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EDITORIAL

CO-OPERATION.

When the general public join with the medical profession in a movement for the good of humanity, something definite and of value is likely to be achieved. This is well seen in the worldwide efforts for the prevention of disease, and especially in the case of tuberculosis.

Clergymen do not think it is improper to speak of health subjects from the pulpit. They take up such a topic as the prevention of tuberculosis, and speak freely upon it to their congregations on a Sunday. The time was when such would have been looked upon as an improper use of the sacred edifices.

A vast amount of human sickness and suffering is due to the introduction of some infection into the body. It is now admitted that a vast amount of this could be prevented. In the case of typhoid fever the amount of sickness and the number of deaths could be reduced to a very low percentage. The laws governing the spread of this infection have now been determined to consist of the pollution of water with human excreta. This water is used for drinking purposes or in domestic use and so infects foods and other drinks, such as milk.

The spread of smallpox, that formerly wrought such havoc, can be controlled. Vaccination reduces the risk of contracting the disease almost to the vanishing point, and when it is contracted removes from it its dangers. Further, when a case of smallpox does appear in a locality all that needs be done is to isolate the victim of the disease and place in charge some one who has been protected by vaccination. Were it not for vaccination the disease would keep on attacking the attendants, and the prevention and arrest of an epidemic would be very difficult indeed.

Few diseases have come more into the limelight than tuberculosis. The reasons are not far to seek. In the first place it is very ubiquitous, and is found in almost every known country, and among all races of men. It has also a wide incidence among the lower orders of animals.

Another reason is that it may attack any organ in the body. Hip diseases, Potts' disease, meningitis, intestinal troubles, ulceration of the lungs, caries of the bones, etc., are among its usual manifestations. One eminent writer has said if tuberculosis and syphilis were removed from the world the field of pathology would be vastly reduced and the work of the physician and surgeon markedly limited.

But another reason for this disease attracting so much attention is the fact that it is now admitted, the world over, to spread from the sick to the well. There are still differences of opinion as to whether it is spread by the air, or whether bovine tuberculosis can be given to man; but there is no difference of opinion that the sick infect the well, and that the sputum and discharges contain the infection. Here, then, lies the secret of successful prevention. Segregate the sick and destroy all infected discharges. Prevention is so much better than treatment.

Much has been said about the curability of tuberculosis. We know that many who have been infected at some time in the past have recovered; but we also know that when the disease has secured a fairly firm foothold it is most serious, and that the death rate is high.

The hope of a country lies in the proper training of her children. In this regard much is being done. Medical journals, lay newspapers, religious journals, books, school teachers, preachers, doctors, many associations and learned bodies, are all giving forth information to the public on preventive medicine. Each individual is appreciating more and more that good health is one of his most important assets. A sound mind in a *healthy* body has now come to have a new meaning.

We are glad to notice the growing interest that the church is taking in matters of public health. Hospital Sundays and tuberculosis Sundays mean much for the good of the country. But the Governments have not done their full duty as yet. They have, no doubt, been waiting for public opinion. They have that now, and the way is clear for action and a forward movement.

THE FEEBLE-MINDED.

Some time ago an association called for the special purpose of dealing with this class of the community, after careful deliberation adopted a number of very important resolutions. Among these we may mention the following:—

"That the Legislature be memorialized to provide institutions for the care of the feeble-minded in Ontario, and that municipalities of the province be required to pay for the maintenance of their wards up to

the age of twenty-one years, if necessary, after which, if unable to take care of themselves, they shall become wards of the Government.

"That in the opinion of this Conference the issuing of marriage licenses should be confined to a municipal officer—for instance, the municipal clerk.

"That in the opinion of this Conference, it is desirable that steps be taken to prevent the marriage of a mental defective.

"That in the event of the permanent organization of this Conference the permanent executive be instructed to press on the Government the desirability of introducing such legislation."

The best way to deal with drunkenness is not to make drunkards, and the best way to deal with the feeble-minded is to stay their coming into the world. It is not possible to prevent the birth of a certain number of feeble-minded persons. Conditions in utero, the accidents of birth, and the diseases and injuries of childhood are sure to give every community its quota of these unfortunates. But they should not be allowed to marry, and in this way their numbers may be kept down to the minimum.

