for vaccination by the medical practitioner, or by some other legally qualified medical practitioner, and the medical practitioner shall adopt the same measures to secure the vaccination or re-vaccination of every such person, as he is required to take with regard to children.

(2) A proclamation issued by the head of the municipality, and published in posters and in at least one newspaper published within the municipality, or if there is no such newspaper, in at least one newspaper published in the county or district in which such municipality is situate, warning the public that this section is in force, shall be sufficient evidence to justify the conviction of any person who has failed to comply with the law within a period of seven days from the publication of the proclamation. R.S.O. 1897, c. 249, s. 15.

(3) Every member of a municipal council which neglects or refuses to make the order required by subsection 1 or to make proper provision for carrying the same into effect, shall incur a penalty not exceeding \$25, unless he proves that he did everything in his power to secure the making of the order or the making of proper provision for carrying any such order into effect, and causes his protest against such refusal or neglect to be recorded in the proceedings of the council.

(4) If the head of a municipality neglects or refuses to issue and publish the proclamation required by subsection 2, he shall incur a penalty not exceeding \$25.

(5) Every person who wilfully neglects or refuses to obey the order

of the council shall incur a penalty not exceeding \$25. *New.*

13.—(1) Where it is deemed necessary by the medical health officer of any municipality owing to the presence or threatened presence of smallpox, he may, with the approval of the local board of health, require certificates of successful vaccination or of insusceptibility on re-vaccination within seven years of all pupils or students of a public, separate, continuation or high school or collegiate institute, and of a college or university, or of any other public or private institution of learning within the municipality, to be presented to the proper authorities of the institution, and no pupil or student refusing to produce such certificate on demand shall be admitted to further attendance in the institution until the certificate is furnished.

(2) Any principal, teacher, superintendent or officer of any such institution who commits or is party or privy to any contravention of subsection 1, shall incur a penalty not exceeding \$20. (*See R.S.O. 1897, c. 249, ss. 16, 17.*)

14. Any person who by inoculation with or by wilful exposure to variolous matter or by any matter, article or thing impregnated with variolous matter, or wilfully by any other means produces or attempts to produce, the disease of smallpox in any person, shall upon conviction thereof be liable to imprisonment for any term not exceeding one year. *R.S.O. 1897, c. 249, s. 18.*

15. If a legally qualified medical practitioner is convicted of an offence against section 14 his name shall be erased from the Register of the College of Physicians and Surgeons of Ontario, but the medical council at any time after the expiration of the term of imprisonment of any such person may restore his name to the Register. *R.S.O. 1897, c. 249, s. 19.*

16. Every prosecution under this Act shall take place before a police magistrate or two justices of the peace and *The Ontario Summary Convictions Act* shall apply thereto.

17. Chapter 249 of the Revised Statutes of Ontario, 1897, is repealed.

PRIZES OFFERED.

On recommendation of the Council of the American Therapeutic Society, at the annual meeting of the Society held in Montreal, Canada, June 1st, 1912, it was voted that prizes of two hundred and fifty (\$250.00), one hundred and fifty (\$150.00) and one hundred dollars (\$100.00) be awarded to the best reports on subjects relating to Therapeutics, on the following conditions:

1. The competition is to be limited to qualified physicians in the United States and Canada.

2. The subject of the competition is to be limited to a substance or preparation which is official in the United States Pharmacopoeia.

3. The research may be either wholly laboratory or clinical, or laboratory and clinical combined, and must be conducted in a public institution.

4. The reports must be (a) designated by a distinctive word or motto, and (b) must be accompanied by a sealed envelope marked with the said word or motto, and containing the name and address of the competitor and of the laboratories or hospitals in which the research was conducted. (c) The report and protocol must be typewritten. (d) These must be in the hands of the Chairman of the Committee before April 1st, 1913.

5. The reports and protocols are to be judged by a Committee consisting of the three Vice-Presidents of the Society, who shall decide which are the best reports as showing valuable therapeutic research, and shall return their decision, together with all the papers submitted to them, to the Chairman of the Council of the Society before May 1st, 1913.

6. The Chairman of the Council shall then return the unsuccessful reports to their authors, and shall notify the successful author or authors.

7. The successful report or reports shall be read by the author, or a designated member of the Society, on the first day of the meeting of the Society, immediately after the President's address.

8. All matters connected with the competition shall be considered as absolutely confidential by the Chairman of the Council and the Judges, except as to the successful competitors.

9. The Vice-Presidents as judges may fail to award any prize if the report or reports entered in the contest are not found to be of sufficiently high standard.

