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EDITORIAL

A MODERN MIRACLE.

The Messenger, Collingwood, prints the following letter from J. E. M. Patterson, once of that town, and now a farmer in Saskatchewan:

"You will all remember what a great sufferer our daughter Jane was for many years before leaving for the Prairie West. Last August after reaching Saskatchewan there was a marked change for the worse until about the 1st of December, 1913, when she had another paralytic stroke, through which she lost the power of speech and the use of one of her arms, while her whole body was left so full of pain that her suffering was intense. We daily watched for the end, as she gradually grew worse, and the doctor said there was no hope for her. On the night of January 1st 1914, we gathered around her bedside, and watched her from 10 p.m. till 10 minutes to 11, at which time her face was seen to light up with a heavenly smile, and as she afterwards related it, God spoke assuring her that He was going to heal her, and asked her to lift up the helpless hand, which she did. Then sitting upright in the bed, with her two arms outstretched, she spoke to us, declaring that God wanted her to get out on the floor. We, still thinking it was but the reaction before death, insisted she should lie down and rest. But in a few minutes she was out of bed, and after taking some refreshment, conducted family worship.

"Neighbors and friends were alike astonished on coming in to find her going about the house praising the Lord.

"Several weeks have passed, and she is still strong, rests well, is free from pain, and drives eight miles every Sunday to attend church."

Here we have a typical case of ordinary hysteria cured by suggestion, resulting from the watching of friends, or the anxiety of the patient to move about. It is a case in keeping with many others on record. Some years ago there was a woman in Boston who had been paralyzed for many years. She had been pronounced a hysteric, still

she did get up and walk. One day some friends called, and in the conversation down-stairs she was forgotten. In her anxiety to see her friends she forgot her paralysis and hurried down-stairs.

A few years ago, a man drove around the streets of Toronto done up in a plaster jacket. One day in a fit of religious emotion he threw away his jacket and took to his feet, and preached afterwards for the Doweyites.

The case of the "wonderful cure" wrought on a certain young woman, who afterwards by repeated marriages, become known to the world as Mary Baker Glover Eddy, is another example of hysteria "cured." Yet she became a "prophetess" and thousands believe in her nonsense, taught in her book, "Science and Health"

And the procession of these cases goes on from age to age. We read of the dancing maniacs of the middle ages, of Tarantulism, etc. There are always the hysterics with us and there is always someone who claims to have "healing power," and did some very bad and ignorant things in days gone by. With these people, usually in some remote village, or behind some mountain, the hysterics betake themselves. The results is the newspapers have some more "cures" to publish, and the gullible have some "marvellous news" to read.

THE HOSPITAL PROBLEM IN TORONTO.

This problem comes up from time to time, and will not down until a proper solution for it has been found. There are poor in all large cities that call for care, hospital accomodation, and treatment when they fall sick, or become injured. There are others who need rest rather than hospital treatment.

The hospitals of Toronto have always cared for the city's poor on a losing basis. At no time in the past has the city contributed a daily amount to the hospitals that would meet the daily cost of patients received into the wards. In addition to these patients the hospitals have maintained at their own cost a free out-door department for the relief of poor patients. These out-door departments have proved heavy drains upon the resources of the hospitals.

Now, the hospitals furnish the management, the medical and surgical attention required, and the nursing. The value of these cannot be put in dollars. It is only reasonable and right that the city should pay the actual cost of the food, drugs, and running expenses in caring for these interne and externe cases.

It is now in the air that the Toronto General Hospital will ask the city for an annual grant of $50,000 a year. At four per cent. this is

equal to asking for a cash grant of $1,250,000. The city has already given this hospital over $600,000. For this sum the hospital furnishes accommodation for about 300 city-order patients, although there are beds for a large number if required.

St. Michael's Hospital received from the city $50,000, and cares for large numbers of city-order patients, and conducts an extensive out-door department. The Toronto Western Hospital was granted by the city $100,000, and agreed to hold ready for the city 100 beds whenever required.

Now, it would be quite unfair for the city to make an annual grant to the General Hospital and not make a similar grant to the other hospitals in proportion to the number of the city's poor cared for by each. All should be treated alike when they are doing the same work and doing it equally well. It will no doubt be carefully considered by the City Council, but it is not likely that the Council will be willing to commit the city to such large annual expenditures until the whole matter has been gone into with great care. Instead of making lump sum grants, it might be better for the city to pay the full daily cost of the externe and interne care of the city's poor. If the plan should be adopted of making a large annual grant to the General Hospital in addition to what is paid on the per diem allowance of $1. for city patients, then there could be no escaping the logic that the same treatment must be accorded to St. Michael's, The Western and Grace Hospitals. The full study of this question may lead to some effort being made to materially reduce the cost of maintenance for city-order patients. How this could be done we do not undertake to say at present.

RADIUM, THE NEW QUACKERY.

This is the remarkable heading for the first editorial in the February issue of the *Canadian Medical Association Journal*. It is most strange that this line of treatment should be branded as a phase of quackery, any more than should the use of scalpel or the x-ray machine. All the world is awake to the possibilities of radium, and are investigating its powers.

That it has great powers there is no longer any doubt. One swallow does not make spring, but the cases where radium treatment has done good are now numbered by the legion. Digitalis is a valuable drug, but it does not cure all cases of heart disease. In like manner arsenic has its limitations in dermatology. No one pretends that radium can cure all sorts of neoplasms, but very many claim it can cure some and relieve others. This is a very fine eulogium to be able to pass upon any line of treatment.

When it is capable of doing so much good, we fail to see why its employment in therapevtres should be regarded as quackery. As well say that the administration of a dose of salvarsan or vaccine for typhoid fever are forms of quackery. This would be a sorry class in which to place Ehrlich, Wright and Leishman. Says the*Association Journal* "All quackery does not lie outside the boundaries of the medical profession; and it is hard to distinguish between creduality, pretence, and charlatanism." So far as radium is concerned we think that the workers with this agent have conducted this work on very high and ethical methods.

THE MANAGEMENT OF HOSPITALS.

We are induced to make some comments on this topic by some remarks in the February issue of the Journal of the*Canadian Medical Association.* The Journal states that "a gift does not imply the acquisition of proprietary rights." Now, this is absolutely wrong. Those who give the money for the erection of hospitals constitute the persons from whom are chosen those who manage their affairs. There are two distinct sides to a hospital. These are the funds that procure the site and erect thereon the buildings and provide the same with equipment; and the medical staff that attends to the patients. The standing of every hospital depends upon both.

All the business affairs of the hospital should be in the hands of the board of management. This board must have full control over the staff. It must have an absolutely free hand to add to the numbers of the staff when such is required, and it must equally have power to dismiss from the staff when the conduct of any members of the staff call for such dismissal. No staff should be given the power to make its own additions, and be responsible for dismissals. No staff would ever undergo proper reorganization along such lines.

There must be something that corresponds to a corporation. This must be made up of wealthy, who can give money in large sums This does not constitute ownership, but it does constitute the body that should appoint those who manage. In this body of givers the staff should not figure. If they do, there will be friction between those that constitute the corporation and those that make up the staff. The functions of these bodies are so separate that they cannot be welded.

No money is made from the fees of patients as most of it only forms part of the maintenance fund. No hospital was built this way.. Large sums must be given, and those who give these large sums will of necessity look after the use to which their gifts are being put. These men

have often to face heavy deficits and secure from the banks large lines of credit, and they are not going to attach their names to paper for this purpose and not feel confidence in the management. Here the staff must stand aside.

Now, turning to the staff we have this to say. Its members care for the patients placed under their care. Many of these are imbued with a high sense of their responsibility and do their work with great enthusiasm and acquire a high professional standing in which the hospital shares. In no sense is this building up a hospital. The opposite is the real case—the hospital gives these their opportunity.

So far as the Toronto Western Hospital is concerned the staff interfered with the board in an uncalled for manner, and made it necessary for the latter to apply for some amendments to the act of incorporation. Had the Editor of the *Canadian Medical Journal* taken the trouble to become acquainted with the facts he would have written differently. If he had done so, he would not have penned these words: "This would inevitably throw the control into few hands, and no surer plan could be devised for drying up the sources of charity." The real fact that it was just the cause the wealthy donors had this influence that they were willing to give more and borrow from time to time as the needs of the hospital required. The trouble is that a number of small donors from among the staff, totalling only a few thousand dollars, sought to control both the professional and the business sides of the hospital's affairs. Those who had given or procured all the balance could not agree to this position. It is a good rule to be sure of one's facts before going into print.

VACCINATION FOR TYPHOID FEVER.

Sir William Boog Leishman, K.C.M.G., F.R.S., Professor of Pathology in the Army Medical College of London, paid a visit to Toronto a few weeks ago. His visit was looked forward to with expectation,, when it came it proved a genuine pleasure, and when he left our midst he both took and left pleasant memories.

His address before the Toronto Academy of Medicine was enjoyed by all who had the good fortune to hear it. He took up the subject of inoculation for Typhoid Fever. He mentioned the labours of Sir A. Wright and himself in their search for some means of mitigating the serious results arising from this disease in the army. He pointed out that typhoid fever had done more damage to the British Army during the South African War than that had the bullets of the enemy.

He went on to show that, while the conditions were very unfavour-

able, inoculation with the dead typhoid fever germs during the War had been attended by some very gratifying results. These results have been markedly improved upon by a more complete knowledge of the method of administration. He made it quite clear that this method of treatment was highly satisfactory from the prophylactic point of view, and was very valuable as an aid in treatment, as it rendered the course of the disease mild, with an absence of the toxic conditions of the disease, and most of its complications.

A few years ago there were from 1,500 to 1,600 deaths in the Indian Army annually from typhoid fever, while last year it was only 348. Among an equal number of soldiers there were, among the inoculated, 56 cases and 5 deaths, and among the uninoculated 272 cases and 46 deaths. This shows one death in eleven in the former class and one in six in the latter. Here we have a double proof of its value both in prevention and mitigation of the disease.

This method of treatment was of the utmost value in civil life as well as in the military life. In districts where the disease becomes prevalent, and in lumbering and mining camps. The protection was good for a period of eighteen months. He spoke very highly of the strain which had been obtained by cultures from the spleen of a soldier named Rawlings who had died of typhoid fever, and stated that this man's death had saved many lives.

OSTEOPATHS ON THE MOVE AGAIN.

Osteopathy is only a form of rubbing or manipulation. The rest is suggestion and humbug. They treat all sorts of ailments whether suitable for this sort of treatment or not. Here is the way their case is stated by Kendrick Smith, of Boston:

"Osteopathy has no fight with the medical world. On the contrary no group of practitioners has greater respect for the scientific achievements of medical history and for the splendid and heroic work which is being done to-day by the great army of doctors the world over. Their way is medical, our way is mechanical. They are satisfied with their methods, we are enthusiastic over ours. It is none of our business how or why they do as they do and we must all agree that it is none of their business how or why we do as we do, provided we prove to the Government that we are competent to practise our profession."

Here we have in a word the declaration for an entirely new system of treatment. We are told that our system is medical. By this we are told that we trust to drugs. What of the physician who orders massage with electro-therapeutics and baths? What of the surgeon who breaks

down adhesions around a stiff joint? What of the oculist who improves vision and cures headaches by glasses? What of the obstrician who corrects a malpresentation and delivers the child alive? These are instances of treatment that are mechanical as the osteopaths would have us believe.

But osteopathy is an old thing under a new name. Long ago in Britain there were bonesetters. Then there was the system of treatment by Swedish movements. And all this comes back to what every tribe in the world has practiced since time began, namely, to rub stiff parts and gently stroke or handle painful parts. To reduce a dislocation is only educated manipulation.

But we wish to be fair to the osteopaths and therefore, we quote again from Kendrick Smith:

"Massage, gymnastics and such procedure have always been utilized in the practice of medicine, but they were general treatments administered by persons who were not physicians and given under the orders of the attending medical advisor. In absolute contradistinction to this, and it is most essential that this should be emphatically and distinctly understood, is osteopathy, a system complete in itself, applicable to the treatment of all conditions, the osteopaths being mechanical physcians as contrasted with medical physicians. The contrast is one of method, not of completeness or scientific or professional prestige."

So the osteopathic system differs entirely from "massage, gymnastics and such procedure," though we are told that it is mechanical. We are told "osteopathy is a system complete in itself, applicable to the treatment of all conditions." Now, how can this be so, when it is only a mechanical system, as there are so many conditions that could not be treated in this manner, and, if so treated would be made worse, as peritonitis from a rupture tube, appendix, or stomach. Yet it is a "system complete in itself, and applicable to the treatment of all conditions." May kind heaven defend the people from such a system!

But the same authority goes on to state:

"As a matter of fact osteopathy is a positive, not a negative, system of treatment. The principle of osteopathy is anatomical adjustment. Because this principle is correct and because it works, it happens that medicine is not necessary for its adherents, but there is no more sense in classifying osteopathy as a non-drug system than in labelling it as non-electrical system or a non-anything else."

Now, what "anatomical adjustment" is there to be made in the case of a person who is dying from pressure on the brain caused by a syphilitic gumma? This is a case for proper antisyphilitic treatment, and not for twisting at the spinal column in some ignorant sort of way.

We knew of an osteopath who treated a case of dementia praecox by manipulations around the head and spine, stating that the brain was not working properly because some nerve was out of place. This was "anatomical adjustment" with a vengeance. It will be a sad day for this country if ever any such system is legalized.

THE CASE OF THE HOSPITAL FOR SICK CHILDREN.

Perhaps there is not in all Canada a finer example of devotion to a given cause than is to be found in the relationship of Mr. John Ross Robertson to this hospital. To mention the one is at once to think of the other, "Each is the half of a blessed pair." The trustees of the Children's Hospital have made an appeal to the city council and beyond that to the public. These trustees are Mr. J. Ross Robertson, Sir Edmund Osler, Mr. John Flett and Mr. J. Strachan Johnston.

In their statement they show that the cost of maintenance has been steadily from 75 cents a day in 1872 to $1.97 in 1913. All know the causes of this. They point out that the patients treated in the hospital from 1872 to 1913 cost $744,663, and the amount received from the city was $261,650, leaving a balance of $503,013 that had to be found by donations or from what some of the patients paid. To this large deficit should be added another deficit of $50,294 incurred by the outdoor department during these years. These two deficits total $553,307.

Here is a case that should well appeal to the city council and the wealthy. We would have wished that the trustees in making their statement had said how much had been derived from patients. The balance would have then shown the net amount that has been raised by the zealous trustees. One thing we do know, even after such deduction the amount would be very large. There have been treated since 1875, the large number of 15,200 in the wards, and 159,231 in the externe department.

PRIZE FOR FINDING RADIUM.

Hon. W. H. Hearst recently introduced into the Legislature a bill appropriating $25.000 to be offered as reward to any one who would find radium in the province in sufficient quantity to make it profitable for extraction. The Government will retain the ownership in any deposit that may be found. The bill also provides that should radium be found in a workable amount the Government may install the requisite plant. It also enables the Government to purchase private lands containing radium. The present price of radium is $80,000 a gramme.

Similar legislation is proposed in British Columbia. The Government of the United States is moving in the direction of controlling all radium ores.

SLUM DISTRICTS.

This is a perennial question in all large cities. Toronto has not as many and bad slum districts as are to be found in some other large cities, yet it is not free from them. The Local Board of Health is dealing with the problem. It has been urged that the city go into the business of building and renting dwelling apartments. This would be a system of municipal lodging houses. The private lodging houses in the city are inadequate in equipment and many of them are run by foreigners. Very many of these lodging houses are greatly over-crowded. The inspectors found that there were 2,930 persons in 714 lodging houses in excess of the numbers allowed by law.

THE LONGEVITY OF MAN.

Sir Gilbert Parker said a short time ago that people should not stop working at 70, but should keep on doing more. With this view we find Sir James Crichton-Brown in accord. This latter authority on old age contends that man's normal limit is 100 years. The best way of avoiding a feeble old age is to be busy doing something. He states that the biographical dictionary is full of examples of men of marked activity at ages far over 70. Musical and speech expressions come in late mid-life, but reason and judgment reach their acme later and may be retained to advanced ages. Under favorable conditions one hundred years should be the goal.

SEX EDUCATION.

Perhaps on no subject has there been more said that it would not have been far better for the public had it been unsaid. All sorts of people have undertaken to give advice on this subject. Societies exist for the propagation of *knowledge* on it, and the daily press is frequently quite sensational over it, and gives space to the discussions that take place about it. The whole subject is one of great difficulty and delicacy, and one where very much more harm can be done than good according to the sort of person who gives the instructions.

We have always felt that the home is where this information should

be imparted. If the atmosphere of the home is a proper one the child will grow up, in the vast majority of cases, with a proper sense of what is right. As age comes to the child the amount of information may be gradually increased as to the good to be gained from proper conduct and dangers of violating the rules that should regulate the relationships of the sexes.

The subject has run through three phases. First of all were those who tried to scare boys and girls into being good by telling them of the dire effects of the diseases that might be contracted. This was the pathological school. Then came, secondly, those who taught the gains from a pure life, and the functions of the sex organs. This might be termed the physiological school. At the present, those who are discussing this subject classify themselves as sex hygienists; some might venture to say, sex moralists.

If teaching is to be done, the questions come up: By whom should it be done, and at what ages should it be given? When one considers the worthless and dangerous rubbish that has been written upon the subject in fiction, and in books that purport to deal with this matter in a scientific way, we are forced to the conclusion that it would not be safe to relegate the task of talking upon it to the average teacher. There are, no doubt, a few teachers who would treat the subject with judgment, but experience would show that they are not a large percentage. We have taken the position that if any teaching is to be done on the matter it should be done by the senior teachers, carefully selected for the purpose and along the lines of carefully prepared literature.

We have no hesitation in stating that this sort of teaching should not be given at too early an age. Just what that age should be we cannot dogmatically state, but think it should not be commenced under the age of what is ordinarily known as puberty.

A distinguished advocate of sex education said in New York a short time ago that "there is no use trying to formulate laws in advance of public opinion, but the consensus of trained opinion is that such education is necessary and cannot be left to parents. Eventually sex education will be a regular part of the curriculum." This is what wise leaders of opinion have to take into their serious consideration. If the demand ever comes for sex education in schools, it must be surrounded with the strictest safeguards.

THE WORKMEN'S COMPENSATION ACT.

This Act is now before the Ontario Legislature, and before this reaches our readers the Act may have become law, and the cause of the

doctor may, for the time, be lost, or it may for all time have been won. If lost, it can only be temporarily so; for truth and right ever prevails. In this Act there should be provision for compensation to members of the medical profession when called in to attend those that are disabled by accident or industrial diseases.

In the bill as it came before the Legislature, no provision was made to safeguard the medical profession, and an effort, by several societies and many medical men, was made to rectify this omission. At the moment of writing we cannot state with what result. Should the result be adverse, be not discouraged, as laws can be amended. When Antaeus was thrown, he gained strength and rose again to the struggle. So with the medical profession, let it rise again and again with renewed energy for the duties that lie ahead of it. If the request of the medical men should not be granted now, it will at some day in the near future. The attack must be made and renewed until the victory is won.

> Truth crushed to earth shall rise again,
> The eternal years of God are hers;
> But error wounded writhes in pain,
> And dies amid its worshippers.

HOGS VERSUS PEOPLE.

Dr. Hastings, Medical Officer of Health, Toronto, in a recent issue of the *Health Bulletin,* had the following:

"In Toronto this month a man was fined $8 in the Police Court for using the corner of Victoria and Queen Streets as a 'Chat Club.' Eighteen Chinamen were also fined $5 each for playing fan tan on Sunday. For packing hogs too tightly in a railway car a fine of $20 was imposed, while the owner of an auto truck was mulcted $50 for using a 1913 license plate.

"On the other hand, a dairyman charged with failure to pasteurize his milk, pleaded guilty and was remanded even though he had advertised pasteurized milk. This milkman supplied Grace Hospital and numerous citizens who very frequently buy pasteurized milk because it is good insurance against the diseases which may be transmitted by unpasteurized milk. Such people and hospital patients were cheated and their lives possibly endangered by the practise of this dairyman, but it was not considered by the magistrate as serious an offence as packing hogs too tightly in a railway car.

"Moral—There isn't any."

ORIGINAL CONTRIBUTIONS

INTESTINAL STASIS.*

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IN order to appreciate in a more or less intelligent manner the subject of intestinal stasis and its causation, one must revert for a moment to a brief survey of the development of the alimentary canal.