It has been argued that acquired characteristics are not inherited. The sensible stock breeder knows enough to select healthy parents from which to rear his young animals. Disregarding all fine spun theories, it cannot be contradicted that a healthy parent, in the law of chances, is more likely to have healthy children than is the case with a sickly or delicate parent. That great surgeon and philosopher in medicine, Sir Jonathan Hutchinson, once said: "The syphlitic parent may not give syphilis to his child, but he may do worse and give his child a poor constitution. This latter may not be curable." There can be no dissent to this view.

We would press upon the Governments of all our provinces to place on the statute books such a law as will regulate marriages so as to make it impossible for the feeble-minded, the epileptic, the criminal and the confirmed drinker to enter into the married state. We interfere with the liberty of the individual to prevent crime, so we should interfere with individual liberty in the prevention of disease and degeneration. Take the case of Kallikuk of the Vineland, N.Y. From Martin Kallikuk, who served with Washington in the Revolutionary War, and who left an illegitimate son by a feeble-minded woman there have been in all 480 descendants. Of this number 36 have been illegitimate, 33 prostitutes, 24 confirmed alcoholics, 3 epileptics, 3 criminals, 8 keepers of houses of ill-fame, and 82 died in infancy.

But one can also recall the notorious Jukes family that cost the United States so much. In Drs. Bucknell and Tuke's work on insanity the case is mentioned of a woman in London who became the ancestor of 80 degenerates and criminals.

DOCTOR WOULD NOT GO.

We had occasion a short time ago to say a few words on this subject. There had been a couple of cases commented upon adversely by the lay press. We took the ground on that ossacion that it would be best for the doctor to respond to the first call.

It might be that he could render such aid as would save life; or he could see for himself as to the advisability of sending the patient into a hospital. We still adhere to this view. The reason that induces us to again mention this matter is that a case happened in Toronto recently where there was a good deal of newspaper talk regarding the refusal to make an emergency visit when summoned.

The fee, we think, should not stand in the way. It might turn out that some one would pay the fee, so that in this respect the matter would stand adjusted. There would still be some visits of this sort unpaid for; but this is not a sufficient reason for refusing to go to an emergency case. The medical profession has a certain place to maintain in the public eye. Members of the medical profession are now and ever will continue to make *free* visits. An additional one to an emergency case is not going to matter much. Give the benefit to the doubt.

A REGRETTABLE EVENT.

In the month of October, the name of Professor A. B. Macallum was proposed for Fellowship in the Toronto Academy of Medicine. The name was posted up in the usual manner. When the name came before the Fellows on 3rd December, there were sufficient adverse votes to prevent election.

Dr. R. A. Reeve, the president of the Academy, thereupon tendered his resignation. This every Fellow of the Academy regrets. There is no one in the Academy more esteemed than Dr. Reeve. Every one regards him as influenced by the best of motives, and all admit his many and distinguished services for the Academy.

It is generally felt that the rejection of Professor Macallum's name should not have been regarded by Dr. Reeve as a cause for his resignation of the presidency. No one who voted against Professor Macallum had the slightest desire to give Dr. Reeve any annoyance.

Whichever way it may end, either by Dr. Reeve maintaining his determination to vacate the chair, or by resuming office again, every Fellow will still have the highest regard for him, and feel as kindly towards him as it is possible to feel.

TRUE HEROINES.

Courage is one of those qualities that has been much debated, and all sorts of theories have been advanced as to what true courage is. The attempt has been made to divide courage into several sub-varieties, such as physical courage, moral courage, the courage of despair, and the courage of the discharge of duty.

A short time ago the Orphanage at San Antonio was destroyed by fire. There were in it at the time eighty-seven orphans under the charge of several sisters. These latter sacrificed their lives in their efforts to save the children under their care. The result was that all the children were saved, while six of the sisters perished. Four of these were natives of Ireland, one was a native of France, and one a native of Mexico. Such deeds show that the truly brave are not limited to any one country or race. The soldier can die for his country, the sister for her charge, the nurse for her patient, the teacher for her class, and the friend for his friend. Long may such courage last as a precious blossom of the human race!