10. In case any Vice-President shall fail to act, the President of the Society shall designate a substitute.

REYNOLD WEBB WILCOX,
THOMAS L. SATTERTHWAITE,
SPENCER L. DAWES,

Committee.

LOWEST RATE IN INFANT DEATHS.

New Zealand is proud of its modern legislation—far in advance of

most other lands of the globe—and its results, particularly regarding infant mortality.

Here are the figures denoting the comparative infant mortality per thousand in various nations, for one year:

England and Wales	109
France	120
German Empire	170
Commonwealth of Australia	72
Norway	72
Province of Ontario, Canada	131
Sweden	72
New Zealand	62

In the German Empire women are not even allowed to attend a political meeting, and they take no part in elections.

Why should Australia, with its burning summers, be able to keep its babies alive better than Ontario? If it is the cold that kills them, Norway has as severe a climate as Canada.

SMALL FAMILIES A CAUSE OF CRIME.

Primogeniture confers no natural advantages, according to Professor Metschinikoff of Paris. On the contrary, all the eldest sons and daughters must consider themselves as lucky if they are just normal. The professor was asked to account for the alleged increase of criminality in France. Some believe that the increase is due to the increase of sensational police reports in the new French yellow press, but that is neither here nor there.

Professor Metschinikoff's answer was one word, "depopulation." He afterwards explained himself thus: The smaller families are, the more chance there is of the children turning out idiots or criminals, which is very much the same thing. There is a much higher proportion of degeneration and imbelicity among first-born children than among others. The limitation of families, therefore, makes for increase of abnormal individuals. The best stock is produced only at the fourth or fifth birth. Parents, therefore, who desire to do their best by their country and to bring into the world the finest offspring which they are capable of giving to the world, should have at least five children. As almost no families in France exceed three, nature is given no chance to fashion her best work. It would be interesting to obtain statistics of the number of criminals who were eldest sons or daughters.

SOME USEFUL DONT'S.

Dr. C. J. O. Hastings, Medical Health Officer for Toronto, has issued a number of useful suggestions regarding the house fly.

A large percentage of the cases of infantile diarrhoea is caused by flies.

Don't allow flies in the sick room, or near any child or adult suffering from a communicable disease.

Don't allow flies to crawl over the mouth of the sleeping baby or over the nipple of baby's feeding bottle.

Don't allow your children to eat any food that has been exposed in any way to fly contamination.

Don't buy fruit, confectionery, pastry, or other food that has been exposed to flies.

If you have flies in your home there is some filth near by. If your own yard and premises are all right, take a peep at your neighbors.

Report promptly any breeding places for flies to the Department of Health, phone Main 1200.

Screen all doors and windows before the flies get in and keep them screened until the flies have practically disappeared.

If flies have gained access to your home, two teaspoonfuls of formaldehyde and a teacup full of sweetened water, a small portion put on plates and saucers out of the way of small children answers as an excellent poison for flies. Sticky fly papers and the various fly traps may be used.

 JUVENILE PRECOCITY.

The most remarkable case of juvenile precocity on record is that of Christian Henry Heinecker, the "learned boy of Lübeck," born in 1721, who could read before he was one year old, and could write before he was three. Before completing his first 12 months he could recite all the principal events in Biblical history, and before he was four he "knew" the history of all the nations of antiquity, geography, anatomy, the use of maps, ecclesiastical history, and the doctrines of divinity. He spoke German, Latin, French, and Dutch. And at the age of four years and four months he died.

 CONTAGIOUS DISEASES FOR SEPTEMBER.

Returns of contagious diseases in Ontario for the month of September, reported to the Provincial Board of Health, show a total of 823 cases and 137 deaths, as compared with 894 cases and 147 deaths for the corresponding month of 1911.

The diseases are classified as follows:

	1912		1911	
	Cases	Deaths	Cases	Deaths
Smallpox	4	0	20	0
Scarlet Fever	92	6	174	2
Diphtheria	115	11	225	26
Measles	80	3	17	1
Whooping Cough	109	16	31	6
Typhoid	197	31	327	34
Tuberculosis	110	60	94	90
Infantile Paralysis	12	6	5	2
Cerebro spinal meningitis	4	1	1	1

The cases of infantile paralysis were distributed: Toronto, 3; St. Catharines, 1; Collingwood, 1; Niagara Falls, 4; Victoria Harbor, 1; Willoughby township, 1; York township, 1.

DOMINION MEDICAL COUNCIL.

The first meeting to organize the new Dominion Medical Council has been summoned by Hon. Dr. Roche, Secretary of State. The summons, which is issued under the Canada Medical Health Act, calls for a gathering of delegates at Ottawa on the morning of Thursday, Nov. 7. The meeting is to comprise representatives of the several provincial medical councils, representatives of the universities, representatives of the homeopathic physicians, and three members yet to be appointed by order-in-Council.