From the foregut there is derived the oesophagus and the stomach. In early foetal life the stomach lies, with what is to be its lesser curvature, looking directly forward. As it descends it rotates on the fixed duodenum and the left lateral surface becomes the anterior, and the lesser curvature becomes the superior border. The stomach absorbs some water and may absorb alcohol if it gets the opportunity.

From the midgut is derived the small intestine, the caecum, appendix, and most of the colon. The small and the large intestine continue in practically a straight tube from the lower or pyloric end of the stomach, attached to the posterior wall by a primitive mesentery, from which all the mesenteries, peritoneal folds, etc., are developed.

From the hindgut is derived the rectum and possibly the descending colon.

The small intestine grows in length more rapidly than the large, and out of all proportion to the growth of the belly cavity; consequently it early begins to form coils. This early formation of coils in the small intestine goes on simultaneously with the rotation of the stomach mentioned a moment ago. This rotation of the stomach on an already partly-fixed duodenum may cause the duodenal tube to twist upon itself. At about the fourth month of foetal life a great thickening of the mucous membrane occur (1), which absorbs later. It is possible that cases of atresia (2) of the duodenum, sometimes seen in infants, may be due to failure in this absorption. It seems to me also possible that this twist of the duodenum—together with only partial absorption of this thickened mucous membrane—may be responsible for some of the cases of duodenal ulcer occurring in later life.

The great growth of coils of small intestine crowds the large bowel into its anterior position. The caecum is first seen in the lower part of the belly cavity, and to the left. Gradually it is crowded upward and to the right, and folds over upon itself—the caecum and appendix, at

*Read at Perth County Medical Association, Stratford, January 14, 1914.

one period, resting at about the level of the hepatic flexure. It is possible that in this overfolding process of the caecum and appendix the groundwork is laid for kinking of the ileum (3). With the advent of placental circulation the liver begins to enlarge rapidly and the caecum is then crowded down from its position in front of the duodenum to the right iliac fossa. There is some traction at this period on the transverse meso-colon, and this in turn may give rise to a kinking of the small intestine at the duodeno-jejunal junction. When exploring the abdomen, in cases of duodenal ulcer, one frequently finds bands fixing the jejunum to the transverse meso-colon in a faulty position. Recently in several cases my first thought was, that a badly-done gastro-enterostomy had already been performed. Because of these kinks I have seen the first piece of the duodenum quite as large as a large caecum.

In the descent of the caecum from its infra-hepatic position there may be an arrest of development at any point from the under surface of the liver, or along the face of the kidney, and thus the high position of the appendix in many cases may be accounted for. There may also be an unusual fusion of the layers of peritoneum surrounding the caecum, including the appendix. This accounts for the fact that the appendix is sometimes found in a retro-caecal position and without a mesentry. Sometimes this fusion of the peritoneal layers about the caecum occurs unevenly, and excludes the appendix from the general peritoneal cavity, leaving it in a retro-caecal cavity all its own. I have no doubt this accounts for the cases one occasionally hears about, in which *no appendix was found.* Any of these anomalies may fix the caecum so as to interfere with the churning process that normally occurs in the caecum and ascending colon. When watching this tossing-about process in the large bowel with the fluoroscope, I have been reminded of a man dodging between bases with a good catcher on both first and second. It is said not to be due to a forward and reverse peristalis ,but merely the reaction after the forcible, forward peristalsis.

As I said a moment ago, the caecum finds its normal position in the right iliac fossa. Sometimes, however, it does not stop there, but drops and becomes a pelvic organ, supplying the stage-setting necessary for ptosis of the large bowel, the medical treatment of which the physician glories in, but which is more readily relieved by properly-regulated exercises and by the wearing of a suitable abdominal belt. When the caecum thus finds a position in the pelvis it is more than likely that in some of the cases the appendix may become attached somewhere throughout its length, and if it does, it is likely to lie across the posterior surface of the ileum, thus interfering with the effluent from it to the caecum.

After birth, the liver begins to recede, and with it carries up the

hepatic flexure of the colon, and if the first part of the transverse has become adherent laterally with the ascending, an acute angulation occurs at the hepatic flexure, creating difficulty at this point.

At, or just above the junction of the sigmoid with the rectum, the layers of peritoneum in the female are sometimes foreshortened, creating a firm, fibrous band attached to the broad ligament and producing a serious kink of the sigmoid.

To summarize, then, from a developmental point of view, the most common points at which blockage or stasis may occur are:

1. Duodeno-jejunal junction.
2. At, or associated with, Meckel's diverticulum, when present.
3. The ileo-caecal junction, from
   (a) A faulty position of the appendix,
   (b) A kink of the ileum,
   (c) A faulty angle at which the ileum enters a misplaced caecum.
4. The hepatic flexure. (I have seen the hepatic flexure adherent to the caput coli).
5. The ascending colon, from misplaced peritoneal bands.
6. The splenic flexure, (not as common as hepatic).
7. The sigmoid.

Before going further it might be well to spend a moment on the function of the small and of the large bowel. From the small intestine we absorb most of our nutriment, principally in the form of proteins (as amino-acids), carbohydrates (as sugar), fats, (as soap and glycerin), and water. It is said that from the large intestine water only is absorbed. From the rectum, water is absorbed and apparently also dextrose.

Material such as bismuth taken into the stomach should reach the caecum in from four to six hours. If any is left in the small intestine after six hours it means that there must be some interference with the onward flow. In twenty-four hours it should be in the rectum, so that if one finds bismuth shadows in the small or large bowel after twenty-four hours, there is some degree of stasis. In what commonly passes as an ordinary case of constipation I frequently have found bismuth in both the caecum and the sigmoid six days after a bismuth meal. One point to be remembered is that the bismuth shadow does not always stop at the point of blockage. It may stop in the large bowel at least at a point some distance proximal to the obstructive point. For example, when a cancer of the sigmoid has produced an almost complete obstruction, the bismuth remained in the caecum for several days. In a recent case of a kink of the sigmoid, where the bowels had not moved

for three weeks, most of the bismuth shadow showed in the caecum, with a faint shadow in the transverse colon.

The most common symptom of intestinal stasis is, of course, constipation, though there are some cases that are deceiving, in that there is an almost daily movement from an overloaded bowel, and in one case I had there was diarrhoea. There is great lassitude, a poor appetite, and the taking of food leads to discomfort. Many patients complain of headache. They are often written down as *neurasthenics*—if there is such a thing—when in reality they are suffering from infection from the intestinal tract. The skin is often cold and clammy and they complain of cold hands and cold feet. Often there is no loss of weight, but the patient becomes nervous and irritable.

I am satisfied, from a careful observation of certain cases, that the condition of stasis is responsible for many of the ills to which flesh is heir . Lane (4) has given a long list, and among them cystic degeneration of the breast. I had one case that was completely cured by means of liquid paraffin. I strongly believe that some cases of arthritis deformans are the result of a mild but continuous infection from the intestinal canal, when other sources of infection are not found. One case of parenchymatous goitre sent for operation was, I found, suffering from stasis, and as a preliminary to thyroidectomy, I started her on liquid paraffin. The gland began to reduce so rapidly that I sent her home to await developments, and her thick neck has disappeared.

When acute obstruction can cause such disastrous results in such a short time, one may readily understand how a chronic stasis can give rise to a persistent poisoning that causes not only a condition of misery, but may even lead to such conditions as acute nephritis, hepatic cirrhosis, and frequently arteriosclerosis. There is a danger, of course, of the doctor getting too large a dose of this "stasis bug," when he will attribute all troubles to stasis, and if he depends upon liquid paraffin as a cure for all the ills to which flesh is heir, he will come a cropper with alarming regularity.

Perhaps I appreciate as well as most, and more so than many, that one swallow does not make a summer, yet several cases that have come under my care have caused me to sit up and take notice.

Case I. A female, aged 35, had been a bed-patient with pulmonary tuberculosis for three years, suffering alternately with constipation and diarrhoea. She developed tuberculosis of the caecum and had severe diarrhoea. On December 4th, 1910, I opened the abdomen under gas and oxygen anæsthesia, and did a lateral anastomosis of the ileum to the sigmoid. She began to improve, and in six weeks the tubercle bacilli had disappeared from the stools. The general condition improved

tremendously, and she put on weight with no temperature. There continued to be some trouble from gas backing up into the large bowel, and on May 16th, 1911, I again opened the abdomen, divided the ileum, and turned in the proximal end near the anastomosis. I brought the distal or caecal stump out through a small, right, lateral incision, for the purpose of irrigating the large bowel, and then closed the abdomen. From that time on her general condition improved, and by the end of the year 1911 tubercle bacilli were persistently absent from the sputum. She was discharged from the sanitorium, and for the past two years she has been free from the disease.

Case 2, a female, aged 17, had been a sanitorium patient with pulmonary tuberculosis for several months. She developed signs of tuberculosis of the colon. An ileo-sigmoidostomy was done on March 8th, 1911. Her recovery was not so spectacular, but has been continuous. I saw her a few days ago and she looks and feels well. She has one or two bowel evacuations daily.

Case 3, a male, aged 25, with chronic constipation, began to have soreness about the abdomen. The difficulty of getting the bowels to move was more and more marked. A mass, following the course of the caecum developed, and tuberculosis of the caecum was suspected. On May 25th, 1911, the diagnosis was confirmed by exploration, and I did an end-to-end anastomosis of the ileum to the sigmoid. His recovery was uneventful. I saw him, a strong rugged man, a short time ago, and he told me he has had no inconvenience since. He is a well man.

Case 4, a male, aged 20, had been a very sick bed-patient with pulmonary tuberculosis for months, and had developed cavities with persistent and harassing cough. He then developed signs of tuberculosis of the caecum. Under gas and oxygen I opened him and found tuberculosis of the appendix, caput coli, and about 6 inches of the ileum, involving not only the mucous coat, but the serous coat as well. I resected the ileum, appendix, and caecum, and put the ileum into the sigmoid. His progress towards recovery was most spectacular, but lasted for only about six months, when the abdominal scar showed signs of tuberculosis invasion and finally broke down. He then went down-hill and died of a general tubercular invasion of the peritoneum. A remarkable feature of this case was a complete relief of his cough for weeks following the operation.

I have related these cases merely to call attention to a class of case that may be benefited by short-circuiting. If I have the privilege of seeing a case of pulmonary tuberculosis—but I don't see many—and there is any sign of stasis, I shall most certainly short-circuit with the hope, not merely of relieving the stasis, but of improving assimilation

to such an extent that recovery from the pulmonary lesion may result.

In a paper (5) published some time ago, I pointed out the possibility of stasis being a contributing cause, to the development of gastric and duodenal ulcer. As time goes on I am more and more impressed with the idea. Upon several occasions I have seen an acutely inflamed appendix associated with Lane's kink of the ileum, and have found a duodenal ulcer co-existing. The removal of the appendix and the releacing of the kink has cured the symptoms of ulcer, and I have no doubt, the ulcer itself. All of us are familiar with the cases of indigestion that are cured by the removal of the chronically-inflamed appendix. Some of you, no doubt, have seen these cases that were *not* cured? I have, and upon investigation I have found that a kink of the ileum had been overlooked, or a veil covering the caecum, sometimes even extending across the hepatic flexure to the transverse colon and binding it to the caecum, so that the caecum and ascending colon lie parallel to the first piece of the transverse colon. These conditions are readily overlooked if a *pinhole* incision is made, or if the case has not been thoroughly investigated with the aid of bismuth and the X-ray before operation.

Illustrative of the relationship between gastric and duodenal ulcer, I recall two cases—one a young woman with ulcer extending along the entire saddle of the stomach and involving the pylorus, producing obstruction. Some four years previously she had had her left ovary removed through a *pinhole* incision, without relief to the left iliac tenderness and discomfort. She had always been constipated. I was compelled to do a gastro-enterostomy, and for a time she improved greatly, but this old, left-sided discomfort continued, as well as her constipation. with frequent attacks of vomiting of bile. I gave her bismuth and found the gastro-enterostomy working satisfactorily. At the end of six days, however, we still found our bismuth shadow in the caecum and in the descending colon. I again opened the abdomen and found a series of old, adhesive bands binding the sigmoid to itself in three firm coils, and this mass to the side of the uterus. I side-tracked the ileum into the upper rectum with great difficulty, hoping that time would permit the sigmoid to re-open its lumen. This patient's condition is not satisfactory, as the large bowel has evidently putrefactive changes. My conviction is that it will yet be necessary to remove her colon before she gets comfort. The case, however, demonstrates that if the first surgeon who went after and secured the left ovary as a trophy to his prowess, had recognized the true condition and had relieved it, she would probably never have had the gastric ulcer.

Upon another case of duodenal ulcer in a man, producing complete

pyloric obstruction, I did a gastro-enterostomy. He improved for a time and then showed that the true condition was stasis,* which was verified by the X-ray. A subsequent short-circuiting was done, and he began to have regular evacuations, and after a protracted convalescence largely due to an associated *neurasthenia*—for which he had been treated without benefit for years—he made a good recovery and is now well.

The point I wish to make in these two cases is, that had the true condition been recognized before pyloric obstruction had occured, they might have been saved the pyloric obstruction and the operation for its relief.

The question may properly be asked: Is the operation a hazardous one? To that I must give a guarded answer. I never approach a case without a good deal of misgiving, for many of these patients manage to live in discomfort and misery for years, and most people prefer such an existence to sudden, post-operative death! I have, in odd moments, gone over my operation book, and so far have found records of 30 cases, with two deaths. That mortality is too high, even though I can explain away the two fatal cases. The one case was seriously exhausted from hemorrhage from the bowels—I had advised operative interference several months previously, but she preferred to continue other means—finally nothing gave relief, her hæmoglobin was below 40 and she was still bleeding. I did a short-circuiting, as stasis was a marked feature, and for the first five days she did so well that I began to feel sanguine about her recovery, but one night, instead of ringing for the nurse, she got up and went to the bathroom for a drink. When she was being put back to bed she was seized with a sharp pain in the abdomen, and two days later died of peritonitis. There was no autopsy.

The other case was a man who had suffered from gall stones and had had them removed. Some months later he again began to have symptoms of gall stones and became jaundiced. I examined him with bismuth and X-ray and found marked evidence of stasis. After trying for two weeks to secure relief with paraffin, I advised immediate operation for the relief of the stone in the common duct, and subsequently for stasis. He could not make up his mind, but two months later, when in a badly-shattered condition, he returned, he would consent only if both operations were done at once. It was against my better judgment, but finally I consented. He never rallied from the shock, and died on the second day.

Six and a half per cent, is too high a mortality, but I feel satisfied that from now on we shall be able to reduce it to one per cent., or less than one per cent., but we must approach these cases with great deliberation and all the care possible. We must remember that we are oper-

ating upon an infected patient and one very susceptible to shock. It is difficult to estimate how much damage has occurred to the heart muscle. The blood pressure should be taken on occasions beforehand and should be observed throughout the operation, as a guide to the post-operative treatment.

Operation: As soon as the patient is sufficiently under the anæsthetic, saline solution—preferably containing glucose—should be given subcutaneously. The needles should be inserted outside the axillary border of the pectorals, as the axillæ will receive more and absorb more quickly than elsewhere. When twenty ounces have been given the solution may be turned off and from that on the use is determined by the blood pressure readings. The Crile (6) method of nerve-blocking should be used before any incision is made. The abdomen is then opened by a free incision that will give ample room to enable one to work without too much pulling and hauling on the mesentery—one of the greatest shock producers in abdominal surgery. If there is no twisting or kinking of the sigmoid, I think it preferable to remove the caecum, ascending colon and part of the transverse, to get rid of the after-effects of the churning that persists here if a mere short-circuiting is done. Further, as W. J. Mayo has pointed out, one is still certain of applying midgut to midgut. To do this, the ileum, close to the caecum, is caught between two clamps and divided, and both cut ends are carefully seared by means of a soldering copper at white heat. The proximal end of the ileum is then invaginated and made secure. The caecum and the colon can then be quickly removed by placing a double row of Ochsner clamps on the mesentery and cutting between. A double strand of No. 2 sterile catgut on a curved intestinal needle is then taken, and each pair of forceps is oversewn, released, and the suture drawn tight, until all have been disposed of. When the last forceps have been removed and the last loop of this running suture (7) have been drawn tight, it will be found that the stump of ileum to be anastomosed is lying beside the transverse colon. A small Roosevelt clamp is then applied and the anastomosis is soon complete. By using this method one will find that he not only has no opening in the mesentery to close ,but he has only one knot to be absorbed.

For the protection of the exposed intestines I prefer to follow Lane's plan of having silk handkerchiefs wrung out of sterilized liquid paraffin wrapped about them.

A rectal tube should be inserted and carried well up to the splenic flexure, or if an ileo-sigmoidostomy has been done, the tube should be passed through the anastomosis for a foot, or eighteen inches up the ileum. If a stomach tube is used for this purpose the funnel may be

attached to the foot of the bed and utilized for the administration of a continuous flow of water into the bowel.

The operation is then rapidly completed, the stomach washed out, and about two ounces of castor oil left in the stomach.

REFERENCES.

1 and 2.—The Development of the Human Body. J. P. McMurrich. 3rd Ed., pp. 324-325.
3.—The Kink of the Ileum in Chronic Intestinal Stasis. A monograph. Sir W. Arbuthnot Lane.
4.—Sir Arbuthnot Lane, British Medical Journal, 1913, ii., p. 1125.
5.—The Surgical Aspect of Duodenal Ulcer. Can. Med. Assoc. Jour., March, 1912.
6.—Newer Methods of Reducing Mortality from Shock. G. W. Crile, Jour. A.M.A., Oct. 25, 1913.
7.—The Running Suture—and the Bloodless Operation. Can. Med. Assoc. Jour., Oct., 1913.

THE THERAPEUTICS OF RADIUM.*

BY DR. ROBERT ABBE, NEW YORK.

ON Tuesday, March 3rd, 1914, Dr. Robert Abbe, of New York, discussed at the Toronto Academy of Medicine the therapeutics of radium. He showed many plaster casts and lantern slides of cases he had treated.

Dr. Abbe said that a certain lecturer at Yale had told him some ten years ago that he had got all there was out of the physics of radium and said to Dr. Abbe, "Now it is up to you to learn something new." But this professor is still learning and writing books on radium.

EXHIBITION OF PLASTER CASTS.

Dr. Abbe passed round some plaster casts, a few picked out from the thousands he had made. These were records of the appearance of cases before and after treatment by radium.

The first was that of a simple case of ordinary rodent ulcer in which the king of the nose was destroyed. Twenty minutes of radium treatment cured the condition, as was well shown by the second cast that was exhibited, and this patient has remained well.

The second case showed a similar condition, but more advanced. Here the wing of the nose was eaten away entirely, also part of the lip. A little radium tube was put in three or four times and in five weeks the ulcer was perfectly cured. The casts of this case showed the condition of the patient nine years ago, immediately before treatment, and also the present condition. In the second cast there was no return of

*Address delivered at the Academy of Medicine. Reported by Dr. J. F. Goodchild.

the disease. The patient has remained perfectly cured for nine years. This is an illustration of the fact that radium does what surgery has never been able to do. Surgery sometimes cures the patient but never cures the disease, whereas radium puts an end to the disease itself.

The third pair of casts exhibited another case of the same type, an epithelioma of the corner of the eye and includnig both eyelids. After radium treatment and some weeks in the hospital while treatment was applied this patient became perfectly well.

The fourth cast was one of a case of cancer behind the ear. This growth had been burned out, frozen out and cut out, but always came back. In June some seven or eight years ago, when the patient came to consult Dr. Abbe, eroded tissue extended down the side of the neck. Two or three radium tubes were applied for an hour at one time on four different occasions, and in October the patient was perfectly well. A cast taken sex years afterwards showed the condition to be still perfectly healed.