THE CONTAGIOUSNESS OF TUBERCULOSIS.

Dr. G. D. Maynard read before the branch of the British Medical Association, Witwatersrand, S.A., a lengthy paper, in which he advanced a mass of statistical evidence to dispose of the belief in the infectious nature of pulmonary tuberculosis. This paper merits some consideration. Its views are so different to what has come to be the accepted opinions of late, that, should they be wrong, they are capable of much mischief if allowed to pass unchallenged. He sums up his case thus:

1. If pulmonary tuberculosis is infectious we would expect undoubted examples of marital infection, but there is none.

2. In the case of children the problem comes to be one of inheriting a tuberculous diathesis.

3. As there is no definite proof of the disease spreading from husband to wife, or parent to child, so there is no proof of spreading in institutions for the disease.

4. The argument that falling death rate from tuberculosis is due to preventive measures is not borne out by the facts.

5. Nearly every person in Europe is infected before the age of 30, and therefore the germ is very widespread. The falling death rate is not, therefore, due to diminished risk of infection, but to increased power of resistance.

6. That infection is not so common through the respiratory channels as once believed, but that it finds its way into the body in other ways.

7. That there is a good deal of primary abdominial tuberculosis.

We differ from Dr. Maynard. It must be accepted that there cannot be a case of tuberculosis without the tubercle bacilli first lodging in the person. That lodgement may be in any organ. There is a good deal of confusion about the method of entry into the body. Some contend that the germs are not air-borne. Why not? They may be carried on any object that is light enough to be wafted about in the air. This is the condition of any form of dust.

Then, again, the fact that the disease makes its appearance in the abdominal organs does not prove that the infection was not carried to the person through the air. The dust enters the nostrils or the mouth and is then swallowed. In this way the abdominal organs become infected, just as readily as if some milk had been drank. The respiratory and abdominal organs may alike be infected through the air.

There is abundant proof to hand that husbands and wives have infected each other, and that children have contracted the disease from their parents, and from each other. It does follow that some of the reduction in the death rate from this disease is due to segregation and preventive measures. There are very few medical men who have had much experience who cannot recall instances of several deaths in a family due to direct infection—anywhere from 2 to 6 such being well known.

To put the responsibility back on "diathesis" is just the same as saying the soil is favorable. The best soil in the world will not grow wheat if the seed be not sown. Sowing the seed in tuberculosis is what is known by contagion. Professor Delipine has reported to the French Government that not less than 25 per cent. of abdominal tuberculosis in children under 5 is caused by diseased milk.

THE PROFESSION IN BRITAIN.

The Insurance Act in Great Britain has brought about a very serious condition of things. The medical profession felt that the Act did not do its members justice, and consequently there was widespread dissatisfaction with it. Many protests were filed and meetings held to adjust the difficulties. The Government was waited upon several times and some concessions made by it.

But the differences are still wide. The doctors of Britain are being called upon to perform a service for which they feel they are not going to receive an adequate pay. The large majority have declared they will not act, and this might mean that the Government would not carry

on some phases of the law into operation. But the indications of recent date point to the probability that there will be a sufficient number of medical men yield, and in this way the effective resistance of the medical profession will be broken down.

Those who know the situation by being on the ground, claim that the Insurance Act is going to be very injurious to the working of the hospitals. This is a very serious matter. In Britain the hospitals are quite different institutions to what they are in this country. In Canada hospitals are for poor and pay patients combined. In Britain only for poor patients, and these institutions are maintained entirely out of voluntary gifts.

We have mentioned on a former occasion that much of this unfortunate state of affairs has been brought about by the doctors doing lodge practice at very low fees. This was taken as a basis for what they should be paid.

THE COST OF INFECTIOUS DISEASES.