The Canada Medical Health Act of 1902 and 1910 was passed after years of effort, by Dr. Roddick, formerly M.P., for one of the divisions of Montreal. It could not go into effect until all the Provincial Legislatures had approved it, and this has taken ten years. Now the way lies open for the formation of a Dominion Council, and the formulating of rules regarding examinations, etc. The Act commits the work of organization to the Minister of Agriculture, but Mr. Burrell has asked Dr. Roche to take it over, he having been one of the champions of the Act when it was before the House.

The delegates from the provincial councils are:—

Ontario—Dr. W. Spankie, Wolfe Island; Dr. R. J. Gibson, Sault Ste. Marie.

Quebec—Dr. L. P. Norman, Three Rivers; Dr. Arthur Simard, 59 Rue d'Antenial, Quebec.

New Brunswick—Dr. A. B. Atherton, Fredericton; Dr. Walter W. White, St. John.

Nova Scotia—Dr. A. W. H. Lindsay, Halifax; Dr. John Stewart, Halifax.

Manitoba—Dr. R. S. Thornton, Deloraine; Dr. J. S. Gray, Winnipeg.

Alberta—Dr. R. G. Brett, Banff; Dr. John Park, Edmonton.

British Columbia—Dr. R. E. McKechnie, Vancouver; Dr. R. E. Walker, New Westminster.

Those of Prince Edward Island and Saskatchewan have not yet been selected.

The representatives of the universities are:—

Dalhousie—Dr. D. Fraser Harris, Halifax.

Manitoba—Dr. J. R. Jones, Winnipeg.

Queen's—Dr. J. C. Connell, Kingston.

Western—Dr. H. H. McCallum, London.

Laval, Montreal—Dr. E. P. Lachapelle, Montreal.

Laval, Quebec—Dr. D. Brocher, Quebec.

McGill—Dr. F. J. Shepherd, Montreal.

Toronto—Dr. J. M. McCallum, Toronto.

The representatives of the homeopathic body are:—

Manitoba—Dr. Chas. E. Sugden, Winnipeg.

Ontario—Dr. E. A. P. Hardy, Toronto.

Quebec—Dr. E. M. Morgan, Montreal.

MEDICAL PREPARATIONS, ETC.

CONGESTIVE DYSMENORRHEA.

Dr. F. H. Davenport, A.B., M.D., assistant in gynecology, Harvard Medical School, in his book on "Disease of Women," and under the above caption refers to the treatment of congestive dysmenorrhea and the use of anodynes. He says, "It is by all means wisdom to avoid in these cases, if possible, all the use of stronger sedatives and anodynes."

In referring to the use of medication in these cases, Dr. Davenport, in this most excellent work on "Non-Surgical Gynecology," says: "Hayden's Viburnum Compound has seemed to be the most effectual remedy of this class, given in hourly teaspoonful doses in hot water, for five or six times."

That Hayden's Viburnum Compound is of inestimable value in the treatment of dysmenorrhea is not only indicated by its employ-

ment by gynecologists of to-day, but in the past by no less an authority than J. Marion Sims, who prescribed it and recommended its employment.

Hayden's Viburnum Compound is not a narcotic and contains no habit-forming drugs. It is a product of known composition and as a uterine sedative it holds first place in the opinion of many physicians as not only a dependable therapeutic product, but a remedy which is safe to administer to their patients. Given in teaspoonful doses, administered in hot water, it will prove most effective.

CELL NUTRITION.

All classes of cells are made to live and perform their several functions by the phenomena of cell nutrition; and whenever malnutrition, intoxication, or other causes, impair the special function of cells, they do so by producing some intrinsic metabolic defect. Agents which will directly or indirectly repair metabolic defects are true cell tonics. A very large experience and a close and careful clinical study of all pathological conditions show conclusively that Bovinine is an ideal cell tonic and food. It stimulates the cells to healthy proliferation. It tones the newly born cell, giving it a full and normal power of absorbing, and immediately meets this demand by studying a full and complete nutrition.

THE PNEUMONIA CONVALESCENT.

In spite of all of the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious diseases, acute lobar pneumonia still deserves the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the fall and winter months, many cases of the lobular or irregular pneumonia that so often complicates or follows la grippe. When this condition supervenes it is more than likely to follow a sub-acute or chronic course and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Pepto-Mangan (Gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a true tono-stimulant to the organism generally. As Pepto-Mangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the pneumonia of the aged.