Another cast was that of an eyelid case. The lower lid was the site of a tumor involving some three-fourths of the lid. It was sent to Dr. Abbe for a plastic operation. This round-celled sarcoma was cured by four one-hour applications of radium. This case illustrated a result so good that it was not possible to tell from the plaster casts which one was taken before treatment and which after treatment. The condition was perfectly cured. A photograph taken of this case lately made it plain that it is impossible to tell upon which eyelid the tumor grew. Here there was a mass of cells which had engulfed practically all the tissue of this eyelid. Radium was laid upon it and there was a reassemblage of the normal cells of the lid. The mucous membrane again took on its normal appearance, the edge of the lid its normal shape, and the whole lid became restored. Radium had reassembled the cells which, though not destroyed by disease, were engulfed. This case was treated just in time—that is, before necrosis had set in. This case, celled a round-celled sarcoma, was probably a bascal-celled type of epithelioma. All sorts of tumors which are of a bascal-celled type are cured by radium if they have not gone too far. The simplest type of tumor is the ordinary wart, the non-malignant papilloma. Hundreds of these have been cured completely by fifteen to thirty-minute applications of 10 milligrams of radium.

Another interesting type of tumor which had been treated with success was that of epithelioma of the nipple, commencing cancer of the breast. He reported many of these cases which he had treated with satisfactory results. Every one of these cases had been cured by simply placing a piece of radium over the diseased area. Photographs of warts

from various parts of the body, mouth, tongue, extreme cases, were shown, all of which had been completely and perfectly cured by the use of radium.

The lantern slides of the cases before and after treatment were most instructive. One, a large parotid tumor which would have been almost impossible of treatment by surgical means, was completely cured by the use of radium.

Cancer of Tonguue and Gums.

He next showed some cases of cancer of the tongue and gums which were cured. One of these that was cured died recently of cancer in some other part of the body. In treating one case of cancer of the tongue, the part became so painful he had to use surgical means, removing part of the tongue and then continuing the radium treatment until the condition was cured.

Myeloid Sarcoma.

Dr. Abbe reported radium a specific for myeloid sarcoma. He showed photographs of a boy where a tumor of this variety was present in the jaw. The tumor occupied almost the entire half of the inferior maxillary bone, and in this mass of growth there were three loose teeth. Radium laid about this mass caused it to shrink, and after a few applications the growth began to get gritty and finally became harder and harder. The size became reduced to normal, with the bone firm and hard, and the teeth perfectly firm and solid in their places.

Some specimens of carnotite containing two or three per cent. radium were then passed round. He said that the original mineral in which this was found was pitchblende. This was American ore. He also showed some Austrian pitchblende, and remarked that the Austrian pitchblende is much richer in radium than the American, but that all contain radium in workable quantity.

Radium Apparatus.

Dr. Abbe then exhibited different forms of radium used in the treatment of disease. The first specimen handed round for examination was a little glass tube some three inches in length and containing 60 milligrams of radium in one end of the tube. He said this form is used in the treatment of such conditions as diseased eyelids, for inserting in various body cavities, also for inserting in the tumors themselves after opening them surgically. When passing it into these tumors he usually wraps a little cotton about the tube. He said the most perfect way apart from the tubes is the little vulcanite style with ten milligrams of radium in it. This is pure radium bromide in a little convenient holder.

If this is laid on the hand for ten minutes it will cause a burn, or on a wart it will disappear. Another form exhibited was the plaque of square metal having a burnished surface and containing 25 milligrams of radium. Dr. Abbe explained that this little plaque was emitting from it multiple rays, and later during the course of the lecture he showed these on the screen. All the rays are given off from this plaque except in alpha.

Exhibiting an ordinary barium platino-cyanide screen and holding up a plaque of radium the screen became brilliantly illuminated. The rays had gone in a straight line from this small piece of radium, and, striking the screen, it shone brightly. In radium we have something absolutely new in physics. There is something in it like life itself. From it rays go straight into infinite space with almost the speed of light. They do not deviate from their course till influenced by some magnetic influence. If the rays pass through some magnetic field they are separated instantly. The alpha rays, being positive to electricity, go to the right, and the beta rays, being negative to electricity, go in another direction. The gamma rays are not affected by the magnet and they will still go straight on into space, uninfluenced in their course by electrical force. These gamma rays are like light itself, rapid, vibratory rays going straight into infinite space. Holding the plaque in his hand, Dr. Abbe said, "The rays from this little plaque this instant are now in the universe off to the nearest stars and they are continuing to go. They are discharged instantly. This peculiar quality of radium makes it a very penetrating and very active agent. If you allow these rays to strike the cells of tumors or the cells of the skin or even vegetable cells you will get the same demonstration of its representative action on cell life."

A very interesting experiment which Dr. Abbe had carried out was one showing the action of radium on seeds. Some seeds were put in a box and a piece of radium placed on top of the box. Every few hours some of these seeds were taken out and planted in rows in turn as they came from the box. Some of the seeds that had not been influenced by radium at all were planted beside those that had been so influenced. This experiment showed that the longer the seeds were exposd to radium th weaker was their growth. Those that were left long enough under its influence were killed, and did not grow at all. The action is the same on animal and vegetable cells. It is supposed that the gamma rays are the efficient ones that act upon the cells. The dynamic force of radium we have not yet measured very well. In regard to its use, however, the subject of cancer has become a prevailing one for serious popular contemplation. This is unfortunate, because this will hide the

real use of radium. Cancer will not be settled for a generation. If we get to the fringe of it we will do a great deal. The very beginning of cancer has hardly been touched upon as yet.

Whether applied to papillomata, those heaped-up cell masses of the skin and mucous membrane, to the epitheliomata of the skin and mucous membranes, or to those increased formations of the squamous cells or basal cells of the skin or to the myeloid tumors, those central tumors of bone, or the pure myomata or the tumors of glands like the parotid or thyroid, to all invasions of the normal tissue with overgrowth of the cells normal to the part, the result is the same. These weaker cells are driven back into ordinary growth. The fact of the surrounding cells not being injured and these cells constituting the local disease being destroyed, shows that the weaker cells have been first attacked and that they have been destroyed. Troublesome papillomata of the vocal cords disappear very quickly under radium. Cases of this sort presented proof that mucous membrane cells are not affected by radium, while the papillomata cells were caused to disappear.

Pathologists may name tumors as they choose, but the nomenclature for radium therapists is (1) those tumors that are cured by the use of radium, (2) those tumors that are not cured. To exhibit the penetrating power of the radium rays Dr. Abbe showed a picture of a granite boulder with a radium tube lying on it and a photographic plate underneath the stone. In this experiment some 50 milligrams of radium photographed itself through six inches of solid granite. This experiment has been carried out on a larger scale, passing through boulders as thick as twenty inches. A photograph of a large sarcoma of the leg with a portion of radium within it was shown. This sarcoma was destroyed and headel by a few such applications. If a piece of radium is lost upon the carpet and a plate is held over it, the portion there will photograph its own photograph on the plate. If the radium is not seen the piece of carpet can be sent to the laboratory and the radium present in it recovered there.

In the experiment with the seeds he showed different rows stunted by different exposures. All the plants were there, but stunted in growth in direct relation to the time of their seed exposure to radium influence. Bulbs were also shown retarded in growth in a similar way. These bulbs went through life each the same as the other, only stunted and delayed in growth. The action on the cells of tumors is the same. The cells of these are arrested in development, and if the exposure to radium is long enough they necrose.

Dr. Graham Chambers asked, "Did you state that cancer cells return to normal?" Dr. Abbe said he did not mean that. "There is a

reticulum that holds the normal cells together. We cannot see it, but in these cases that return to normal this reticulum must be there. In many of the tumors one has the feeling while working at it that there is a return to the normal line of growth of many of the cells composing these tumors. A papilloma under treatment is a good illustration of this. There there is a return to the normal line, but this is about as far as our knowledge here will take us. I began to see cases where I thought radium stimulated growth and then tried experiments with oats in different ways. One experiment was, that I took a piece of wood and split it into twenty layers, then laid some oats on each layer and put a radium plaque over them. Each quantity of oats was a little more distant from the radium. Then I took the seeds out and planted them carefully in rows. The findings in this experiment were the two rows nearest the plaque were killed, the three layers next were stunted, and the next four layers were very much stimulated. These last layers were distant from the plaque one to one and a half inches. Then came another confusing series. The rows of oats began to grow more and more poorly until the nineteenth row, which was affected most. Speaking of this to Madam Curie last summer she thought it was owing to the different action of the gamma and beta rays. There was here shown the losing effect from the beta rays and the gaining effect of the gamma rays, The conclusion here is that the alpha rays go a short distance, one-half inch, the beta rays go one and a quarter inches, and the gamma rays go any distance."

To illustrate the different kind of tumors one may deal with, Dr. Abbe used his lantern slides and showed the following pictures of cases:

Papillomata.

A case of warts on the lips. Radium was applied fifteen minutes and the warts disappeared like smoke and never came back; warts on the eyelid were treated in the same way and disappeader completely.

Photographs of warts on the soles of the feet. Treatment and results equally good. Dr. Abbe had seen twenty cases of this sort, and all were cured completely. He had had two cases lately where the middle toe was to be cut off, and radium applied for half an hour resulted in a perfect cure. In these cases the reaction does not take place for a week or ten days, then during the second ten days the part becomes itchy and burns and at the end of thirty days the growth drops off as a scab and leaves a normal skin. Other cases were shown of warts on the tongue, lips, and mouth, also cases of leukoplakia. One of these was a papillary tumor of the tongue with tendency to malignancy. Radium applied one and one-half hours effected a complete cure.

Other very serious cases of warty growths on the tongue were shown next, and the effect of radium on these was most satisfactory.

The next cases shown were those of warts over the scalp, and these were easily cured without destruction of the hair; also cases of warty growths on the vocal cords, and these when removed showed no return after three years, though previous to that no surgical treatment was beneficial.

One case shown was that of a fibroma on one of the vocal cords. This was cut off and came back rapidly, and the larynx filled with popillomatous growths. Treating this case, Dr. Abbe took a tube of radium of one hundred milligrams and held it between the vocal cords for thirty minutes, and then a similar treatment after two weeks. In eight weeks the tumor was practically gone. The patient could talk, and in three months she could sing. The cords are now perfectly well.

Another case shown was that of warts of the vocal cords, where a young woman had lost her voice by the growth of papillomas on the arytenoids and between them. Radium was inserted between the cords for thirty minutes and the larynx is now perfectly healthy.

Keloid.

Another class of cases benefited is keloid. A view before and after treatment of a young girl who had herpes zoster on the side of the face, leaving a red, tender, itchy and burning keloid, which was continuing to grow larger, showed that three or four radium treatments of this condition caused it to change from its enlarged condition, some two inches in diameter and extending some quarter of an inch beyond the normal contour of the face, to a white, flat and perfectly normal appearance. Here Dr. Abbe remarked that true keloid yields to radium just as readily as false keloids. Here is a condition which yields to this form of treatment but will not yield to surgery.

Another case exhibited was that of a young man whose face was very badly burned by acid thrown on it by a girl he had jilted. The primary scarred condition of the face was improving under the influence of radium.

Naevi.

Cases of nævus were shown in the views, and all were completely cured through treatment. In these cases a radium plaque is laid over the deformity for ten, fifteen or twenty minutes, and this sets up a certain amount of inflammatory activity. As a result of this inflammatory reaction inside the blood vessels the nævus goes down to a flat scar in three or four months.

A birthmark on a lady's face was shown—one that nothing could

remove except radium. This birthmark was two or three inches in diameter, extending over the side of the woman's face. In this case the condition was cured, the skin became soft and natural.

Dr. Abbe does not hurry these cases. He reports the results as better if two or three years are taken in treatment. Another view showed a case of lymphangioma of the tongue. The mouth was full, and the mass bleeding most of the time. This painful, large, granulating mass went right down under radium until now it is almost flat and the tongue never bleeds. Another of an ordinary hairy mole was shown to be easily cured by the use of radium. One severe case of this type was that of a young girl who had a large papillary hypertrophic mole of a blackish-purple color and about two inches in diameter on the back of her hand. This was cured nicely by the influence of radium. Another case shown was that of lichen planus of the neck, in which a complete cure was effected. Two cases of tuberculoma, one of the ear and another of the hand, were each beautifully cured by this treatment. These cases were treated several times with an exposure of on half hours each time. The plaque was merely laid over the tumors on each occasion.

Spring Catarrh.

Vernal catarrh, ordinary spring catarrh, that form which ordinarily lasts all summer and only improves in the winter, to return again in the spring, is greatly benefited. One case shown presented heaped-up granulations of the eyelids. Four of those cases he had cured by radium without the slightest trouble. Here the eye was cocainized and little lead plates used to prevent the effects of the radium on the eye itself. Then a piece of radium was moved back and forth under the lid for ten minutes. At the end of one month the patient was nearly well, and with another treatment the patient was perfectly cured.

Graves' Disease.

A girl, a trained nurse, had given up work because of Graves' disease. She had a large growth in the neck which had been getting worse for one and a half years. With cocaine as an anæsthetic a cut was made in the middle lobe and a radium tube passed into the opening and retained there for twenty-four hours, one hundred milligrams being used. In two months this goitre had practically gone, and now, nine years afterwards, she has no tachycardia, no exophthalmos, and the symptoms of goitre are not present, and she is perfectly well. In her case, two months after commencing treatment she was able to walk two or three miles and in three months she was playing tennis. Most of the goitres are not so successfully cured as this one, where the results

were perfectly magical. In ordinary goitre there is simply a hypertrophic glandular structure, and in such conditions the influence of radium proves most beneficial. These conditions are found in the spleen, the liver, the parotid and the prostate gland, and most of them will yield to radium. Not all of them, however, and why some of them will yield and others will not, he did not know. Another thyroid case was shown, a typical exophthalmic goitre, which was treated by external application of radium. The radium was held about three inches away from the part, and applied no longer than one hour over each part of the growth, as it is not safe to allow the gamma rays to penetrate one part for a longer time than one hour or a blister will be produced and cellular change with ultimate fibrosis result. This woman greatly improved, but she went away to the country and began to get worse again and became so bad that her case was thought hopeless by her doctor. She came back and had another radium treatment and improved again. After this she came for treatment three times, with some general improvement. The method of treatment was then changed. Under cocaine an opening into the gland was made and the radium tube was slipped in one-half the thyroid over night and now she is on a fair way to full recovery. Another case shown was that of goitre going down below the sternum, so grave that Dr. Hartley refused to operate. For two years she had not been able to travel, and last year after treatment she was able to go to Europe. An X-ray was taken and showed a reduction of more than one-half the mass since commencing treatment. Ordinary goitre cases were shown, some cured and some not cured. While there are surgical triumphs in the treatment of goitre, some people will not have it, and in radium we have a method that can be used to help that class. Another case of goitre where too much radium has been used and some necrosis was the result was cured. Also another one-sided goitre was reduced under radium treatment.

Parotid Tumor.

The next illusration of the effect of this form of treatment was a case of parotid tumor. Here the same strength of radium used in outside applications for goitre was used, namely, 150 to 200 milligrams of radium. That is enough to produce deep radionization through the tumor. He showed a man with parotid tumor—a mixed glandular sarcoma. On putting radium into it in two places, the growth shrank nicely and disappeared. He also showed a leukoplakia of the tongue which was completely cured. Another case shown was cancer of the tongue in a young woman. This was radionized. Result was that she was sent back to have half the tongue cut out and the remaining portion

was again radionized when she came back. She is now perfectly well. Dr. Abbe next showed six or seven cases of basic-celled epitheliomata of the ear, which were completely cured by radium. Another case was that of epithelioma of the eyelid in an elderly man. He had gone to a New York hospital for treatment, but when they found he had hæmophilia the surgeons refused to touch it. A little tube was laid on for three or four minutes containing fifty milligrams of radium. The epithelioma disappeared in two months, and now, four years afterwards, there is still no sign of a return. Another case was shown where an epithelioma of the nck was quickly cured. A keratosis was cured in a few moments, also several cases of rodent ulcer and a basic-celled epithelioma of the interior canthus, all of which were completely cured. There was one case of rodent ulcer involving one-half the entire nose, and which was completely cured, although a bad scar remains.

A very interesting case shown was that of a cancer of the parotid gland, and this was a growth on the side of the neck of considerable size, lying chiefly in the posterior parotid region. A surgical operation on this case was done, but it was found that they could not get at the tumor to dissect it out; part of it being deep in the parotid sheath was adherent to the parotid tissue and the artery. As they could not remove all, a tube containing one hundred milligrams of radium was inserted. The wound was closed and the tube left in until next morning, when it was withdrawn. This patient was completely cured, and has remained well for five years. She is as well now as she was ten years ago, five years before the operation was performed.

Cancer of the Nipple.

Photographs of a case of cancer of the nipple were shown. Radium took care of all these forms of cancer of the breast where the commencement was in the nipple rather than in the deeper parts of the gland. One of these cases where radium had cured cancer of the nipple now has cancer of the axilliary glands and of the stomach and she will die. It is reported that ten out of a hundred X-ray workers have gone to death by cancer. The early stages of X-ray disease show heaped-up masses of epithelioma. Later as the parts become more seriously involved operations have to be performed. A case of this sort was shown —an X-ray tubemaker whose fingers had to be amputated. He had several of these tumors, and radium was applied to each of them fifteen to thirty minutes, and to some one hour. Some of these growths stood out nearly one inch before treatment, but after, everyone of these dropped off and left smooth skin. In ten days the base of these growths became a little angry and red, and in ten days more the growth had dis-

appeared. Dr. Abbe treated seven or eight X-ray men who had conditions very much like these. Some were so bad that skin-grafting, freezing, in fact, everything had been tried, but in all cases after about three applications of radium the growth dropped off, leaving the parts free and smooth.

Sarcomata.

A case of scalp tumor was shown, a large irregular growth about the scalp. Here there was malignant growth of the scalp, and the dermatologist treating the case said there was nothing to do except scalp the man or try radium. Radium was tried, and before long the scalp became perfectly natural and the skin a normal white. Some time afterwards two growths came back. Dr. Abbe cut those out and the pathologist reported the condition as lymphogranuloma—a hair-splitting diagnosis. This was a beginning sarcoma, and radium had cured it.

The next slide was a section of one of the cancers of the breast. Here radium was used for a time and then the disease cut out. The action of the rays in this case on the tumor was well shown by the photography. The skin of the breast was burned and the growth was commencing to atrophy. There was an exudate of the lymphocytes, showing the effects of irritation. In this case one-quarter inch under the skin there were nests of cancer cells still left. These had not been radiouized.

Another case was that of a giant-celled sarcoma of the skull. This got on nicely under the use of radium. In 1905 a big fibroid of the uterus was treated, and in one year this was reduced to a small tumor lying over the fundus of the uterus. Another case of this sort was treated by passing radium into the uterus by way of the cervical canal. There was an active inflammation of the endometrium and radioniation of the tumor tissues present in the vicinity. In both of these cases bleeding was stopped very shortly after treatment was begun.

A case of myeloid sarcoma of the end of the humerus was shown to be completely cured by this form of treatment. In this instance several tubes of radium had been placed over the tumor. These tubes were left *in situ* for one day only as a general rule, but in this case it was left in seventy-two hours. In this case an osteomyelitis developed, and Dr. Abbe's assistant cut into the upper end of the bone. Next year the entire bone was removed.

A very remarkable case was shown, one of sarcoma of the scalp. After using a large amount of radium in treatment for two days the tumor was half gone and in twenty days had entirely disappeared. This patient remained in Johns Hopkins Hospital for two months and then

went home cured. Speaking of the physics of radium, Dr. Abbe alluded to the experiment already mentioned, and said that the alpha rays have a short excursion, the beta rays an excursion of about five inches, whereas the gamma rays go straight into infinite space. An experiment was made to prove that there are these different rays. A radium plaque was used with lead screens in front of it to prevent the rays getting beyond a certain distance; beyond was a barium platinocyanide screen. The rays from the plaque were seen going to the upper part of the screen, but below all was in darkness by reason of the piece of lead interposed. An electric magnet was put in front and all the alpha rays were changed in direction and the beta rays were changed in course so completely that they illuminated behind the point from which they started. They were so deected they came round and beneath the plaque. Trying the effect of the separate rays, it was found the beta rays arrest growth and the gamma rays seem to have no effect.

When we once understand exactly the effect of each of these different rays, we can apply the different kinds of rays and get the different results of each. Dr. Abbe thought that the whole question of the papular stories of radium in the treatment of cancer, as written in the press, should be suppressed.

Discussion.

Dr. W. H. B. Aikins, opening the discuscsion of Dr. Abbe's lecture and demonstration, said: "Dr. Abbe's excellent and iluminating address, which has been deeply interesting—even fascinating—throughout, discloses his great knowledge of the subject, and his true scientific viewpoint is beyond criticism. I should, however, like to refer to the use of radium in the treatment of certain conditions of the thyroid gland.