Professor James W. Glover, of Ann Arbor, delivered at the American Hospital Association an address on this subject. He pointed out that tuberculosis caused in every 1,000 persons the following death rate:

20	1.450	50	2.011
25	1.999	60	2.196
30	2.118	70	2.616
40	2.041		

On the prosepctive value of a man's earnings from age 20 to age 70 on the basis of $100 a year and 5% on money, with the average incidence of tuberculosis the average man's earnings would be reduced as follows:

20	$47.51	45	$24.21
25	45.81	50	18.72
30	41.21	55	13.20
35	35.70	60	7.51
40	29.72		

This is quite an impairment to the average welth-earning capacity of each on the basis of $100 a year from the various ages above to 70. For the United States an average of $100 for each person this would mean a total loss of $671,018,025. But as the average earnings are greater than $100, the actual loss is calculated to be $2,013,054,075.

Assuming the population of Canada as one-twelfth of that of the United States, the loss to this country would be about $167,000,000.

Professor Glover goes on to show that any country with a death rate from tuberculosis of 140 per 100,000 of the population could profitably spend $10 per head, if thereby the disease could be eradicated.

FEVER.

The term fever is used to indicate a rise of temperature above the normal, or the condition of "fever" as a disease. To this may be joined some qualifying word. The subject is very fully discussed by Dr. E. C. Hart in the *Medical Press* of recent date.

Fever is a unusal accompaniment of infections, though in some cases the toxaemia may be so great that the temperature may not be above normal, or even below normal. Some writers use the term fever for diseases caused by infections, and then speak of fever with or without pyrexia.

There may be degrees of fever of a temporary character due to exertion, nervous excitement, convulsions, baths, reaction from injuries, the passage of calculi, injuries to certain portions of the nervous system, and there may be some rise of temperature after the injection into the veins of a saline or salvarsan, or the administratoin of an anaesthetic.

There is a large group of diseases due to bacteria or protozoa, in which fever is a common symptom. It may be difficult in some cases to determine the real nature of the disease, but in all cases of continued fever it is necessary to search for the real infection, and not to fall back too readily on some of the other explanations for the presence of the fever. Excreta and discharges must be examined carefully for the active infection.

The cause of the elevation of temperature is not easily explained. Some think it is due to some substance set free from the dead germs. Others that it is caused by an action of the germs on nerve cells. Some have held that it is the result of some product set free from the cells of the body reacting to the infection.

Experiments go to show that dead germs if free from every form of contamination may be injected into the animal body without causing fever. It appears from this that when a vaccine is used and fever results, this is caused by the media the bacteria were cultivated in. If this media be of no value in the vaccine, a dose of dead bacteria freed from this contamination would cause no fever. If this reaction is of no therapeutic value, then it may be possible to spare the patient a very unpleasant after-effect of these infections.

The condition known as fever is treated by sponging, baths, the

amount of clothing, the rectal injection of hot normal saline.

There is the method of reducing fever by drugs, such as quinine, autimony, aconite, etc. Certain drugs act on the infection, as quinine in malaria, salvarsan in syphilis, etc.

Then we have the treatment by vaccines. In this there are two forms. The use of dead germs which are injected as an emulsion. This method is now extensively employed. Of late the use of living germs has come more into use. It is claimed that large doses of these may be safely administered if they are sensitized with immune serums. This latter work may yield brilliant results.

TREATMENT OF LARYNGEAL TUBERCULOSIS.

G. Seccombe Hett, in the *British Journal of Tuberculosis* for July, 1912, states that while very slight laryngeal lesions in an advanced and rapidly progressive case of pulmonary tuberculosis are of grave prognostic import, being frequently subterminal infections, in other cases, where there are extensive lesions of the larynx in patients with normal temperature and a chronic type of pulmonary lesion, radical surgical procedures can often be done with impunity, and achieve excellent results. Lesions of the vocal cords can frequently be arrested by absolute vocal rest for six months, if the chest condition is favoroble. Enlarged arytenoids can often be reduced by deep puncture with the galvanocautery, and where this fails, Hett has had good results by punching them out; he has never met with failure of the wound to heal. Infiltrations without ulceration of the venticular bands are best treated by successive deep cautery punctures at intervals of ten days. Superficial ulcerations of the vocal cords should be merely touched with the cautery. Curetting should be limited to large ulcers, and be employed with caution in order to avoid producing a larger breach of surface than already exists.

Where tuberculous lesions are confined to the epiglottis, the author has been much impressed by the results of removal of the body with punch forceps; the stump never failed to heal when this measure was employed in suitable cases. Even in desperate cases the extreme dysphagia, due to the infiltrated and sloughing epiglottis, was at once relieved.

Accumulation of secretion in the larynx can be prevented by the use of an alkaline laryngeal spray. Unnecessary coughing should likewise be prevented, and where it is caused by irritation in the larynx, dry inhalations of creosote, phenol, and chloroform, through a Yeo mask, worn for some hours at a time, are very efficacious.—*N. Y. Med. Jour.*, Oct. 26.

ORIGINAL CONTRIBUTIONS

A MEDICAL SLANDER CASE IN UPPER CANADA, 85 YEARS AGO.

By the Honourable Mr. Justice Riddell, L.H.D., LL.D., etc.

An action for slander by one medical man against another for calling in question his skill is not now often met with in the courts. There is a strong *esprit de corps,* which generally prevents such statements being made; and even when a charge of incompetence is made, generally common sense induces the maligned practitioner to "let sleeping dogs lie" and treat the charge with contempt. But this *esprit de corps* did not always characterize the profession, and the injured doctor did not always submit to unjust accusations. Accordingly, actions for such slanders are to be found scattered throughout the law reports.

I have thought that medical men might be interested in the first case of the kind of which we have a full account—the facts I take from the manuscript note book of Mr. Justice Sherwood, still kept at Osgoode Hall—it was tried Sept. 3rd, 1827, at Newark (Niagara.)

The plaintiff was James Hunter. From the date of the license to practice produced at the trial, he was, no doubt, the Dr. James Hunter of Whitby, who was afterwards mixed up with the Rebellion of 1837. He was born in England in 1790, and came to Canada in 1823, settling in the Niagara district. He does not seem to have studied medicine in England, but on this side of the Atlantic he attended Fairfield Medical College. This college was organized in 1809 at Fairfield, a small village not far from Little Falls, New York State. At this college was the first course of lecture of the celebrated Frank Hamilton given later on, in 1839. Most of its staff (including Hamilton) joined Geneva Medical College in 1840, and this college became the medical faculty of Syracuse University in 1872. At the period of Hunter's atendance, Fairfield Medical College had a very respectable standing as medical schools then went on this continent. He passed his examination before the Medical Board of Upper Canada and received his license to practice April 5th, 1826. The board was composed of five gentlemen appointed by the Lieutenant-Governor, under the provisions of the Act of 1818 (59 George III., c. 13) to examine all applicants for licenses to practice "physic surgery and midwifery, or either of them." They were Christopher Widmer, F.R.C.S., "the father of surgery in Upper Canada," who survived till 1858; Robert Kerr, an old army surgeon, who married Elizabeth, daughter of Sir William Johnson, and "Molly" Brant, sister of Joseph Brant; Grant Powell, a son of Chief Justice Powell, who studied at Guy's Hospital and passed the Apothcaries' Hall—after practising in New York State and in Montreal he became

surgeon general of the militia in Upper Canada; Robert Charles Horne, M.R.C.S., who afterwards became King's Printer, and finally chief teller of the Bank of Upper Canada; and the well-known William Warren Baldwin, M.D. (Edin.), having practised a short time in Ireland, he came with his father to Upper Canada. He shortly afterwards (in 1802) opened a school in York (Toronto), and in 1803 was called to the Bar. He practised law with much success for several years.

At the trial Dr. Baldwin testified that Hunter has passed a creditable examination before the board, particularly in anatomy and midwifery.

The defendant was Dr. Cyrus Sumner, an American, who came to Canada in 1800. He passed the board in 1804—the board then being that constituted under the Act of 1795, (35 George III., c. 1.) He then settled at Twenty-Mile Creek (Clinton), called "Twenty" in the evidence, and made a considerable name for himself as a successful practitioner. Dr. Sumner was proved to have said that Dr. Hunter had been stuffing Isaac Griffin, at the Twenty, with mercury till his mouth was all sore and his teeth all loose. But as Isaac Griffin testified that the plaintiff had left physic for him, yellow, with white powders, which was to be mixed with dry sugar and molasses, and that when he took it as directed for a fever he had, his mouth got sore and raw, his teeth loose and his breath bad, the plaintiff did not get much comfort or damages out of that charge.