Goitre.

"This is a field which Dr. Abbe was the first to develop, as in 1905 he treated a case of exophthalmic goitre by inserting radium tubes into the gland. As he has stated, in eight weeks the goitre had considerably diminished and the nervous symptoms disappeared, and the patient has remained well since.

"I have myself used radium in fifteen cases of goitre. Nine of these showed evidence of hyperthyroidism, while six were of the simpler variety. Of the nine exophthalmic cases, in six the improvement has been most gratifying. The nervous symptoms disappeared, and the enlarged thyroids have decreased to a remarkable extent.

"In one case which I would like to mention particularly, the circumference of the neck was reduced from 14¾ to 12¼ inches. The

exophthalmic symptoms were most severe, but quite disappeared under the treatment, which consisted of three series of exposures to radium of 280, 225 and 100 m.g. hours respectively, from November to April.

"In another case there had been enlargement present for some years. The enlargement was particularly in the middle and right lobes, which had lately been producing constitutional symptoms, and the circumference of the neck was fifteen inches. In a comparatively short treatment of 100 m.g. hours of radium the goitre decreased so that the circumference of the neck was only thirteen inches, and the nervous symptoms quite cleared up.

"In two of my nine cases of exophthalmic goitre, the improvement, although considerable, was not complete, and in one no improvement resulted.

"Of six cases of simple goitre, in four considerable reduction occurred in the size of the gland, the neck decreasing in circumference from three-quarters to one and one-half inches with almost complete disappearance of the enlargement. In one case, though, there was a reduction of one inch in the circumference of the neck a large mass remained present, and in one other which was reduced three-quarters of an inch the bulk of the goitre still remained. This particular one had been present for ten years. A great deal of fibrosis had evidently taken place, and therefore resolution could not so readily occur.

"Thus from my own observations which have been confirmed by what Dr. Abbe has told us this evening, one cannot help but conclude that the radium rays have a distinct place in our therapeutics of thyroid gland conditions.

"The ease and absence of discomfort with which radium plaques can be applied should be emphasized when one considers the highly nervous state in which many of those patients are with the dread of something going to happen to them."

Dr. G. S. Ryerson said he had never before seen a demonstration so satisfactory, so convincing and so obviously truthful as this one. "Dr. Abbe has placed before us casts and photographs which are undeniable, and if I might be permitted to say it, his personality would appeal to any of us as that of a truthful man. There are some people who look on the radium business as allied to quackery. One wonders what kind of a man that man is who is making use of radium in the treatment of diseases. Where suspicion lurks venom will find origin in his spleen. It is like painting the lily to say anything more about Dr. Abbe's address. All present at this meeting have undoubtedly been greatly interested in Dr. Abbe's paper and beautiful demonstrations."

Dr. Graham Chambers said he was very much interested in the

remarkable results obtained. He thought if anything was to be said in criticism it should be directed to the wide application Dr. Abbe had made in the use of radium. This possibly comes from the fact that Dr. Abbe is also a surgeon. Men that work in dermatology and use radium do not in treatment make such a wide application of it.

Dr. King Smith was struck with the conservative method of Dr. Abbe. It was pleasing to hear him tell of the failures he had had. There is a wide impression that radium is a cure for all froms of cancer. The conservative report of Dr. Abbe should go to the press, that the better knowledge of the use of radium might be more widespread.

Dr. Herbert J. Hamilton said that in regard to the press the reporters had been denied admission, although requests had been made that they be allowed to be present. It was explained that Dr. Abbe's address would be technical and not of interest to the public. The mistaken knowledge of what constitutes cancer in the mind of the laity is responsible for the reports in the press in regard to the use of radium for that disease. The public call anything in the shape of a growth on the skin a cancer.

Dr. Herbert A. Bruce referred to Dr. Abbe's case of sarcoma of the face that disappeared like magic under the influence of radium, and said that some eight or ten pears ago he had a case of lymphoscarcoma of the tonsil. This was treated by X-rays by Dr. G. R. McDonagh, and this tumor disappeared in a similar way in a week or ten days. This growth returned in three or four months with a fatal termination. He hoped a similar result would not occur to Dr. Abbe's case. He said the use of radium in the treatment of exophthalmic goitre recalled the fact that at a recent meeting of this Academy one member advised the operation of short-circuiting of the intestines as a treatment for that disease. He hoped radium would prove more useful than this suggested treatment for goitre. In regard to the point that Dr. Abbe is a surgeon, and of wide experience in madicine, it is fitting that such as he should the sole treatment of cancer. This treatment will not be used to replace surgery, but as an adjunct to surgical measures.

Dr. Albert A. Macdonald spoke of the scientific spirit Dr. Abbe had shown in speaking of his cases. He pointed out that if this spirit is held on to by the radium pioneers we will soon not find it necessary to make jositive statements to the public in regard to the value in treatment of this remedy.

Dr. W. H. B. Aikins, seconded by Dr. G. S. Ryerson, moved a vote of thanks to Dr. Abbe. The motion was carried heartily b ythe Fellows present, all of whom were greatly impressed by Dr. Abbe's address and splendid demonstration.

Dr. Abbe in reply said: "I would like to say one thing in accept-

ing the vote of thanks. Cancer of the tongue is a troublesome thing to handle. Going over my records the day before coming to Toronto, I found that in thirty cases of cancer of the tongue and mouth, only one or two cancers of the tongue were cured. Most of the cancers of the tongue are not of the basal-celled type. They are of the squamous-celled variety, and this does not yield so readily to radium as does the basal-celled. I should say also that in every case but one of cancer of the mouth in men the patient was a heavy smoker. They were all heavy smokers. The best case I had was one with a taint of syphilis, and having a typical smoker's tongue. He had leukoplakia. After treatment he got well. Smoker's tongue is a mark against tobacco. Men who smoke from two to twenty cigars a day are the men who in from two to ten years get leukoplakia and ulcers, then hardening of the ulcers, and then serious disease. They will get well if treated early. Those men who get cancer inside of the teeth are men that chew tobacco. Only ten or eleven women had cancer of the mouth, and three of these were smokers. The other day a woman came to me from Oklahoma with her husband. She had a typical smoker's tongue. She said she did not smoke, but used snuff. She rubbed the snuff in with a toothbrush. She had a tobacco tongue. These cases of cancer of the mouth and tongue constitute a black mark against the practice of smoking. This fact is as plain as daylight."

A CASE OF SUPPURATIVE GONORRHOEAL ARTHRITIS.

By George Ewart Wilson, M.B., F.R.C.S., Eng.

WHILE it is true that a gonorrhoeal infection of a point is usually of the non-suppurative variety and while some authorities, including Rose and Carless, maintain that the joint content is never purulent in a pure gonorrhœal infection, still one occasionally meets with a patient whose joint is distended with thick creamy pus without any mixed infection. The following is such a case:

M. G., female, married, aged 20, was admitted to St. Michael's Hospital on September 23rd, 1911. Some three weeks previously she had had painful and frequent micturition, accompanied by a yellowish discharge and pain on walking. Two weeks later her right knee began to swell, followed in two or three days by some pain and swelling in the ankle of the same side. On admission to the hospital three days later her temperature was 100 deg. F., pulse 84, and respirations 24. The house surgeon noted that the right knee was much swollen, with an effusion into the joint. I saw the patient on the 28th, when the condition was as follows: The patient was well nourished. Her right knee was much swollen and exquisitely tender. It was distinctly hotter than

the other knee and the color was slightly heightened. The synovial sac was moderately distended with fluid, but owing to the extensive inflammatory thickening of the perisynovial tissues, together with the tenderness, it was impossible to be sure of the synovial thickening, but no doubt it was quite marked. Besides the capsular thickening referred to there was some œdema of the subcutaneous tissues about the knee and extending half way to the ankle. The knee was slightly flexed and any attempt at movement either active or passive caused very great pain. Her temperature at that time was 100 1-5 deg. F., pulse 98, and she had a leucocytosis of 12,500. Three days later the swelling had increased and there was considerably more swelling below the knee. Her temperature and pulse had gone up to 101 deg. F. and 100, respectively, while her white blood count was 22,500. There was in addition an increase in the pain. A needle was accordingly inserted into the knee joint and two ounces of very turbid serum drawn off. A broth culture was inoculated with negative results, while from a smear of gram negative intracellular diplococcus was obtained without much difficulty. No other organisms were present in the smear. The next day the same variety of organism was demonstrated in a smear taken from the urethra.

During the next few days the patient showed no improvement, so that the joint was again tapped on October 3rd, when two ounces of yellow pus were obtained. This likewise showed a pure culture of gonococci. The joint was forthwith prepared for operation, and at 4 p.m., under ether anæsthesia, a trochar having a bore of a N. 9 English catheter was plunged into the joint. Several ounces of pus were evacuated and then the cavity was irrigated many times with 1-5000 warm bichloride of mercury solution passed through a catheter. This was followed by several washings of silver nitrate 1-5000, a small quantity of the latter being finally allowed to remain within the synovial sac. The catheter and connula were withdrawn, the puncture sealed with collodion, and the leg put upon a back splint with the knee slightly flexed.

Two days after the operation the temperature ranged around 99 3-5 deg. F., and the pulse was 90, and in a week's time both temperature and pulse were normal. The joint showed very marked improvement as evidenced by the physical signs, but the pain continued rather severe for about three weeks. Massage and passive movements were begun three and one-half weeks after operation, and she left the hospital three weeks later with about thirty degrees of movement. When heard from three months later she was walking without a limp and doing housework.

205 Bloor Street East.

CURRENT MEDICAL LITERATURE

MEDICINE.

VACCINES FROM THE STANDPOINT OF THE PHYSICIAN.

Dr. T. J. Horder, in an opening paper, said that now the subject had been freed from the incubus of the opsonic index much advance had been made in the use of vaccines during the last few years. There were three types of vaccine: (1) The autogenous, (2) the stock vaccine, and (3) the phylacogens. This order, he thought, represented the grades of their efficiency, and though stock vaccines were necessary in certain cases where autogenous vaccines could not be prepared, the merits of vaccine-therapy rested almost entirely with the first class. In no case has he seen, in chronic infection of the urinary and bronchial tracts, freedom from micro-organisms obtained. In spite of limitations, however, a systematic use of vaccines led to improvement in the general condition, and, to a less extent, in the local condition also. Effective drainage was an important adjunct to such course of treatment. There was a tendency for practitioners either to proceed with unreasonable precaution or to use a rigid system of dosage which had been laid down as a tentative scheme rather than as an inviolable law. The failures of vaccine-therapy were probably much more numerous than its successes. Yet in it they had a weapon of enormous value. He had no doubt of the efficacy at times of vacine-therapy, and he was quite as disappointed in its effects in the mass as most others. Its value was in direct proportion to the care bestowed on the diagnostic problem. Speaking of the factors which made for success, he placed choice of case first. The nature of the organism mattered little compared with the nature of the diseased process. It was a matter of importance that the diseased process which was treated was really due to an infection. In the attempt to isolate the casual microbe the collection of the material should not be entrusted either to the patient of to the nurse, and it should be dealt with as promptly as possible. He was convinced of the superiority of sensitized vaccines. A graduated system of dosage seemed to have proved the favorite, and he had found it most generally useful in chronic infections. In acute infections, whether local or general, he favored a steppage system of dosage. It was important that there should be relative rest of the patient for twenty-four hours, and

that vaccine should be omitted or decreased considerably if there was any general disturbance or disturbing incident, such as a journey, menstruation, etc. He emphasized the truth that attention must be paid to all the non-specific points in the treatment, just as though no vaccine were being given. It must be confessed that the limitations of this treatment were considerable, and had already got far beyond those outlined by the sponsors of the method at its birth. Sometimes there was a response to a vaccine when it was first tried, but it failed in later attempts. It was a matter for question as to whether this was comparable to the same failure to respond, which occurred when drugs were given, or whether the first attempt at vaccine-therapy used up all the patient's power of response. Cases of general infection did not yield to this treatment in most cases. In typhoid fever he thought it was of some help, but that it did not shorten or modify the course of the disease.

Dr. Charlton Briscoe began by giving reasons for the disappointment which had been experienced by some, in results produced by vaccine-therapy. He then mentioned three cases—a staphylococcic infection, an asthmatic case with a lesion in the nose, and a case of rheumatoid arthritis, illustrating the points: (1) That a vaccine injection tended to produce local necrosis; (2) the toxic symptoms alone might be relieved; and (3) that an infected area ought to be completely removed in order to avoid the risk of a recurrence. even when a vaccine relieved the symptoms. Illustrating the first point, he quoted cases where empyema had followed vaccine injections, and gave a warning against the employment of this treatment in large lesions where drainage had not been effected. He claimed that vaccines diminished the amount and duration of the suppuration which followed the evacuation of pus, and materially assisted the closing of recent sinuses. Illustrating the second point, he remarked upon the striking success which followed the treatment of asthma by the eradiction of some septic focus, or by treatment by vaccines grown from the sputum. He instanced three cases in which this treatment was a complete failure, to show that success did not always follow. Following this line of argument, he pointed out that bacilluria, when causing symptoms, and rheumatoid arthritis were conditions which were readily relieved by vaccines. He recommended that where possible the infecting focus should be completely removed, on account of the liability to relapse when the injections were discontinued. He related some cases in which recognized treatment had completely failed, where vaccines had produced good results. The cases instanced were: (1) A staphylococcal cellulitis of the scalp; (2) a *Bacillus coli* infection of the genito-urinary tract; (3) a non-tuberculous caseation of large size in the pelvis; (4) an acute pyrexial polyarthritis (not acute

rheumatism); and (5) a bronchorrhoea of thirty years' standing. Finally, he drew the general conclusion that vaccines were distinctly useful therapeutically, but should be employed in conjunction with recognized treatment; that all infecting focuses should be removed; that where such was not possible vaccines might relieve symptoms; and he concluded that he had never seen a case where permanent injury had been produced by this form of treatment.—*British Medical Journal.*

KIDNEY FATIGUE WITH DIURETICS IN EXPERIMENTAL NEPHRITIS.

Dr. Herman O. Mosenthal, of New York, read a paper at the American Society for the Promotion of Clinical Research. This is synopsized in the *Boston Medical and Surgical Journal* as follows:—

Researches conducted by Schlayer on human nephritis showed that diuretics used in too large doses, will in certain cases suppress urinary secretion rather than augment it, that is to say, they will cause kidney fatigue. In other instances sodium chloride effected the same results. It was in order to elucidate some of these phenomena that the following experiments were undertaken.

Rabbits anesthetized by the subcutaneous injection of urethane, were given three successive intravenous injections of 5 ccm. of 5% solution of sodium chloride, followed by three successive intravenous injections of 2 ccm. of 5% caffeine sodium benzoate solution. The diuresis was measured by collecting the urine at ten-minute intervals; the reaction of the intrarenal vessels by an oncometer applied to the left kidney. The experiments were first performed on normal rabbits and subsequently on those in which experimental neqhritis had been produced by potassium chromate and uranium acetate. The latter were subjected to the tests from a few hours up to several days after the poisons had been administered so that the progress from one phase to another of the nephritis could be satisfactorily studied. The anatomical difference between the two forms of nephritis is very slight. Both poisons damage the cells of the convoluted tubules very markedly and the glomeruli only slightly.

Normal rabbits showed no signs of diminished renal function after the series of three salt injections but a very marked fatigue after the twice-repeated use of caffeine. This fatigue manifested itself in the inhibition of the diuresis as well as in the diminished dilatation of the kidney vessels. Salt injections following the caffeine series again produced diuresis, thus showing that the mechanism of salt and caffeine diuresis is not by any means indentical.

RESULTS WITH CHROMATE NEPHRITIS.

In the earlier stages of chromate nephritis salt produces a diuresis and increases the dilatation of the renal vessels, much as in the normal kidney. Caffeine, however, very rapidly causes kidney fatigue, much more rapidly than in the normal kidney, so that in some cases anuria results and the kidney vessels contract instead of dilating. Furthermore, the after-effects of the caffeine are seen when salt is subsequently administered intravenously and no longer calls forth a diuresis as it did in the noraml kidney after the use of caffeine. The demands put upon this form of nephritic kidney by the sodium chloride must be responsible for the fatigue evinced by the kidney after caffeine, for if the caffeine be preceded by only one dose of sodium chloride instead of several, the evidences of fatigue do not appear.

In this connection an interesting point is observed in the final stages of both chromate and uranium nephritis, when anuria or very much diminished kidney secretion has been produced. In these instances it is found that although salt and caffeine no longer cause diuresis, the kidney vessels are still dilated. These and other similar results obtained in the course of these experiments lead to the conclusion that the quantity of urine does not constantly parallel the volume of blood flowing through the kidney, as many physiologists would have us believe, but that diuresis may occur without dilatation of the renal vessels and *vice versa*.

RESULTS WITH URANIUM NEPHRITIS.

In the initial periods of uranium nephritis the effects of sodium chloride are approximately the same as those seen in the normal animals. Caffeine causes no decrease in diuresis; however, the dilatation of the blood vessels is markedly diminished, which may be considered a sign of fatigue. This is another example of the lack of parallelism between dilatation of the renal vessels and diuresis. In the terminal stages of this as well as of the chromate type the blood vessels of the kidneys are still dilated but no urine is secretated. In this form of poisoning a type of functional reaction may be seen intermediate between the initial and terminal periods, *i.e.* taking the degree of poisoning as a guide. Schlayer has designated this as the "Zwischenstadium," intermediate stage. It is characterized in this series of experiments by a reaction which is different from that previously seen. The control period shows a kidney putting out an approximately normal amount of salt and water. The injection of sodium chloride results in a rise of the oncometer lever (blood vessel dilatation) but no diuresis. Caffeine, on the other hand, produces an enormous diuresis and in some cases an enormous dilitation of the kidney vessels.

Thus there are produced two diametrically opposed conditions. In the one case salt results in a good response on the part of the kidney, and caffeine in marked kidney fatigue (chromate poisoning), in the other, salt produces no diuresis and caffeine an enormous one (intermediate stage of uranium poisoning). Yet the pathological conditions of these kidneys are very similar and the final stages in both forms of poisoning the same, namely a total lack of response to both salt and caffeine.

Both of these conditions may be seen in human nephritis; suppression of urine by diuretics (as in the chromate type), lack of diuresis after administration of salt (as in the uranium type), sometimes to be dispelled by the exhibition of small doses of diuretics of the caffeine group.

A careful study of the cause and effect along these lines may in the future enable us to obtain diuresis in many cases of nephritis where the blind pushing of drugs has no effect.

PATHOLOGY OF THYROID GLAND IN EXOPHTHALMIC GOITRE.

L. B. Wilson, *Journal American Medical Association,* states that the studies on which this paper is based are a continuation of those first reported five years ago. His conclusions are: 1. A detailed pathological study of fixed tissue preparations from 1,208 thyroids, removed from patients whose condition would ordinarily have been diagnosed as exophthalmic goitre, showed that seventy-nine per cent. of the thyroids contained large areas of marked hypertrophy and hyperplasia. A parallel clinical study has shown that for a period of three years all patients with true exophtalmic goitre, and from whom gland tissue was removed, fall into this list. 2. In this series of 1,208 so called exophtalmic goitres plus 585 so called simple goitres, or a total of 1,793 thyroids, but four instances of marked primary hypertrophy and hyperplasia of the parenchyma have been noted which did not show clinical symptoms of true exophthalmic goitre. Three of the four patients were children. 3. Twenty-one per cent. of the 1,208 glands were either regenerations or adenomas. Clinically, while all of these were markedly toxic, all were chronic and none of them would now be grouped clinically as true exophthalmic goitre. 4. By assuming that the symptoms of true exophthalmic goitre are the results of an excretion from the thyroid, and by attempting to determine the amount of such secretion from the pathological data, one is able to estimate in a large series of cases the clinical stage of the disease with about eighty per cent. of accuracy and the

clinical severity of the disease with about seventy-five per cent. of accuracy. 5. It would therefore appear that the relation of primary hypertrophy and hyperplasia of the parenchyma of the thyroid to true exophthalmic goitre is as direct and constant as primary inflammation of the kidney is to the symptoms of true Bright's disease.—*New York Medical Journal.*

ANTITYPHOID VACCINATION.

F. F. Russell, *J.A.M.A.,* concludes his Harvey lecture on this subject by saying that at the present time sanitation alone is not ample protection, and some measure of personal prophylaxis is absolutely essential the moment we leave home. We are, then, reduced to measures of personal hygiene and individual prophylaxis, and the best method at the present time is vaccination. Only by it can we protect ourselves against infection with as great certainty as against smallpox; in this day and generation it is, in fact, the one promising method of protection from the sporadic and residual typhoid which has so far resisted the efforts of sanitarians. There is no occasion for conflict between the advocates of general and individual prophylaxis; one is as necessary as the other, and no one interested in the suppression of this disease can afford to ignore either.—*New York Medical Journal.*

HEMORRHAGIC DISEASE—ANTITHROMBIN AND PROTHROMBIN FACTORS.

Dr. G. H. Whiffle. in the Archives of Internal Medicine, discusses this subject. He studied the blood in a series of cases of hemorrhagic disease of various forms. He is more convinced than ever by this further study that antithrombin is a factor of importance in cases of bleeding. He finds that the antithrombin-prothrombin balance in the blood is a delicate equilibrium, but under normal conditions there are strong factors which can preserve this balance. Under disease conditions this balance may be temporarily or permanently upset. The prothrombin factor is rarely involved, but may drop to a low level and cause hemorrhagic symptoms. The antithrombin factor is frequently involved, the amount of excess determining the degree of hemorrhage. Antithrombin may fall below normal and cause a tendency to vascular thrombosis. It is highly probable that under certain conditions liver injury or disease may be associated with an excess of antithrombin in the blood capable of giving hemorrhagic symptoms. True hemorrhagic

disease is rarely associated with obstructive icterus. In these rare cases we may presuppose some liver disease and an upset in the antithrombin-prothrombin balance. Certain substances in the blood will cause an over-production of antithrombin, due probably in great part to the stimulation of the liver. This is the cause of hemorrhagic symptoms in septicemia, endocarditis, pneumonia and miliary tuberculosis. In disease of the blood-forming organs, the blood-forming tissues are probably not directly concerned in the excessive antithrombin production, as this element is much in excess in cases of anemia with complete marrow aplasia. Treatment of hemorrhagic disease should follow a careful analysis of the blood. In cases of low prothrombin serum rich in this element is indicated, intravenously or, even better, by direct transfusion. Treatment of antithrombin cases is very difficult. At present direct transfusion seems to offer the greatest hope of permanent benefit.—*Boston Medical Journal.*

PATHOGENESIS AND TREATMENT OF DIABETES MELLITUS AND ACETONEMIA.

R. Lépine, in *Revue de médicine* for October, 1913, asserts that studies on diabetes in the last thirty years have definitely shown diminished sugar combustion to play an important role in the pathogenesis of diabetes. The pancreatic internal secretion exerts a marked influence upon glycolysis; exaggeration (or perversion) of the thyroid secretion has a slight influence, and that of the pituitary is doubtless in part contributory to the glycosuria observed in tumor of this organ. While the adrenal secretion is unquestionably glycogenic and antiglycolytic in certain amounts, its actual influence in the causation of diabetes is at present hard to define; in certain forms of diabetes at least, e. g., that arising from traumatism, increased adrenal secretion may be a factor in the pathogenesis. Phlorizin intoxication, which reproduces grave diabetes in man as regards denutrition, causes an extraordinary lowering of the threshold of urinary sugar excretion, and its study has led to the differentiation of several types of diabetes, due to different combinations of pathogenic factors. Acetonemia is not a mere complication of diabetes, but a necessary end result in all progressive cases, being due to a more or less marked loss of glycolytic power which, in turn, causes carbohydrate starvation, even though a sufficient amount of carbohydrates are ingested and absorbed. A specific remedy exciting glycolysis not yet being available, diminishing, by an appropriate diet, the demands upon the glycolytic function of the diabetic organism remains the best method of fortifying this function. Where disappearance of

glycosuria cannot be obtained by restriction or even suppression of carbohydrates, interdiction of meat, in conjunction with the green vegetable or oatmeal cure, will generally procure the desired result. Lentils and beans are very advantageous as regards high ratio of vegetable albumin to starch content; yet rice and potatoes have also at times proved beneficial. Glucose is better borne by rectum than by mouth. Levulose and inulin are sometimes serviceable. A slight excess of meat increases glycosuria, but very little in ordinary cases of diabetes. Egg albumin is likely to be better borne than casein, though individual variations of fats, milk, and drugs, as well as for physical exercise and residence in a warm climate, are also discussed.—*New York Medical Journal.*

COLI INFECTION OF THE URINARY TRACT.

Marsh (*Pediatrics,* October, 1913) discusses *coli* infection of the urinary tract in infancy and childhood. Although many other organisms may occasionally be the exciting cause of an infection, the *Bacillus coli* is by far the most frequent. Since 90 to 95 per cent. of the cases occur in girls, direct ascending infection is probably the route in most cases, though the organisms may pass directly from the bowel to the kidney or from inflamed pelvic organs to the bladder and ureters, or be carried by the blood stream to the kidney, with a consequent descending infection. Shivering is an important sign in the onset of pyelitis, as it is very rarely met with in infancy except in this condition. The general distress may be considerable and may stimulate other infections, though local symptoms may be slight; and mysterious febrile attacks, especially in females, should not be attributed to dentition and gastro-intestinal disturbances until a careful examination of the urine for pus cells and organisms has been made. The urine is opalescent or turbid, acid in reaction, of unpleasant odor, and deposits pus and epithelial cells on standing. The turbidity is unaffected by acids or boiling, and microscopically the deposit contains quantities of motile bacilli. General œdema is sometimes marked, and in older children there may be puffiness about the eyelids. Diagnosis depends entirely upon microscopical and bacteriological examination of the urine, and when the symptoms are wholly constitutional the true nature of the condition may be easily overlooked, so that in all cases the examination of the contrifugalized urine should never be omitted. Duration is variable and ultimate prognosis favorable, but before a cure is pronounced the urine should not only show an absence of organisms and pus cells, but should also be culturally free from the colon bacillus. Apparently no pernament dam-

age occurs to the kidneys in those cases that are cured. The main indications for treatment are to secure a copious excretion of urine by free administration of fluids, and to render the urine alkaline and keep it so for some weeks. Citrate of potash in from 5 to 20-grain doses every three or four hours will generally produce alkalinity with accompanying improvement in symptoms in from one to three days, and should this drug disturb digestion alkalinity may be maintained by 5 to 10-grain doses of sodium bicarbonate or potassium bicarbonate every two or three hours. Urinary antiseptics are not satisfactory, probably because the efficacy of urotropine depends upon the urine being acid; and autogenous vaccines are of no special value, but these should be given a trial where the alkaline treatment fails.—*British Medical Journal.*

SURGERY

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

VENEREAL DISEASES.

At the eleventh meeting of the Royal Commission, held on January 19th, evidence was given by Lieutenant-Colonel Gibbard, R.A.M.C., head of the Rochester Row Military Hospital. The witness said that the most important causes of the decrease of venereal diseases in the army were the improved treatment and the instruction of the men by lectures and individual talks; other causes contributing to the reduction were greater temperance, the increased attractions of barracks, and the greater encouragement given to sports and outdoor games.

The problem of the prevention of the spread of venereal diseases in the civil population could be best attacked by providing early diagnosis and treatment, by enlightening the public regarding the diseases by lectures and otherwise, and by promoting temperance.

As syphilis was chiefly spread during the early stages of the disease, early diagnosis and treatment were of the greatest importance, especially now that the methods of diagnosis were so good, and that by the use of salvarsan a patient was rendered non-infective in from twenty-four to forty-eight hours.

For the provision of early diagnosis it was necessary that arrangements should be made whereby microscopic examinations and blood tests could be carried out free of charge to private practitioners or patients.

With regard to treatment, Colonel Gibbard was of opinion that

special hospitals for venereal diseases were not to be recommended; every general hospital should provide a certain number of beds for the treatment of the diseases, and these beds should be in general wards. An out-patient department should also be organized so as to give patients every facility for early diagnosis and treatment; and the department (which should not be called venereal) should be kept open at hours suitable to the working classes. Colonel Gibbard thought that compulsory notification was most undesirable, as it would lead to concealment of the diseases.

On the subject of education respecting venereal diseases he thought that there would be advantage in lectures being given at all large factories by selected medical men (or women where the employees were women), and that these lectures might perhaps be illustrated by kinemacolor photographs. At the lectures great stress should be laid on the importance of seeking medical advice on the first suspicion of the disease, and of not consulting chemists or quacks. The experience at Rochester Row had shown that much good might be done in this direction. The number of secondary cases among the men reporting sick at that hospital had been reduced until it was now only equal to the number of primary cases, whereas for the army generally it had been found that for every soldier commencing treatment in the primary stage five began in the secondary stage.

The importance of this reduction was illustrated in the results of the treatment of 62 consecutive cases of primary syphilis during the last eighteen months, which have been under observation for periods varying from six to nine months from the completion of treatment. None of these cases had developed secondary symptoms; only one case relapsed, and that was probably a reinfection. Colonel Gibbard gave an account of the methods of treatment employed at Rochester Row and of the results obtained. The use of a combined treatment of mercury and salvarsan had effected a reduction in the average number of days in hospital on first admission from 42 to 23.2, while the percentage of relapses had fallen from 33 with mercury alone to 3.9 per cent. with the combined treatment.

Questioned respecting some remarks which had been recently published regarding the dangers attending the use of salvarsan, Colonel Gibbard said that all his experience had gone to show that, provided the medical men using it had acquired and knew thoroughly the technique and contraindications, salvarsan could be safely used, and in conjunction with mercury was the most effective cure known. There had been no deaths or ill effects following its use at Rochester Row, and more than 3,000 intravenous salvarsan injections had been given.—*British Medical Journal.*

CHRONIC INTESTINAL STASIS SURGICALLY CONSIDERED—SOME TYPES ILLUSTRATED.

Dr. William Seaman Bainbridge said that just how far the admirable pioneer work of Lane would lead us, time and further study must determine. We no longer questioned the far-reaching relationship of chronic intestinal stasis to many conditions formerly considered distinct disease entities. Lane, as was well known, had repeatedly emphasized a long series of affections brought about by the enfeebled resistance which the tissues offered to the invasion of microbes. Intestinal stasis presented a wide field for research on the part of the physician and surgeon; at the same time such work opened the door of hope for many a person who would otherwise be doomed to chronic invalidism. Adopting the definition of this stasis which Lane had given, we had practically a question of body drainage to deal with. The great central canal, the gastrointestinal tract, with its side passages leading to reservoirs which we called organs, might be compared to a great drainage or sewage system. Obstruction and retention in one part of the sewage system meant, sooner or later, contamination of the entire area drained by the system; and so with the body, when there was abnormal retention in one part, the entire system eventually became contaminated, for here there were present just the conditions—warmth, moisture and bacteria—which favoured the development of toxic materials. There might be not only development of more toxic matter than under normal circumstances, but the absorption into the body tubes of more poisonous material, and the bathing of the tissues with it. The parts thus affected in time suffered disturbed function, disease and ultimate death. The prevention, therefore, of chronic intestinal stasis, with its aftermath of disturbed function, disease and death, was our prime object in the study of this subject. The vast majority of cases should have been prevented, while hygienic and medical treatment, if instituted sufficiently early, would cure a large proportion. Certainly 9 out of 10, or 19 out of 20, of all cases should not reach the stage calling for surgical intervention. In many instances, unfortunately, there came a time when the plumbing must receive direct attention; when the surgeon, as the expert plumber, must be called in. Whether he should patch and mend, so to speak, the defective drainage system, thus warding off trouble, or whether he should employ more radical measures and eliminate defective parts, was a fine point to be decided according to the exigencies of the individual case. We therefore heard of the conservative and the radical treatment of intestinal stasis; but it should be borne in mind that there was no hard-and-fast distinction between the two terms, for what in one case might seem radical treatment might, in another, be extremely conservative.

The physician who waited, fearing to resort to surgery, and by this delay rendered necessary, ultimately, a severe operation, was less conservative than one who, by employing milder surgical measures at first, obviated the necessity for the severer operations. In many cases the drainage system had been neglected until a part of the human plumbing must be removed—that was colectomy; in others it was possible to sidetrack the damaged part—that was short-circuiting. In still others the parts could be patched up; the tubes could be straightened, the angles corrected. It was often difficult to determine to just which type an individual case belonged. In fact, it had to be freely admitted that to-day we were feeling our way along; endeavouring to profit by experience in order to more accurately place the border-line cases. For over seven years, the speaker said, he had been in personal touch with Lane, studying many of his cases with him before, during and after operation, supplementing this observation by actual experience in a large number of cases, and to-day he did not hesitate to short-circuit or colectomize where he felt that less radical measures might not suffice; for, as Lane had shown, to cut bands and to disturb many adhesions gave, in markedly toxic cases, as great a mortality as short-circuiting, if not greater than this. In a broad way we might classify cases of chronic intestinal stasis under three groups. The first, in which surgery was unnecessary, might be called the medical group, and in the third either a short-circuit or a colectomy was necessary. Between these two there was a group in which it was possible to "patch up" the drainage system and thus effect a cure. The cases which he would present belonged to this second group. It was a question whether some of the cases would not have done better if the short-circuit operation or colectomy had been performed; but at all events we had here a group of patients with all the symptoms attributable to chronic intestinal stasis who had been literally made over through surgical intervention based upon the mechanical causes of intestinal obstruction, as described by Lane. He desired to present briefly the histories of a few cases which had been worked out with Dr. Hayes and Dr. Quimby. After all, the surgeon must substantiate on the operating table the predictions which he had made from clinical observation and X-ray examination. In order to do this and to put into indisputable and permanent form the actual conditions found upon laparotomy, it was his practice to have an artist skilled in medical and surgical work stand beside the operating table to study the conditions, step by step, and depict on paper exactly what was seen. In addition, he had present a stenographer, to whom he dictated the conditions found and the procedure employed to correct them. The first case described was that of a male, aged 49, who when first seen by Dr. Bainbridge was in very poor condition and practically starving to death. The clinical

diagnosis was almost complete pyloric stenosis; gastric dilation; duodenal ulcer; ileal stasis; and the radiographic, incomplete pyloric obstruction; organic involvement of the first portion of the duodenum, probably malignant; ileal stasis. The conditions found on laparotomy December 25, 1912, were dilation of the stomach; almost complete pyloric obstruction; diverticulum of duodenum, with a mass of inflammation about it; marked duodenojejunal kink; adhesions between neck of gall-bladder and duodenum; pronounced ileal stasis; marked Lane's bands; some enlarged glands about the pylorus and back of liver. Operative treatment: (1) Gastroenterostomy, posterior; (2) ileal band cut transversely and sutured longitudinally; appendix removed, though normal; (3) small fibroid of right lobe of liver, at free margin, excised; liver sutured. After-treatment: Liquid paraffin and supporting abdominal belt. This patient was presented perfectly well; having gained 45 pounds. In case 2, that of a physician aged 40, the procedures were: (1) Pyloroplasty (Heinke-Mikulicz); (2) duodeno-jejunal bands severed and loop of jejunum fastened to under surface of transverse mesocolon; adherent omentum detached and raw surfaces turned in; appendix, which was long, wound around the caput coli to the extent of four inches, and adherent to a typical Lane's band, removed. Lane's band, two inches from ileocecal valve and constricting ileum, severed transversely and sewed up longitudinally. Mobile cecum fastened into right ileac fossa. In case 3, that of a female aged 52 many adhesions were divided, and longitudinal bands of cecum shortened, and head fixed in normal position; retroversion and retroflection of uterus corrected. This patient was also presented in good health. The histories of four other cases were given; after which Dr. Bainbridge went on to say that it had been his endeavour to demonstrate in a concise manner the existence of the various conditions caused, and the results produced by, chronic intestinalstasis. It should be borne in mind that the *x*-ray plates and drawings made at the operation must be studied with an appreciation of mechanical conditions. When the subject was in the reclining position, as at on the operating table, these kinks and angulations might not be apparent, and this fact perhaps explained the difficulty many surgeons had in "seeing the kinks." Added experience, however, with due allowances for changes resulting from change of position, had precstically eliminated the former doubt concerning the existence of these "crystallizations of lines of strain," as Lane had called them, and the resultant showing of the passage of the contents of the great drainage system of the body.—*Medical Record.*

GYNÆCOLOGY

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

RUPTURE OF UTERUS IN FIFTH MONTH OF PREGNANCY.

E. Bovin (*Hygeia*, Ocober, 1913) records he case of an unmarried woman, aged 24, who declared herself a primipara, but who subsequently was found to be a multipara. She stated that she menstruated last in the middle of September, 1912, that abdominal pain began on January 21st, 1913, and that it had continued at short intervals till she was admitted to hospital on the 22nd, when a slight hæmorrhage was found to have stopped. On account of a temperature of 101.6 deg. no internal examination was made, and it was thought that, as the labor pains were active, the abortion would be completed spontaneously. At first the pulse was 112, and the uterus did not quite extend upwards to the level of the umbilicus. Two hours later the uterus reached this level, and diffuse tenderness of the lower abdomen was most noticeable in the middle line. The abdomen was, however, flaccid. A few hours later an internal examination was made. The external os was far back in the pelvis and admitted only one finger. No abnormality was discovered. An hour later the patient suddenly became pale and pulseless, and died in a few minutes. The necropsy showed much fluid blood in the abdominal cavity. A large hæmatoma in front of the left side of the uterus had stripped up the serous lining, which had given way at one point, whence the blood had escaped into the abdominal cavity. The hæmatoma communicated with the interior of the uterus by a longitudinal tear extending from a point just above the external os to the upper portion of the body of the uterus. The cervix showed no other lesion, and the vaginal fornices were uninjured. A 15 cm. long unmacerated fetus had escaped from the uterus completely, and lay in the cavity formed by the hæmatoma. The placenta was still attached to the right upper portion of the uterus, which had not been involved in the rupture. Although the position of the tear in the uterus coincided with that usually found after spontaneous rupture at term, the author is sceptical as to its spontaneity, for there were no signs of erosions or scars to account for it. It is more probable that the cervix had been wounded and infected during an attempt to induce abortion, and that when labor pains began the wound instead of the os had been gradually enlarged till it transmitted the fetus into the hæmatoma. The circumstantial evidence in support of this hypothesis was full and convincing.

ACID INTOXICATION IN INFANCY.

In a very interesting communication to the *American Journal of the Medical Sciences* for January Professor Isaac A. Abt, of Chicago, de-

scribes a type of acidosis observed by him in infants which he believes to be separate and distinct from the similar intoxications which are already recognized. The victims of this disorder, nine of whom have come under Professor Abt's care, are nearly always infants at the weaning stage, previously healthy and of healthy parentage. Three of his cases, two of them fatal, were of one generation in the same family, and he knows of a similar familial group in the practice of a colleague. In some cases the child shows a stationary weight curve for a little time before the onset; some of the children were at the breast, others were on the bottle. The onset in gastra-intestinal in type, diarrhœa with some vomiting being the predominant symptom. Fever rarely exceeding 101 deg. F. and soon falling, restlessness, and early dyspnœa of the air-hunger type, are also noted. The liver is uniformly enlarged and firm, and urine soon contains albumin with casts (and leucin and tyrosin in one instance) and acetone and diacetic acid, but no sugar. The abdomen becomes more and more distended, intestinal atony being extreme towards the end, which occurs in coma on the fourth or fifth day. The blood count is not altered, and there are no nervous symptoms apart from the stupor, which begins early and deepens into coma. Professor Abt is careful to differentiate between these cases and the other common acidosis of childhood, cyclical vomiting, on clinical grounds, but the necropsy findings in four fatal cases are much like those of the more familiar syndrome. There is extreme fatty degeneration of the liver, but no jaundice. Similar changes are noted in the renal parenchyma, and moderate focal necrosis is noted in the myocardium and lungs. The familial factor is a point of great interest, since it enters into other acidoses, such as that known as "delayed chloroform poisoning," while in the cyclical vomiting of childhood a history of migraine in one or other parent is by no means unusual. It is impossible to judge whether or no Professor Abt's is indeed a "new" syndrome(but his paper serves to remind us that the term "acidosis," convenient hybrid though it may be, covers a multitude of metabolic errors which are not yet adequately understood or differentiated from each other.—*London Lancet*.

ENLARGEMENT OF THE SPLEEN IN CHILDREN.