Dr. Lafferty gave evidence for the defendant, saying that he himself used small doses of mercury for fever, but never to the extent spoken of by Griffin. This gentleman seems to have been an army surgeon also, and practised at Drummondville. He became a member of Parliament, had a large and lucrative practice, but was no lover of novelties. It is said that after seing one of the new school use a stethoscope he said that the sight of the doctor using the *telescope* was enough for him.

Dr. Tiffany thought that the salivation of Griffin, if done intentionally, could not be justified. Some gave mercury in fevers, but he himself seldom gave more than one does. This witness may have been Dr. Oliver Tiffany,* who had been educated at the Philadelphia Medical College, or his nephew, Dr. Oliver F. Tiffany, educated at Fairfield, who

*The uncle was a well-known Radical and a valued friend of William Lyon Mackenzie. He had got into trouble some years before for alleged sedition. I find the following in the Term Books at Osgoode Hall: Easter term, 37, George III., April 29, 1797. An information was read against O. Tiffany and one against Tiffany, Sr. In the case of the former, in the following term, July 19th, 1797, he was sentenced "to be fined £20 to the King and to be confined for one calendar month in His Majesty's goal (sic) at Newark, and to remain in confinement till the fine is paid, and afterwards to find securities for his good behavior for three years himself in £100, and two sureties in £50 each."

in January, 1822, passed the board. After practising for a time at Ancaster with his uncle, he went to Chicago and there spent the rest of his life.

But Dr. Sumner was charged with other statements concerning Dr. Hunter. He said that Dr. Hunter had destroyed Mary Gilmour; that he understood he had taken five quarts of blood from her, and caused her death. To another witness he had said it was a d——d pity they hadn't employed Granny Huff and two or three men and they might have killed her sooner than they did, bleeding her five or six times, Hunter had murdered the girl.

One, perhaps, would not be inclined to find much fault with Dr. Sumner's characterization of the treatment if he had his facts right—and certainly there is no evidence that his facts were not right. But those were the days of heroic measures—and one can only pity poor Mary Gilmour, bled white in the name of science.

The main complaint is that the defendant said of the plaintiff that he was totally ignorant of the medical profession. He was proved to have said that Hunter was nothing but a butcher in Niagara; that he was a poor ignorant creature and knew nothing about doctoring; that the bleeding of Mary Gilmour was the cursedest piece of work he ever saw; that the plaintiff was not a medical man at all; that he had given Peggy Berry some drops which put her to sleep and she died immediately, "a devil of a case," and some other like choice expressions.

Very little defence was offered and the jury found a verdict for the plaintiff for £5, or $20—not an extravagant sum, we would say, under all the circumstances. The verdict was not appealed from.

THE SURGICAL TREATMENT OF ARTHRITIS OF INFECTIOUS ORIGIN AND THE METHODS APPROPRIATE TO SPECIAL CASES.*

CHARLES F. PAINTER, M.D., BOSTON, MASS.

IN selecting a subject to bring before you to-night I was influenced largely by a desire to discuss some of the recent surgical advances in the management of damaged points. Such cases are cropping out in the practice of general surgeons with considerable frequency. In former times the treatment of anchylosis was about as far as the interest of the surgeon went in joint disease. In such conditions the principal question for him to decide was, to what extent may anchylosis be overcome. In the present day the question is how far and in what way has the usefulness of a joint become impaired and what method of

*Read before the Surgical Section of the Toronto Academy of Medicine, 17th December, 1912.

treatment may be counted upon to restore the function of the part, not necessarily the joint, most completely.

I shall be obliged to take a little time to discuss the etiology of the various types of infectious arthritis and will endeavor to bring before you the character of the changes which take place in joints affected by different and frequently indeterminate infections and the treatment which, from an orthopedic point of view, is most clearly indicated.