Dr. Hutchison, at Royal Medical Society, suggested the following grouping of enlargements of the spleen met with in children in this country: 1, Tumors: neoplasms, endothelioma, cysts, etc. 2. Infective: typhoid, ulcerative endocarditis, malaria, tuberculosis, lymphadenoma, chronic arthritis. 3. Chronic venous congestion. 4. Metabolic disorders: rickets, lardaceous disease. 5. Blood diseases: leukæmias, splenic anæmia of infancy, chloroma, congenital anæmia with splenomegaly and jaundice. 6. Splenic anæmia of the adult type. 7. Syphil-

itic. 8. Splenomegaly with acholuric jaundice. 9. Splenomegaly with cirrhosis of liver: (a) portal cirrhosis, alcoholic and other forms; (b) biliary cirrhosis; (c) syphilitic cirrhosis; (d) Banti's disease; and (e) congenital obliteration of bile-ducts. Dr. Hutchison pointed out that the classification was mainly a clinical one. He then made a few remarks explanatory of each group. With regard to Group 5, he pointed out that chronic myeloid leukæmia, which causes so great a degree of enlargement of the spleen in adults, was a rare disease in childhood, but acute myeloid and lymphatic leukæmia were not very uncommon and were attended by a considerable degree of splenomegaly. Closely allied to these was the enlargement met with in chloroma. By far the commonest blood disorder in earlier childhood, characterized by marked enlargement of the spleen was the so-called pseudo-leukæmia of von Jaksch (splenic anæmia of infancy). The pathological problems which arose in connection with enlargement of the spleen in these cases in children did not differ from the kindred problems which arose in the case of adults. Group 6: Cases were sometimes met with in later childhood which were indistinguishable from the splenic anæmia of adults. Group 9: Enlargement of the spleen with cirrhosis was not infrequent. Several varieties might be distinguished: (a) The cirrhosis might be of the multilobular type; some cases were alcoholic, but probably other poisons produced a similar result; (b) the cirrhosis might be of the monolobular variety (Hanot type); (c) the cirrhosis might be syphilitic; (d) enlargement of the spleen might exist for years and be followed by a multilobular cirrhosis (Banti's disease); and (e) cirrhosis might depend upon congenital malformation of the bile-ducts. As regards pathology, (a) What was the cause of the enlargement of the spleen? (b) What was its relation to the pathology of the disease as a whole, and especially was the spleen playing an active or passive part? It was reasonably certain that the cause of the enlargement was not the same in all the groups, but it was particularly necessary to inquire what part was played by syphilis in its production. Dr. Hutchison suggested that in Groups (6) and (8) syphilis played no part, and not in cases of cirrhosis except where the cirrhosis was of the well-known syphilitic variety. As to the ultimate cause of the enlargement in acholuric jaundice, in splenic anæmia of the adult type, in portal and biliary cirrhosis, and congenital obliteration of the bile-ducts, he had no suggestions to offer. The results of splenectomy were now enabling one to say whether the part played by the spleen was active or passive. In Groups (6) and (8) the spleen was in some way the cause of the other features in the clinical picture. As regards therapeutics, he suggested that splenectomy was indicated in Groups (1), (6) and (8). It would generally be admitted that it was entirely inadmissible in Group (5).—*London Lancet.*

EFFECTS OF CHRONIC INTESTINAL STASIS ON THE FEMALE GENERATIVE ORGANS.

H. Chapple, in *British Med. Jour.*, referring to the band now generally known as Lane's kink and the argument that bands of this nature are of congenital origin, said that with the object of inquiring into this point he had opened and carefully exafimined at Guy's Hospital thirty-one fetuses. Their ages varied from four to nine months, but in no case had he been able to find anything that might be considered a true Lane's kink. Chapple mentioned that he had recently received confirmatory evidence in this direction in the form of a beautiful series of pictures from the clinic of Dr. Bainbridge, of New York. Chapple pointed out how gravely intestinal stasis affected the generative organs of women and that operative measures for its relief almost invariably had a remarkably favorable effect on these organs. Especially was this so in the degenerative changes which accompanied or followed intestinal stasis. Attention was drawn to the fact that opinions on the subject of intestinal stasis of those members of the medical profession whose notice had been called to it had undergone a very rapid change and that nothing could better illustrate this change than the address in surgery delivered before the annual meeting of the British Medical Association at Brighton in 1913. This surgeon referred to Lane's disease as a clinical entity.—*Medical Record.*

THE ABUSE OF PITUITRIN IN OBSTETRICS.

In the *St. Paul Medical Journal* for August, 1913, Litzenberg reaches these views:

Pituitrin is a valuable stimulant to uterine contraction.

It will not usually produce an abortion.

It will sometimes induce premature labor, but it not reliable for that purpose.

The results in the first stage of labor are not satisfactory unless the cervix is effaced and considerably dilated.

With an undilated cervix it is not to be recommended.

It is a most efficacious drug during the second stage of labor.

It is of some value during the third stage, but its efficacy is much less certain than in the second stage.

Postpartum it is also of some value, but no better than ergot.

Litzenberg believes its proven value is limited to the second stage of labor, and that our knowledge is still limited and its use not without danger, so it must be used with caution.

PERSONAL AND NEWS ITEMS

Ontario.

In the latter part of February, compulsory vaccination prosecutions were abandoned in Dryden on the advice of Medical Inspector, Dr. Blair.

Plans are in preparation for an addition to cost $30,000 to the Public General Hospital at Chatham.

Dr. R. F. Preston, Member in the Ontario Legislature for North Lanark, has been taken into the Ontario Cabinet without portfolio. Congratulations to Honourable Dr. Preston. He is a graduate of Queen's University and has been a Member of the House for twenty years.

Recently the Medical Students of Toronto conducted what they called "Daffodil Night" in Convocation Hall. The affair was very successful, and many members of the faculty were present, as well as a number of senior nurses. The students performed a farce operation in which certain members of the faculty were impersonated. There were other humourous features well staged.

Mr. John Ross Robertson appeared, a short time ago, before the Toronto Board of Control to urge that a grant be made to the Hospital for Sick Children in Aid of the Outdoor Work. He stated that this part of the work of the hospital had increased so much that it was necessary to receive assistance for it, or much of the relief it was now giving to the poor would have to be abandoned.

Honourable Dr. R. A. Payne was for a short time Acting Premier of Ontario owing to the absence from the House of Premier, Sir James Whitney, and Honourable J. J. Fox, both due to ill health.

At a meeting of the Kingston Medical Society, prolonged discussion took place on the question of fee splitting, a practice which now prevails to some extent in most of the larger towns and cities, and is known to be somewhat practised there. After full discussion the following motion was adopted: "That this association desires to place on record its unreserved condemnation of the practice of fee splitting. That any member of this association found guilty of this practice of fee splitting shall forfeit his membership."

Two classes of students in the Veterinary College were suspended because some of the number threw chalk on one of the professors. When will students of all colleges learn to conduct themselves like gentlemen?

The fifteenth Annual Meeting of the Victorian Order of Nurses was held in Toronto, on 20th February. His Honour, Sir John Gibson,

presided. Mr. Capreol presented the treasurer's report, which showed that the income for the year from all sources were $11,817.82. The expenditures exceeded this by a few hundred dollars, showing a deficit to this extent. It was stated that the Victorian Nurses had attended to 25 per cent. of the births reported at the City Hall. During the year, Miss Eastwood retired and Senator Cox, a staunch friend of the order had died. Miss Touche had been appointed Superintendent. Mr. D. R. Wilkie said that a new home was much required, and that towards this there was a fund of $4,605. The reports showed that 17,411 visits had been made, and that 410 doctors had employed Victorian Nurses.

Arrangements have at last been completed for the care of those insane persons that have been sent to the jail. Toronto is to furnish the accommodation and the Government will pay the cost of maintenance. It is probable that the building formerly used as the Burnside Maternity will be put in proper condition for these patients.

A movement is on foot to build a home for the aged in Upper Ontario, and all municipalities will be asked to co-operate in securing the aid of the Government. At present time many of the aged are neglected, and after much suffering, rely on the kindness of those who are willing to receive them.

Some of the teachers on the Toronto Staff have been given leave to attend the demonstrations given on the Care of Children. There are now four leagues under the charge of the Public School Nurses.

A fine new hospital was opened in Coburg, on 20th February. The building cost $50,000 and is well equipped in every way. Dr. Bruce Smith, Inspector of Hospitals, congratulated the town on having such a fine hospital.

The Toronto General Hospital had a deficit of $70,000 on its first years' operations. Some of the trustees appeared before the Board of Control and asked that a special grant of $30,000 be made to the hospital for a few years. It is hoped that in time the revenue from the Private Ward Pavilion will help the institution considerably.

The Roman Catholic Charities, of Toronto, have had their resources heavily taxed during the winter. There has not only been the needy ones of the city, but many have come from other municipalities. There was an unusual demand for out-door help in the form of meal tickets, the various charities giving a total of 11,119 meals. In addition, $6,000 was given in relief of cases.

Some recent cases of smallpox have appeared in Toronto. They have been promptly isolated.

A short time ago, Dr. Gilmour, of the Ontario Reformatory, was in New York, and gave an address before the Prison Reform Association.

Dr. Winnett has removed to his new residence on the corner of Sherbourne Street and Maple Avenue, Rosedale.

It is now proposed that the pavilion of the old General Hospital, Toronto, should be used for the Psychiatric Hospital and not the Burnside Home. It is pointed out that the layout of the pavilion is much superior for that kind of institutiion for the reason that it has two large corridors, which are considered much preferable to a building that is divided into small rooms as the Burnside Home is.

At St. Andrew's Church, Toronto, by the Rev. T. Crawford Brown, on March 3rd, 1914, Janet Louise, daughter of Mr. and Mrs. S. R. Hart, to William Edward Gallie, M.B., of Toronto.

Mr. and Mrs. W. G. Gooderham, of Toronto, have sent a cheque of $500 to the Treasurer of the Coburg Hospital building fund, Lieut-Col. Neil F. MacNachtan, to be devoted towards the cost of an elevator for the new hospital.

The increased cost of living last year, caused a deficit of $879. in the Stratford General Hospital. There is a floating debt of $5,309. Most of the patients paid only $6. a week.

A deputation waited upon Honourable Dr. Pyne recently, and urged that the medical inspection of school children be made general throughout the province.

The Board of Control, a few days ago, voted a second special grant of $10,000 to the House of Industry, as this institution has given a great deal of relief during the winter.

A meeting was held at Port Perry, on 4th March, at which the organiation of the Ontario County Medical Association was completed. Officers were elected as follows: President, Dr. J. S. Mellow, Port Perry; Vice-President, Dr. J. McClintock, Uxbridge; Secretary-Treasurer, Dr. J. Moore, Brooklin; Executive—Dr. Shier, Uxbridge; Dr. Hoig, Oshawa; Dr. Broddy, Claremont, and Dr. N. Blanchard, Sunderland, with the officers. A tariff of fees was arranged for and copies will be sent to every practising physician in the county.

The Annual Meeting of the Ontario Medical Association will be held in Toronto on 26th, 27th, and 28th May. There should be a very large attendance. The work will be very practical.

The Hebrews of Toronto are making some progress towards a hospital of their own. They have secured a site and building on Murray Street, and are arranging for an additional building.

At a recent date the Muskoka and Weston Hospitals for Consumptives had 467 patients, 264 being from Toronto.

Dr. Thomas R. Henry, of Harriston, Ontario, has moved to Oakville.

Dr. Edmund Boyd has located at 142 Carlton Street, Toronto, and will confine his practice to diseases of the nose, throat and ear.

Dr. R. W. Garrett, Professor of Gynaecology and Obstetics in Queen's Medical College, Kingston, has been compelled through ill health, to take a rest.

The new hospital at Coburg cost $50,000. The estate of the late Mr. John Helm has paid the legacy of $20,000 to the hospital.

Dr. J. J. Mason, formerly of London, Ontario, has gone to Vancouver, B. C.

Dr. G. Sterling Ryerson, of Toronto, was elected president of the Canadian Red Cross Society.

Dr. H. R. Elliott and F. W. E. Wilson have been appointed by Dr. Montizombert, quarantine officers for Niagara in connection with the smallpox epidemic there.

Dr. Abner McKinnon, of Port Huron, was found dead in his office 10th March, by a policeman. The man had taken a dose of carbolic acid by mistake, and had tried to save himself with other antidotes. Deceased was born at Manilla, Ontario, in 1871 and was educated at Toronto where he graduated in medicine in 1899. His parents and two sisters still reside in Toronto.

Brantford has a new small-pox hospital, as a lot of sixand a half acres have been purchased, and the house thereon renovated to suit for hospital purposes.

The Hamilton Health Association has asked the city authorities for a grant of $75,000 for the purpose of building and equipping a new infirmary, as the present building is no longer suited.

Recently the village of Wickewimiking, on Manitoulin Island, was quarantined on account of small-pox.

The Hamilton Board of Health recently rejected the claim of a certainp arty for compensation for having been isolated because one of his children had small-pox, the Board stating that the child had never been vaccinated.

The Victorian Order of Nurses in Peterborough attended last year 174 patients, and made 2,745 visits.

At present there are 486 patients in the Sanitoria at Muskoka and Weston. Of these 348 pay nothing for their support. There are 297 from Toronto. In all 7,500 have been cared for since these institutions were commenced.

The press despatches from Oil Springs of 13th March brought the news that the wife of Dr. Joseph Campbell, a retired physician, revived to a state of consciousness after being apparently dead for five hours, and while preparations for her burial were being arranged. She relapsed and died the day following.

Dr. Gustave Monod, of Paris, gave an illustrated lecture in the Physics Building of the University of Toronto on 16th March, on the Facilities for post-graduate work in Paris. He gave a series of moving pictures showing the physiology of the intestines, and athletes in action.

The Joint International Commission on Streams Pollution states that the tests made of 30,000 samples of water reveals a dangerous condition of pollution, from Rainy River to the lower St. Lawrence.

The Kingston Ice Company has entered action for libel against Dr. W. A. McCarthy, as result of a statement alleged to have been made by him at a recent meeting of the Board of Health.

The Board of Trustees of the Berlin and Waterloo Hospital have accept- the resignations of Mrs. H. M. F. Bowman, Superintendent, and Miss V. H. Macsweyne, Assistant Superintendent. General regret is expressed at the proposed departure from the city of these efficient officials.

Quebec.

The Montreal General Hospital has to face a deficit of $67,014, reported at the ninety-second annual meeting to-day. Treasurer Evans said the board would soon have to face an annual expense of $250,000. Over a million dollars had been spent in recent years upon additions to buildings, and to complete the work in hand $75,000 more at least was needed. The report says that the time has come for a public appeal for a sum of $1,600,000 to put the institution upon a sound basis. Nearly five thousand indoor patients were treated, the largest number in the hospitals history. Dr. Alexander J. Hutchinson becomes senior surgeon in succession to Dr. F. J. Shepherd, who after 25 years' service goes on the Board of Management.

An interesting trial of a bonesetter took place a short time ago in Quebec. Mr. Fiset, who practised bonesetting at Portneuf, was brought to trial by the College of Physicians and Surgeons for accepting fees without a license to practise. A number of witnesses were called to show how he had cured cases when doctors had failed. Judgment was reserved.

On the morning of 26th February, a fire broke out in the hospital portion of the St. Vincent de Paul Penitentiary, Montreal, and destroyed that section, valued at $50,000. No lives were lost. It soon became evident that the hospital must be sacrificed, and all the attention was devoted to the removing of patients. The fire was brought under control before the building proper was reached.

It is almost a year since Dr. F. H. Friedmann of Berlin, and of turtle serum fame, visited Montreal and treated fifty-six tuberculosis patients at the Royal Edward Institute. The local physicians in charge of the cases now state that absolutely no benefit has resulted from the treatment. The few deaths that have occurred were probably neither hastened nor delayed.

It is stated that carelessness, is the cause for the spread of typhoid fever in the Rechelieu River region. Many of the inhabitants refuse to boil the water used for drinking purposes. A statement was issued officially by Dr. S. Sabourin that there were 300 cases.

The Protestant Hospital at Vendom, treated last year 477 men and 433 women. There were 247 admissions. Of 151 who were discharged, 74 recovered, 45 were improved, and 32 unimproved.

Maritime Provinces.

Twenty-six steerage passengers from the Russian-American liner Russia, which arrived in port at Halifax on 6th March, from Libau, were landed in the Quarantine station because of a suspected case of smallpox.

The fourteenth Annual Convention for the Prevention of Tuberculosis will meet in Halifax on 13th and 14th of July. This just follows the meeting of the Canadian Medical Association.

Plans are under way for a hospital at River Glade, N.B. It is expected the building will accommodate 100 patients and cost about $15,000.

The recent Act of New Brunswick makes it obligatory on the municipality to pay $1 a week for each pauper patient. It has been contended that it is notfair to charge the balance to the public, and that the municipality should pay more.

The Halifax Medical Association has been urging that the city erect a sanitorium for tuberculosis and also have frequent bacteriological test of the water made.

The conditions of housing and sanitation in some districts in St. John are to be examined, with the view improving health conditions.

Western Provinces.

Four cases of smallpox was discovered in the Childrens' Home in Winnipeg, and as a result the institution was placed under quarantine. There is a theory that the disease was carried by a nurse who attended a supposed case of chickenpox at Kildona.

Dr. T. Glen Hamilton, member of the Winnipeg Public School Board, has been chosen by the Liberals as their candidate for the Legislature in Elmwood.

The University of Alberta has now in operation its medical department. Students of the first year in Medicine are attending lectures.

Dr. E. H. Gray has been appointed to the Medical Superintendency of the Waddell Hospital, Conora, Saskatchewan.

Dr. Arthur Wilson, Secretary of the Saskatchewan Medical Association, and late Assistant to the Commission of Health, has been appointed Officer of Health for Paskatoon.

Dr. Ernest A. Hall, of Vancouver, recently paid a visit to Toronto. On his way home he delivered some lectures in Regina.

The following has passed the Examinations of the Alberta College of Physicians and Surgeons: J. A. Jardine, A. B. Wickware, C. Atkinson, P. Dahl, H. Barrow, L. Conn, R. J. Douglas, J. F. McCracken, W. A. Proud, W. A. Scanlon, F. Standish, and B. C. Sutherland.

The Saskatchewan Medical Association has acquired the *Western Medical News*. We hope this will prove a happy arrangement for all concerned. The *Western Medical News* is a bright publication and has done much good.

The Council of the College of Physicians and Surgeons of Saskatchewan has elected Dr. Argue, of Grenfell, as president, and Dr. Eaglesham, of Weyburn, as vice-president.

The following officers of the Canadian Army Medical Corps at Regina have passed their examinations for the grade of Captain: J.J. Field, J. A. Callum, H. McLean, J. Henderson, E. B. Allport, and A. Croll.

The College of Physicians and Surgeons for Alberta have passed the following: D. Brace, C. Coulter, C. H. Edmunds, W. H. Godfrey, O. W.Irwin, W. C. Kitchen, J. C. Kittlesey, P. M. Lavoye, W. H. Mains, J. M. McLean, J. R. Page, H. J. Robertson, E. A. Shaw, A. Sousy, F. J. Thompson, J. A. Murison, R. M. Johnstone, J. Q. A. Scroggy, and O. N. Singleton.

The Tranquille, B.C. Sanatorium had a deficit of $15,000. It is proposed to erect a new building at a cost of $100,000, and the provincial Legislature will be asked for assistance.

Calgary will erect a municipal abattoir at a cost of $125,000

The Saskatchewan Medical Association will meet this year at Saskatoon in June.

The Vancouver General Hospital shows a deficit, and it has been decided to advance the charges for semi-private wards from $1.75 to $2.00, and for private wards from $2.00 to 03.50 a day. The contract for the new nurses home has been let.

The sum of $75,000 is on hand for the new sanitorium for tuberculosis at Kamloop. The Government is to be asked for $75,000.

Mr. Justice MacDonald, of British Columbia, gave judgment in favour of a party who brought action against Columbia Coast Mission, as the organization received $1.00 a month for medical treatment.

Hon, W. H. Montague, Provincial Minister of Public Works, who has been at Hot Springs, Ark., is coming home. His health has improved somewhat since he left Winnipeg, but he has not fully recovered.

From Abroad.

Permanent cure of cancer of the face and neck by radium treatment was claimed by Dr. Robert Abbe, of New York, in a lecture before the Radium Institute of America at Columbia University.

Two Canadian nurses, named Miss Edna Schwalm and Miss Elizabeth Wilson, were engaged in the hospital in connection with Ann Arbor University, Michigan, the former as matron and the latter as her assistant, were on 26th February ordered by the Immigration Department at Washington to leave the country, as they had entered it in violation of the United States Alien Labour Laws. They are both graduates of the McDonald Institute, Guelph. There is no institution in the United States that gives a training similar to that obtained in Guelph, and Miss Pindell, the Lady Superintendent of the hospital, had to turn to Canada for the skilled help she required.

Suburban municipalities comprising "Greater Berlin" have formed a "radium trust" for the purpose of providing themselves with radium at minimum cost. The necessary funds have been placed at their disposal by the State Insurance Department at a low rate of interest. The "trust" has been offered 850 grams of radium at a considerable lower price than was demanded a year ago. The city of Berlin is itself buying radium on its own account.

News comes from Delmar, Deleware, that a young girl, aged ten, was cured of the effects of an injury to her spine that doctors said could not be cured. She is now curing other "incurables" by her prayers. She has received hundreds of letters from all over the United States asking for her prayers for afflicted ones. People of all ages seem to love the occult and yield their minds to the mysterious. To the educated, the story has the ear-marks of the "fake."

Mrs. Hooper has given to the University of California $1,000,000 to endow a School of Medical Research in memory of her late husband, George William Hooper. No part of the fund is to be used for buildings or the teaching of medicine. The entire income is to be expended in investigation.

Beginning July 1st Bellevue Hospital will have three women internes, and six months later at least one more will be added. All four are from the Cornell Medical School. This means that the young women will have to jump upon the speeding ambulance and perform many a service beneath the eyes of an admiring crowd. It will be a new sensation for Manhattan.

The *Medical Record* of New York states that it is reported that the late Dr. Weir Mitchell a very short time before his death finished an epic poem of five thousand lines entitled *Barabbas,* which is believed to be one of the most remarkable of his literary productions.

Dr. Franklin P. Mall has announced that two men and four women lead in his class in Anatomy at John Hopkins University. This statement is made in answer to Professor William Sedgwick, of Massachusettes Institute of Technology, who said that women are not as capable of learning as men.

At the annual report of the London Fever Hospital it was stated that during the year no malt liquors had been used in the Hospital either by patients or the staff. The institution was gratified with the results.

Miss Jean R. Shaw, M.B., D.P.H., has been appointed fourth Assistant School Medical Officer for Chashire at a salary of £350. She is the first woman medical officer appointed in that part of Britain.

In the United States 10,000,000 gallons of wood alcohol are produced annually. There have been one thousand cases of poisoning since 1893. There is need for legislation governing its sale and use.

Hubert French, author of "Medical Laboratory Tests," and a son of Sir John French, the distinguished soldier, died in London recently.

An English expert, after considerable prospecting in Jamaica, declares he has discovered a large deposit of radium-bearing ore and that a sample of the ore sent to the United States has been pronounced satisfactory.

Dr. G. Frank Lydston, of Chicago, reported to the Chicago Medical Association that he had transplanted the generative gland of a lad of eighteen, who had been dead seventeen hours, into his own body, and that the gland is active. He thinks this may prove of value in the treatment of some presenile conditions as, hardening of the arteries, Bright's disease, etc.

We learn from the *Glasgow Medical Journal* the interesting fact that the late Dr. Weir Mitchell was the great-grandson of an Ayrshire man, Collector John Mitchell, a friend of Robert Burns, whose superior he was in the Excise.

Some time ago, Sir William James Thomas gave to the building fund of the Medical Department of Wales, the sum of $30,000, and recently some one has given anonymously $60,000. The Chancellor of the Exchequer has promised that the Government will also aid.

One of the most notable figures at the annual meeting of the British Medical Association in Brighton last July was that of Dr. Hans Schlimpert of the Freiburg University; and members, especially of the Section of Obstetrics and Gynaecology, will learn with great regret of his tragic death on January 25th. He had felt slightly indisposed for a few days, and on January 19th he was compelled to break off suddenly in the middle of his lecture, saying, "Gentlemen, I must beg you to excuse me. I have a commencing appendicitis." On the following evening he called in his chief, Geheimrath Krönig, begging him to operate immediately, but although this was done within the hour, there was little hope of his recovery; he lingered for a few days, bearing pain with the greatest fortitude, and died a few hours after a second hopless operation on January 25th.

Many will regret to learn of the death of Dr. Roswell Park, of Buffalo, which occurred on 15th February, in his 62nd year. He was one of the most distinguished surgeons of America, and an extensive writer on medical subjects. He received many honorary degrees

Dr. Lachand, President of the Parliamentary Committee of Hygiene and Public Health, has stated that there is a marked degree of over crowding in the Tenth barracks, and that many of them are in a very insanitary condition. He showed that 27 per cent. of the troops in the east of France are incapacitated by illness.

A bill recently introduced into the New York State Legislature provides that before a marriage license shall be issued in the State both parties to the prospective marriage must file physicians' certificate to show that they are not afflicted with any physical or mental disease which is contagious or likely to become hereditary.

The Philadelphia Academy of Surgery announces that the Samuel D. Gross Prize of $1,500 will be awarded next year, and that essays in competition for it will be received until January 1, 1915. The conditions made by the giver of the prize are that it "shall be awarded every five years to the writer of the best original essay not exceeding 150 printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens."

W. B. Saunders Company, Publishers of Philadelphia and London, have just issued an entirely new eighty-eight page Illustrated Catalogue of their publications. As great care has evidently been taken in its production as in the manufacture of their books. It is an extremely

handsome catalogue. It is a descriptive catalogue in the truest sense, telling you just what you will find in their books and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 250 books, including 30 new books and new editions. A postal sent to W. R. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

The eighty-second annual meeting of the British Medical Association will meet this year in Aberdeen from July 24th to 31st. Sir Alexander Ogston is President.

The Legislature of New York State has before it a bill to limit the sale of habit forming drugs, and the bill to confer upon the Board of Regents of the University of New York to supervise experimentation on animals with the view of preventing cruelty, and a bill to create a commission to enquire into and report upon experimentation on man and animals.

Two years' salary, amounting to $5,570, was voted by the United States Senate on February 12th, to the widow of Dr. Thomas W. McClintock of the United States Public Health Service, who died from spotted fever contracted while he was making researches into the cause of the disease.

Professor A. W. Mayo Robson of London, who is an honorary Fellow of the American Surgical Society, was shot in the thigh recently by a gun bearer while on a hunting trip in British East Africa. He was carried to Nairobi for treatment and is now recovering.

Dr. Alphonse Bertillon, the noted criminologist and the director of the anthropometric department of the Paris police, died in that city on February 13th, in the sixty-first year of his age. Dr. Bertillon was known chiefly as the originator of the system called by his name for the identification of criminals by accurate measurement . The system was first introduced into France in 1883 and rapidly grew in popularity until it was adopted by practically all of the police departments of the larger cities. Of late years, however, it has been somewhat supplanted by the finger print method of identification. In recognition of his work Dr. Bertillon was some time ago made a Chevalier of the Legion of Honour.

The Radium Institute of Philadelphia was incorporated on Tuesday, February 10th, under the laws of the State of Delaware, to "build, maintain, and operate hospitals and institutions for the treatment of cancer and other diseases." The capital stock is $250,000. It is said that those who are interested have laid plans to procure all the radium that will be needed when the institute is opened. The site has been selected and work on the structure will be started in a few weeks.

The doctors on the panel for the working out of the British Insurance Act derive about £230 a year for their services. Out of 22,500 medical practitioners in Great Britain, no less than 20,000 are on the panel.

Dr. J. Kerr Love in giving evidence before the British Commission on Veneral Diseases said that the record of 21 families he had studied with syphilis in the parents, two-thirds of the children were born dead, or if alive suffered seriously in health.

The Local Government Board of Britain has issued an order to come into effect on 1st April, that ophthalmia neonatorum is placed on the list of notifiable diseases.

In Britain a regulation has been issued that when insured persons contract with unregistered practitioners for treatment the Committee may grant these the assistance under the Act. This would appear to let in bonesetters, osteopaths, faith-healers, Christian Scientists.

On February 21st, Senator Ransdell introduced into the national Senate a bill carrying an appropriation of $500,000 for the study and eradication of malaria and typhoid fever in the United States.

A report of the hospital investigating board, submitted on February ennually $1,000,000 for the hospital and almshouse care of aliens, many of whom have entered this country within five years, and were diseased on admission.

OBITUARY

GEORGE HARRISON.

The medical fraternity of Ontario lost one of its best men in the death of Dr. George Harrison, which took place at his late home in Clifford, on 7th March, in his fifty-sixth year. He was born in Selkirk, County of Haldimand. He taught school in Dunnville for about four years, after which he was graduated in the year 1890. After a year spent in the Toronto General Hospital he commenced practice in Belmore and came to Clifford about eighteen years ago. He is survived by his wife and three daughters and an aged father, Dr. Harrison, who is still practising in Selkirk. Deceased was a member of the I.O.O.F., A.F. & A.M., and A.O.U.W. The funeral took place on Tuesday afternoon, 10th March, to the Clifford Cemetery.

BLISS S. THORNE.

Dr. Thorne died at his home in Havelock, N.B.,, 26th January, in his 71st year. He was a well-known practitioner in the district.

C. A. DUGAS.

Dr. Dugas, of Montreal, died there on 7th January. He was in his fiftieth year, and was born in St. Jackes L'Achigan, Quebec. He was a graduate of Victoria University of 1887. He was well known in Montreal and for twenty years was Coroners' Physician.

HUGH WATT.

Dr. Watt died at Elks, B.C., on the 23rd March. Deceased was for several years editor and proprietor of the Meaford *Monitor*. Recentlly he had medical charge of an Indian reservation at Fort Steele, B.C.

ALEXANDER SANGSTER.

Dr. Sangster graduated from Victoria University in 1884, and was in his 50th year when he died. He had been in poor health for three months. He followed his profession with success and marked devotion in Stouffville since the time of his graduation. His son, Dr. F. N. Sangster, practises in Sarnia, and three brothers practise in Stouffville, Cheboygan, and Calumet, Mich., respectively.

A. J. SINCLAIR.

Dr. Sinclair, of Paris, Ont., died on 20th March, at his home. He had been in poor health for a long time. He was born in Elgin County and graduated from Trinity Medical College in 1875. He located at once in Paris, where he carried on his practice until his realth failed a few years ago. He was surgeon in that district for the Grand Trunk Railway for 25 years. He took an active interest in public questions, and was appointed collector of customs in Paris in 1904. He retired four years ago from all active work owing to ill-health. He was interred in St. Thomas, and is survived by his wife.

BOOK REVIEWS

THE PRACTICE OR SURGERY.

The Practice of Surgery. By Russell Howard, M.S., F.R.C.S., Surgeon, Poplar Hospital; Assistant Surgeon, London Hospital; Joint Lecturer on Surgery and Teacher of Operative Surgery, London Hospital Medical College; Author of Surgical Nursing, etc. With 8 colored plates and 523 illustrations. London: Edward Arnold, 1914. Price, 21s net.

This is the first edition of what promises to be a very popular work. It contains 1,227 pages, medium sized octavo. The paper has been selected with taste, as it is fairly thin, but of very fine quality and lends itself well to the illustrations. The coloured plates are very attractive and helpful. The general diseases of Surgery are taken up first and are well handled, and lay a good foundation for the subsequent chapters. The various sections are taken up seriatim, and in each of these sections full attention is given to the surgery of injuries. The work throughout is of a thoroughly practical character, and but very little space is given to pathology. This is the proper course to follow, as there are many excellent works on pathology, the work on surgery should not attempt to be an encyclopedia, and cover the ground in an imperfect manner which is done much better in books for the purpose. Enough is given under the heading of symptomatology to make the student's path clear, but the main feature of the work is treatment. It is a work on the *Practice* of Surgery. In every possible way both the author and publisher are to be warmly congratulated on the results of their efforts to give the student and practitioner a reliable work on Surgery. We can commend this work as sound, readable, and amply exhaustive.

MODERN ANÆSTHETICS.

By J. Frederick W. Silk, M.D. (Lond.), Senior Anaesthetist and Lecturer on Anaesthetics, King's College Hospital; formerly Anaesthetist to Guy's Hospital and Dental School; to the Royal Free Hospital; to the Great Northern Hospital; to the Hospital for Paralysis, Queen's Square; and to the National Dental Hospital; late President of the Society of Anaesthetists, and Vice-President, Section of Anaesthetics, seventeenth International Medical Congress. London: Edward Arnold. Price, 3s net.

The author gives, first of all, a short account of the phenomena of anæsthesia. This is followed by his own experience in the administration of anæsthetics and the procedures he has found of most service and the best to follow. Then follows an account of the difficulties met with in various types of cases and operations. He gives full attention to the more recent procedures that have stood the test of practical trial, and now appear to be among established methods. There is a brief but

good account of the history and introduction of anæsthetics and their various mixtures. One of the most interesting parts of the book is that devoted to the study of the preparation of the patient, the insruments to be used, and the choice of the anæsthetic. He then takes up the administration of nitrous oxide, ether, chloroform, various mixtures, and local anæsthetics. Careful attention is given to difficulties and dangers, their treatment, the after-treatment of the patient, and sequels. A chapter is devoted to exceptional operations. The book is well illustrated and printed on good paper and in clear type. We congratulate the author on the results of his efforts to put into the hands of the medical profession so excellent a guide on the important subject of anæsthetics, the use of which every physician ought to be familiar with. We recommend this book with great confidence.

DENTAL DISEASES AND PUBLIC HEALTH.

By J. Sims Wallace, D.Sc., M.D., L.D.S., formerly Dental Surgeon and Lecturer on Dental Surgery, London Hospital. London:Published at office of the Dental Record, Alston House, Newman Street, W., 1914. Price, 3s net.

This neat little book deals with three topics: Dental Disease in Relation to Public Health; The Physiology of Oral Hygiene; and Children and Dental Disease. Under these headings much useful information is given. The volume will prove a great help to those who have to do with these questions.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. Vol. 1, March, 1914, Surgery of the Head and Neck, Surgery of the Thorax, Infectious Diseases ,Diseases of Children, Rhinology, Otology. Philadelphia and New York: Lea & Febiger. Price, $6.00 per year.

This volume is in keeping with the rest of the series. It is full of good information on the sections covered. It will repay careful study, and will form an excellent addition to any library.

GENITO-URINARY SURGEONS' REPORT.

Transactions of the American Association of Genito-Urinary Surgeons, Twenty-seventh Annual Meeting, held at the Shareham Hotel, Washington, D.C., May 6th and 7th, 1913. Vol. viii. Published for the Association by Frederick H. Hitchcock, 105 West Fortieth Street, New York.

This volume of the annual transactions of genito-urinary surgeons gives evidence of much good work done in this department of medicine. The volume is printed on good paper and in clear type. It is well illustrated. We congratulate the Association on the excellent papers herein contained.

MISCELLANEOUS MEDICAL NEWS

TORONTO HOUSING COMPANY.

This is the first annual report of this company. It is operating on the Ontario Act of a year ago, which aimed at securing a better class of housing for the working classes, and at lower rates of rental. A number of well-known citizens constitute the board of the company, and many others are shareholders. The profits of the shareholders are limited to 6%. A good deal of real progress has been made. Spruce Court, with accommodation for 38 families is now ready for occupation. Other buildings are in progress or contemplation

THE INSTITUTE QUARTERLY.

This publication is brought out under the auspices of the State Board of Administration, The State Charities Commission, and the State Psychopathic Institute for Illinois. This number gives carefully prepared information about the hospitals, jails, refuges, dispensaries, etc., throughout the State.

VETERINARY DIRECTOR GENERAL'S REPORT.

This report, issued by the Department of Agriculture for Canada, contains much information with regard to what is being done in this country to suppress disease among live stock; and, especially, such diseases as may affect the health of man.

CRIME IN CANADA.

A statement of the criminal statistics brought down in the House on 21st February, shows an increase in all provinces with the exception of New Brunswick and Prince Edward Island, the percentage increases being:

Ontario	9
Nova Scotia	90
Alberta	65
British Columbia	43
Saskatchewan	27
Manitoba	24
Quebec	23

The statement covers the year ending September 30th, 1912, and shows a total of 20,168 charges and 15,567 convictions of indictable of-

fences, as against 16,625 charges and 12,627 convictions in the previous year, an increase of 3,543 charges and 2,940 convictions.

Offences by young people increased by thirty per cent. Out of 1,242 cases under this head, 944 were of theft.

The number of criminals per 100,000 of the populatoin is as follows, by provinces:—

Province	
Ontario	253
Prince Edward Island	38
Nova Scotia	147
Quebec	124
Manitoba	268
Saskatchewan	215
Alberta	350
British Columbia	390

For all Canada the proportion is 208. Female offenders numbered 709, a proportion of 9.49. Fifty-two charges of murder resulted in 25 convictions and it is noted that of those convicted only six were native born Canadians. There were 53,171 convictions for drunkenness, an increase of 11,792.

THE SAFETY MOVEMENT.

About a year ago the American Museum of Safety began agitating a children's safety crusade, with a view of reducing the alarming number of accidents that had occurred in the streets of New York in the preceding twelve months. It was found that 195 persons had been killed by trolley cars, 91 by automobiles, and 228 by wagons in the year 1912, besides a greater number injured. These were also the fire statistics expressed in the following table:—

Cause—	No. of Fires.
Careless handlind of matches	1,115
Careless handling of candles	386
Careless disposal of cigars and cigarettes	401
Careless handling of kerosene	161
Overheated stoves and stovepipes	419
Curtains ignited by gas lights	216
Unknown	2,764
Total	5,462

It was concluded that the very best way of going about the work of reform was to begin with the children, and impress upon their minds the importance of carefulness. So it was recommended to the Board of Educa-

tion that a certain period of each schoold day should be devoted to lessons upon "Safety First." The board agreed but did not vote the funds.

Then the Brooklyn Rapid Transit Company came forward and offered to pay the expenses of this course in the schools of Brooklyn for six months. So successful has been the result that the feature is to become pernament in the Brooklyn schools, and is very likely to be copied by schools in other cities. The president of the Brooklyn Transit Company believes that the $17,000 spent by the company in educating the children was wisely invested. He calculates that once in 1,000 car trips a car and a pedestrian or the driver of another vehicle come into contact, or there is an accident to some passenger in boarding or alighting from a car. Since every such accident may be the basis of a suit for damages, and since there are 30,000 car trips a day, it is plain that $17,000 is a small sum to be spent in six months if it will appreciably decrease the number of accidents.

HUNGER STRIKE IN 1537.

Hunger striking began as long ago as the reign of Edward III., and, what is more, here is official record of it. A royal note of 1537 has reference to the case of Cecilia de Rygeway, who was in Nottingham prison on the charge of murdering her husband. There she had remained mute and abstinent from meat and drink for a full forty days, until at last the King, "moved by piety, and for the glory of God, to whom the miracle was owing," granted her a pardon. And one could find it in one's heart to pardon modern hunger strikers if they would only remain mute as well.—*London Chronicle.*

REFORMS SUGGESTED IN THE PENITENTIARIES.

Reforms for the betterment of conditions in the Canadian penitentiaries are embodied in the annual report of Inspectors Douglas Stewart and W. S. Hughes, tabled by Hon. C. J. Doherty. There are two which the inspectors say "seem to us to be vital, and which involve a reversal of the policies by which the penitentiaries have been governed during the past decade." They are, in brief:

1. That the penitentiaries shall be administered by the Minister through his responsible officers and free from local or other external interference.

2. That the Government shall utilize the obligatory labor of its wards in supplying so far as possible its own needs and requirements.

The report points out that most of the convicts are practically without work that is either instructive or remunerative. The penitentiaries could make brooms, brushes and doormats for public buildings, letter carriers' uniforms, rural mail boxes, uniforms for Government employees, and overcoats for the militia, and, with a little extra cost for plant, could include desks, filing plants, etc., for Government offices, and all militia uniforms.

An increase of 56 per cent. in the population of Canadian penitentiaries in the last ten years is noted. The number of convicts in custody at the end of the fiscal year was 1,970, of whom 984 were Canadians. The principal creeds were: Roman Catholics, 947; Anglicans, 345; Methodists, 215; Presbyterians, 213; Baptists, 86; Jews, 14.