It is not possible, as was formerly the case, to entirely ignore etiology in these cases, though we must admit, even now, that very many times it is impossible to determine it accurately. Tuberculosis as an infectious cause for arthritis is in a class by itself. Gonorrheal infection has always held a prominent place among the etiologic factors entering into joint lesions. In fact, the gonococcus has had ascribed to it a specificity in the etiologic rôle second only to that of the tubercle bacillus, and that with much less ground for the assumption. Streptococcic infections through the tonsils and as sequelæ of streptococcic infections in other parts of the body, e.g., the uterus, are quite common, though it is not always possible to prove that a given joint infection is of streptococcic origin. Colon and other infections from the gastrointestinal tract are even more difficult of demonstration. Associated with Riggs' disease there is not infrequently a polyarthritis dependent upon the absorption of toxins from suppuration about the roots of the teeth. Inflammations of the antrum and other sinuses in connection with the upper air passages are occasionally the seat of inflammatory processes of uncertain bacteriologic origin, for which there is inadequate drainage, and consequently the possibility of toxic absorption.

There is considerable uncertainty, therefore, as to the specificity of bacteria seemingly the cause of joint infections. There is but little definitely known as to the sources of the infections within the body from which these joint involvements may take place. We are uncertain whether the supposed infection is due to bacteria themselves or to the products of their life history—toxins. Neither can we determine certainly whether toxins are conveyed from the reservoir where they are made to the joints where they produce their lesions, or whether they operate through some intermediate process, as is apparently the case with syphilitic virus in its production of the joint changes of tabes. There is much to be learned in this connection before we shall be in a position to understand all the etiologic phenomena of polyarthritis.

From a study of the gross pathology of arthritic lesions during life but little information can be obtained regarding the kind of infection primarily responsible for the lesions. The characteristics of the acute changes are not those of the chronic, and when they have passed out of their acute stage, whatever there may have been that was path-

ologically significant of a particular infection has disappeared at the time of operation.

We come then to a consideration of the question, what is it that marks the difference in the various joint structures in the types of arthritis which we are called to see?

In some cases the capsular structures of the joint are the ones primarily, perhaps solely, affected. In others cartilage seems to suffer more than the capsular structures. In most cases both of these tissues are more or less involved. Repair can go on in the one until a pretty complete restitution to the normal has been attained, whereas in the other if the process goes beyond a very superficial involvement of the cartilage no real repair or restitution can take place. In a few instances the bone may be involved as well as the other tissues. In the acute cases it is at times possible to isolate specific bacteria from the joints by aspiration, or more certainly by removing some of the villi and cutting them into very fine pieces aseptically and from this material making cultures. The more subacute or chronic the case becomes the less certainty is there of being able to find any bacteria by cultural or other bacteriologic methods. Indeed, in certain of the chronic cases the only way possible to prove the bacteriologic cause of an arthritis is to strain for bacteria in the villi removed for histologic examination. In certain cases the only reason that one has for regarding a joint lesion as of bacteriologic or infectious origin is from the analogy of the tissue changes observed with those commonly noted in processes of proved bacteriologic origin.

Inasmuch as a good deal of the interest of those who are called upon to treat these cases must centre in the condition during the stage of its repair it is appropriate that we should devote a litle time to the consideration of the histology of the repair process in joints, and here we have a better knowledge of what goes on than we possess in regard to the initial pathological lesions of chronic arthritis. In the acute infections of joints the synovia is first involved. If the infecting agent is sufficiently toxic it destroys the serous surface of the membrane in areas of greater or lesser size, just as inflammatory processes in the peritoneal cavity destroy the serous surfaces there and give opportunity for the formation of adhesions between apposed surfaces. Up to a certain point the serous erosions may be repaired in a joint as in the peritoneum, but very extensive or very deep erosions may not be repaired. In animals the complete restitution of synovial membrane may take place, but not in man. If raw surfaces are left in contact with each other the subserous tissues, which are composed of connective tissue cells in an active stage of proliferation because of the toxicity of the infecting agent, immediately seek to bridge over the space intervening between the apposed serous erosions, and the result is that an adhesion forms.