The penitentiary population is distributed: Kingston, 516; St. Vincent de Paul, 405; Dorchester, 193; Manitoba, 201; British Columbia, 351; Alberta, 207; Saskatchewan, 95.

SOME EFFECTS OF INTEMPERANCE.

Tuberculosis has a little more than doubled in France since 1887, according to figures supplied to the Temps by Henri Schmidt, the Republican radical deputy, who is one of the leading figures in the temperance movement in France.

Deputy Schmidt also traces statistically the effects of drunkenness on births and upon the lives of children whose parents have been intemperate.

Infantile mortality in Normandy, where women drink excessively, is just double what is in the temperate department of the Gero, where the people are sober, although much wine and brandy are produced in that district. Infantile mortality is at its highest in these districts where absinthe drinking is prevalent.

The writer assembles figures showing that after the age of sixty sober men have one-third greater expectation of life than intemperate men.

TORONTO'S HOSPITAL BILL FOR 1913.

The city of Toronto last year paid for the maintenance of patients in the public hospitals the sum of $274,122.44.

In January of this year the city's total hospital bill amounted to $27,304 for the maintenance of city patients for 29,467 days. At that rate the city's hospital bill this year would reach the sum of $453,604.

Following are the details of the city's hospital expenditure, showing the amount received by each hospital, the number of orders issued on each, and the days charged for the patients last year:

1913.	Amount Paid.	Orders Issued	Days in Hospital
Toronto General Hospital	$63,720.00	2,589	63,720
St. Michael's Hospital	59,844.00	1,736	59,844
Grace Hospital	10,554.00	366	10,554
Western Hospital	25,413.00	...	25,413
Hillcrest Hospital	1,374.00	132	2,748
St. John's Hospital	1,239.30	17	1,302
Gravenhurst	20,232.10	132	28,684
Weston	32,652.90	312	46,295
Queen Alexandra, London	1,853.50	...	.....
Hospital for Incurables	24,312.50	52	44,464
Hospital for Consumptives (Queen Mary)	4,916.10	...	7,023
Hospital for Sick Children	28,000.00	...	.....

CHILDREN SAVED BY PURE MILK.

The lives of 41,000 babies have been saved in New York in the last seven years by co-operating public and private welfare agencies, according to the seventh annual report of the New York Milk Committee. The report says:

"During that time 950,000 babies have been born in New York City. If the infant death rate of the five years had prevailed there would have been 150,000 infant deaths instead of the 109,000 which actually occurred. On the other hand, if New York's low death rate of 1913—101.9 per 1,000 births—had prevailed throughout the seven-year period only 96,000 babies would have died of the 950,000 born."

To prove that this record is not due to favorable weather conditions or other general accidental causes the committee publishes comparative figures showing that while New York had fewer deaths last year than in 1912—the previous low record year—the number of deaths increased in Chicago, Philadelphia, Cleveland, St. Louis, Pittsburg, Detroit, Buffalo, New Orleans and Toledo.

MEDICAL COUNCIL OF CANADA.

The place and date of the next examinations will be fixed when the council meets at Ottawa on the sixteenth of June next. In all probability they will be held in October. The forms of certificates necessary to qualify can be obtained by applying to the registrar, Dr. R. W. Powell, 180 Cooper Street, Ottawa.

The registrar is also prepared at any time to furnish the necessary forms and details of requirements for registration under the ten year clause.

THE DEATH OF GOLDSMITH.

Oliver Goldsmith, as our readers know, was a physician. At a meeting of the section in the history of medicine of the Royal Society of Medicine, held on January 28th last, Sir Willliam Osler presiding, Sir Ernest Clarke, F.S.A., read a paper on the medical education and qualifications of the poet, which is summarized in the *Lancet* for February 7th. Mr. D'Arcy Power, in discussing the paper, added that Goldsmith took sick in March, 1774, and went to a farmhouse to recuperate from an attack of dysuria; in addition to the prescriptions of his medical adviser, he dosed himself with James's powder, a preparation of antimony, in which he had great faith. He died in convulsions early in April. Mr. Power had submitted this history to Dr. Philip Hamil, who returned as a death certificate: "Old pyelitis. Bacillus coli septicemia, complicated by an excess of antimony in the James's powders."—*New York Medical Journal.*

DR. C. K. MILLARD ON VACCINATION.

1. I believe absolutely in vaccination, though with certain inportant reservations, and I differ *in toto* from the anti-vaccinist when he asserts that vaccination is a "myth" and a "delusion." I agree entirely with the provaccinist that recent vaccination confers on the individual protection against small-pox, which, for practical purposes, is complete, though unfortunately only temporary.

2. Vaccination, repeated as often as necessary, is invaluable for protecting those who for any reason are specially exposed to the infection of small-pox—for example, doctors and nurses.

3. It is also of very great value for protecting persons after actual exposure to infection—that is, small-pox "contacts."

4. I agree entirely with the provaccinist that vaccination has a remarkable power of modifying and mitigating small-pox for many years after its power to protect against attack has worn out. Moreover, the protection conferred by vaccination can be renewed by revaccination.

5. On the other hand, I agree with the antivaccinist in doubting the value to the community at the present day of infantile vaccination as provided by law. I think that an altogether exaggerated view has been taken as to the effect of such vaccination in preventing the spread of small-pox, which is the real problem before us.

6. I agree with the antivaccinist that sanitation, notification, isolation, surveillance of contacts, and other modern measures which are becoming generally adopted, have played a more important part in the abolition of small-pox from this country during the past thirty or forty years than infantile vaccination.

7. I think the antivaccinist is right when he contends that the drawbacks to infantile vaccination and the injuries to health caused by it are not sufficiently recognized by the medical profession, who, in their sincere anxiety to defend vaccination, have been inclined to minimize these drawbacks.

8. On the other hand, I quite admit that the antivaccinist, in his hostility to vaccination, has frequently run into the opposite extreme and grossly exaggereted these drawbacks, whilst endeavouring to prejudice the question of vaccination by making wild assertions about the nature and origin of vaccine lymph, etc.

9. There is distinct evidence that small-pox is leaving this country in spite of the increasing neglect of vaccination, and it seems probable that such neglect of vaccination will continue to increase until the great majority of the population has become unvaccinated. I am inclined to believe that when this happens the problem of small-pox prevention will very possibly be simplified and made more easy rather than more difficult.

10. The great difficulty in controlling the spread of small-pox at the present day is the occurrence of very mild unrecognized cases of the disease which spread infection broadcast before any precautions can be taken. It is an important fact, the significance of which does not appear to be sufficiently appreciated, that these mild unrecognized cases which do so much mischief, and which go so far to thwart our efforts to control the spread of the disease, occur almost entirely amongst vaccinated persons and *because they were so vaccinated.* In other words, it would seem that infantile vaccination, by its very success in mitigating small-pox after its power to protect from attack has worn out, may have a distinct tendency to encourage the spread of the disease. It is possible that this tendency more than neutralizes any benefit which the communtiy derives from the fact that vaccination largely protects the child population from small-pox.

Dr. Millard concluded his course by saying that he was satisfied that modern measures, if perfected and promptly applied, were quite adequate for dealing with casual importations of small-pox into this country, even though infantile vaccination became entirely neglected. The chief danger lay in unrecognized cases, especially when occurring in the tramp class. In the rather remote contingency of a really serious epidemic of small-pox occurring again in Leicester, or in any town, he

would advise every one to get vaccinated, even though they had already been once vaccinated. It was only recent vaccination that could really be trusted to protect. Nothing was so fallacious in the face of real danger as to trust to vaccination performed many years before.—*British Medical Journal.*

THE HEART IN SYPHILIS.

After a comprehensive dissertation upon this subject, Harlow Brooks reaches these conclusions:

1. Serious involvement of the heart is frequent in syphilis. Epicardium, endocardium, or myocardium or all together may be so diseased.

2. Cardiac involvement may develop early in the infection, though its symptoms may not be apparent until late.

3. The signs and symptoms are those of cardiac disorder, and little or nothing except the history, genearal aspects, and the Wassermann reaction may indicate the true etiology.

444. Treatment should be first along indicated circulatory lines, secondary as to time, but most productive and important of all, it must be specific.

5. Good results, cures in many instances, will follow appropriate antisyphilitic treatment.

6. The special method of treatment should be individual, but both mercury and salvarsen are efficacious in the condition; usually they are preferably combined, in some instances the former, in others the latter acts best. Iodin is an efficient adjuvant in at least some instances.

7. Treatment should be continued until a permanent negative Wassermann is attained. Subsequent to this the management of the case should be along circulatory, not leutic lines. (*Am. Jour. Med. Sciences,* Oct. 1913,) *and Medical Times.*

TORONTO ACADEMY OF MEDICINE.

The Surgical Section of the Toronto Academy of Medicine held its February meeting on the eleventh.

INJURIES TO THE EPIPHYSES.

Dr. Stewart Wright showed four patients who had received injuries to the epiphyses of the upper femoral extremity. The first, a young adult, 16 years of age, with coxa vara, resulting from a separated epiphysis, with an excellent functional result. The second, a boy of eight, had injured his hip eight weeks previous, but was able to walk home. X-ray examination showed slight epiphyseal separation. Here

again the result was excellent. The third patient was a boy, aged 15 who came complaining of pain in the knee. Six months previously he had hurt his hip and as a consequence was off work for two weeks. On examination there was an apparent shortening of three inches, and an actual decrease of three-eights of an inch in length due to a separated epiphysis, secondary to injury, with function restored. Dr. Wright also showed an X-ray from a man suffering from osteoarthritis of the hip, and another of loose bodies in the hip joint. Ninety had been removed in all. Their origin was not made out, Dr. Warner Jones suggesting that calcified pieces of cartilage might account for their demonstration by the rays.

ERB'S PARALYSIS.

Dr. George Wilson presented a patient suffering from Erb's paralysis. A workman, 39 years of age, had his left shoulder dislocated six weeks ago. It was the ordinary subcoracoid variety and was reduced by his physician soon afterwards. At present his condition was as follows: He has marked wasting of the deltoid, supra and infraspinati, with some involvement of the biceps. There is no disturbance of sensation whatever. In addition, he has a fibro-lipoma, four inches in diameter, over the spring of the left scapula.

The distribution of the paralysis, with no sensory changes, at once indicates the nature of the lesion. Were the circumflex nerve involved there would be some sensory loss on the outer side of the arm just below the joint. Now it is known that the fifth anterior primary division is peculiar in that it resembles a peripheral nerve just above where a branch comes off. In other words, the fibres going to certain muscle groups are segregated, so that it is possible to injure by stretching one division without much disturbance in the others. In this instance, the upper and middle divisions are mainly involved, the lower having largely escaped. In diagnosing a complete from an incomplete division, one must wait for ten days and then test his electrical reactions. To the faradic current there is no response whatever in the paralyzed muscles. With the galvanic, the contraction is much feebler than on the sound side and is worm-like. Moreover, A.C.C. is distinctly greater than K.C.C. In other words he has the reactions of degeneration and indicate that the upper fibres have been devided. The treatment consists in exposing the upper part of the brachial plexus, removing the scar tissue and uniting the ends, or, if this be impossible, dividing six, which supplies no muscle in its entirety, and uniting the proximal end.

Dr. Julian Loudon said he had a case something similar to Dr. Wilson's, but his case was one of incomplete division of the nerve trunk. He treated it by simply putting the arm up in a sling in order to take

all weight off the shoulder muscles. This patient made a complete recovery. He had seen this case of Dr. Wilson's before the meeting and agreed with him that it was one of complete division of the fifth trunk. He also agreed that the only treatment that would be of value in this case was operation. In these cases one thinks of circumflex paralysis because the circumflex is the common nerve injured in these conditions, but this is a more extensive injury than that. Here the supraspinati and part of the biceps muscles are injured as well as the deltoid. It is important to note that in paralysis of the circumflex there is always loss of sensation below the tip of the shoulder in an area about as large as the palm of the hand. In some cases there is more extensive paralysis than in the case presented. The paralysis may be present, not only in the muscles affected in this case, but also in the brachialis anticus and pronator radii teres. In some of these cases, instead of uniting the fifth trunk to the sixth, part of the radial is taken out and inserted in the place where the fifth is injured. This can be done quite easily. He remembered a case of uluar paralysis where that was done. Dr. Wilson did not mention the length of time these cases take to recover. It takes a great number of months and even years before the muscles come back to a normal condition. They may never recover perfectly. The after treatment of massage, electrical treatment and passive movement is very important.

Intestinal Stasis.

The discussion was opened by Dr. Warner Jones, who referred to a paper by James Sherrer, which, showed that of 150 cases carefully investigated only 7% gave any evidence of Louis kinks. He thought spasm was the cause of intestinal stasis.

Dr. H. A. Bruce admired Dr. Starr's splendid optimism, but was afraid he was developing into a little Lane. Dr. Bruce had experience with short circuiting but only in ten or twelve cases. He had not had as many cases as Dr. Starr, because he did not feel justified in subjecting so many patients to these operations. Dr. Starr had given a report of only four or five cases and he had not shown fully the condition of these before and after treatment. In regard to short circuiting curing pulmonary tuberculosis, he had some difficulty in believing the statement. He could, however, quite understand short circuiting relieving a tubercular condition of the intestines but not a general tuberculosis.

Dr. Starr's paper served to remind him of what happened a few years ago in Cleveland, when Dr. Crile believed that transfusion would cure tuberculosis. At that time the verandahs of the hospital became so crowded with tubercular patients that members of the hospital staff complained that they were exposed to infection. These patients were all being transfused, and there were as many as twenty-five at one time

at this clinic. Two years after this there was not one tubercular case treated in this way, Dr. Crile having stopped the procedure. Reference was made to curing duodenal ulcers and gastric ulcers by short circuiting. A similar claim was made by Sir Arbuthnot Lane. Dr. Bruce could not see that these ulcers could be cured in this way. He had operated on a case of duodenal ulcer where the patient had chronic appendicitis. ·In this case there was no kink and no obstruction. In this case the physician wished the lesser operation to be done first. Here removal of the appendix without operation on the duodenum cured the ulcer. This woman had no intestinal stasis. In this case no doubt the ulcer was about healed and since the operation the patient has been more careful in regard to diet. "We will most likely hear from this duodenal ulcer again."

Dr. Starr's report of two deaths and one where he had short circuited and removed gall stones recalled to mind the fact that Sir Arbuthnot Lane had operated on cases which presented symptoms of gall stones. He short circuited this case, but did not remove the gall stones. In this instance a gentleman from New York was asked what he would have done. He said that he would have removed the gall stones and not have done the short circuiting operation. There is one thing short circuiting will not cure and that is constipation, and yet this is one of the troubles for which operation is said to be of special value. In an endeavour to cure this condition of obstinate constipation Dr. Bruce had operated on three cases, short-circuiting in each instance. In each of these the constipation continued. Where an operation proves of so little value in the class of cases where it is claimed to effect so complete a cure, it can hardly cure such cases as goitre, neuralgia of the fifth nerve and tumors of the breast.

Dr. Walter McKeown, criticizing the short circuiting operation, said that Sir Arbuthnot Lane was an especially brilliant man but had extraordinary ideas. The operation of stitching floating kidneys is seldom done now. The operation of gastro-jejunostomy is not done nearly so frequently as formerly and the operation of short circuiting will take the same course. Dr. McKeown said that when he fell sick he would like to be treated by the best medical skill available as practised five years previously.

Dr. Graham Chambers said that one reason why this operation for intestinal stasis was in vogue at the present time was that it had originated in England, but this was not a good reason, as gastro-intestineal disease is not understood by the physicians and surgeons there, and they have wrong ideas of intestineal stasis. When Mr. Patterson was here, he told Dr. Chambers that Dr. Fenwick was the only man in London doing modern work in gastric disease. This was accounted for

by the want of relationship between laboratory and clinical work in the London hospitals. He had been studying Dr. Patterson's book lately and found, from the medical and clinical standpoint, outstanding mistakes in every two or three pages. Gastric stasis is often due to the condition of the nervous system. Dr. Chambers had seen cases where the bismuth meal remained in the stomach over six hours, and yet there was no obstruction of the pyloris and, under medical treatment, the symptoms completely disappeared. The fact of bismuth being found in the stomach by X-ray six hours after taking a bismuth meal is not proof that an operation is necessary. One could do any operation one liked, had same patient gone to an asteopath there would have been the same results. Chronic appendicitis leads to intestinal stasis, a condition which causes the gastric stasis and gastric ulcer. There is a direct relationship between gastric ulcer, duodenal ulcer and gall stones. Some think the gall stones is the primary condition, but Dr. Chambers believes the gastric ulcer is primary. There is first a nervous disturbance and, as a result of this, there is hyperchlorhydria followed by intestinal stasis and constipation with putrefactive processes in the small gut, and this may then terminate in gall stones or ulcer. If a patient suffers periodically from hypersecration they invariably have constipation. But how can this constipation be explained? Possibly it is due to plyloric spasm. As to the good results of surgery in these cases, Mr. Lane operated on them and gave them the cure. Treat the patient by hydrotherapy, electrotherapy, or by surgery, and put him to bed for a few weeks and a cure will be effected.

Dr. Starr closed the discussion. He directed the attention of the chairman and fellows to the fact that he was not discussing Mr. Lane's results, but discussing intestinal stasis and the results in some cases he had had. He was led to think of the superficial way in which some of our physicians listen to and read articles, and consequently get no intelligent idea of what they read. We all know that the nervous condition, whatever it may be, will bring about gastric stasis temporarily, but the same nerve force that brings about that stasis in the stomach is very likely to bring about an intestinal activity. We have all experienced that at examination time. I have both vaunted and have had diarrhoea at that time.

Dr. McKewn's remarks reminded him of a recent advertisement in a Western paper. "Wanted, a salesman to undertake the selling of a patent medicine, a good profit is guaranteed the advertiser by the undertaker." If I have anything wrong with me I want the most modern treatment not the most ancient, unless it be good.

The statement is very commonly made that there is one thing that short circuiting will not do and that is to cure constipation. That has not been my experience. A girl went out of the hospital the other day

all smiles, because she now has two stools a day resulting from short circuiting. This short circuiting was properly done. Her bowels had not moved by drugs or enema for six weeks before she came in. An acutely inflamed appendix brings about diminished peristsis, and, it seems to me, that the chronic appendicitis, of which Dr. Bruce spoke and in which there was no sign of kink, would also diminish peristalsis. A limitation of peristaltic movement gave rise to enough stasis to produce duodenal ulcer. The removal of the appendix cured the ulcer as it was probably a casual factor. It is a long lane that has no turning and it is a long intestinal canal that has no kinks. The quotation from Sherren by Dr. Jones reminds me that unless people are looking for kinks they will not find them. Sherren's findings are contrary to what I find. If he looked carefully and with a decent amount of common sense, he would have found kinks for they are present in 50% of the cases in some shape or form. I am not convinced that short circuiting is an operation to be undertaken lightly. There is more danger in it than there is in circumcision. If we can get paraffin to cure these patients and keep them in good condition, we should not consider operation, because it is a dangerous procedure. But if the patients come to the point where they get no relief and are becoming chronic invalids, let us do something for them if we can benefit them, and I think we can.

A TALE OF TAKA-DIASTASE.

To multiply by two the medical efficacy of a powerful diastasic ferment is a notable accomplishment. And that is what scientific investigation has done for Taka-Diastase. The result, as may be presumed, was not achieved at a single fortunate stroke. It was the culmination of years of study and experimentation. The story is briefly told on another page of this issue of *The Canada Lancet,* over the signature of Parke, Davis & Co. It bears this caption: "We Have Doubled the Strength of Taka-Diastase." The reader is advised to turn to this announcement, which should prove of interest and value to every practitioner who faces the problem of amylaceous dyspepsia.

A word here with reference to the therapeutic application of Taka-Diastase may not be amiss. The product may be prescribed with advantage in the treatment of any pathological condition in which the salivary digestion is inhibited or impaired—in any case of gastric or intestinal disorder in which the starches are digested with apparent difficulty. It is employed with good results in the dietetic treatment of subacute and chronic gastritis; in infantile diarrhea, especially in cases in which diarrhea alternates with constipation; in malnutrition or inanition; in the vomiting of pregnancy; in diabetes due to pancreatic disease.