If the area involved in the serous erosion is a large one the adhesion of subserous connective tissue is correspondingly extensive. The more virulent the infecting agent the more certainly will the serous erosion be pronounced. The gonococcus, the pneumococcus, and the streptococcus are most prone to produce this effect, and the interarticular adhesions thus formed are the most intractable of all. Villous proliferation is rarely seen as the result of the invasion of a joint by either of these organisms in a virulent culture. The gross pathology of such infections shows a thick, porky infiltration of the synovial membrane with considerable œdema of the subserous surfaces, injection of the surface toward the joint, effusion in the joint, which may vary from a turbid fluid containing numerous phagocytic leucocytes to a perfectly clear serous exudate; more or less erosion of the serous surfaces, as shown by the tendency to form soft adhesions wherever the apposing joint surfaces have come in contact. The cartilages, though they may be somewhat hidden by the capsular infiltration, do not in this early stage show any evidence of being influenced in any way by what has been going on around them. The repair of this condition follows the general rules of repair in any other situation or connective tissue. It is essentially a process of cicatrization. The proliferated epithelioid cells take on more and more the characteristics of scar tissue, the round celled infiltration slowly disappears, the effusion becomes absorbed, and the joint cavity becomes more or less completely obliterated, the extent of the obliteration being dependent upon the extent of the area or areas of serous surfaces denuded. With such a condition in the synovial structures it is perfectly possible to have an undamaged cartilage. As a rule, however, contact of toxic materials with cartilaginous surfaces brings about similar changes in cartilage to those just cited as taking place in the soft parts, and even if the cartilage is not as extensively destroyed, it is incapable of any kind of repair other than that which is the result of the patching of the erosion on its surface by a connective tissue cap. Furthermore, one of the frequent effects of the action of toxines upon the superficial layer of cartilage surrounding an erosion or located at the juncture of bone and cartilage is to cause it to proliferate and be raised above the level of the joint surfaces. If the erosion of cartilage is deep, extending to the bone beneath, and two such erosions are apposed, the same result follows which has been described in connection with the apposed erosions of serous surfaces except, of course, that the adhesion is an osseous one instead of a connective tissue one.

There is no essential modification in the foregoing description of the effects produced by acute infections in joints except in degree, and this depends upon the variety and virulence of the infecting organism,

the resistance of the host and the kind of treatment accorded the condition in its initial stages.

In the subacute and chronic cases, and generally these are the ones in which there is no way of determining the specific germ causing the infection, there are no serous erosions. Instead, the conspicuous feature of opening the joint cavity is the formation of villi all over the synovial membrane. These are covered with serous membrane more or less purplish in color, without much or any obliteration of the joint cavity and very little infiltration of the tissue at the base of the villi. There may or may not be a little excess of fluid in the joint and this is usually slightly turbid but rarely contains leucocytes. There are frequently fibrinous appearing clots and in the remote portions of the joint cavity the villi are sometimes covered with a slightly adherent, greyish, fibrinous exudate. The cartilage is often slightly greyish in color or has at least lost its glistening white character and is seemingly diminished in amount because from all sides a pannus has crept in over it from the adjoining serous membrane. If this has remained long in contact with the cartilage it frequently sends down little vescular loops that bore small holes in the surface of the cartilage and anchor the pannus in this way so that it can only with some difficulty be dislodged. Eventually this process will cause the destruction of a considerable area of the bearing surface of the articular cartilage. Associated with some of the chronic joint lesions is a thinning of the cartilage over the entire articulating surface and at the points of greatest intra-articular pressure erosions take place which are not dependent upon any locally acting toxic influence. The process of repair in these joints can never tend to the formation of adhesions between serous surfaces or of osseous adhesions between cartilagenous surfaces, unless the erosions on the two surfaces are apposed to each other.

Luxation, partial anchylosis from disuse, which is a progressive condition tending always to increase in proportion to the disuse, and impairment in function are characteristic of these lesions. They are also much more likely to be polyarticular than the above described acute disturbances. A large part of the disabilities associated with these chronic infections of joints are properly ascribed to functional disuse extending over long periods of time as well as to the fact that the original source of the infection, unless it can be detected and eradicated, is constantly giving opportunity for reinfection. Not enough study has been given to the influence of the function of a joint upon its local well-being and through this upon the body as a whole. In a general way, for individuals at large, we realize that a sedentary life does not bespeak the highest degree of health, and we assume that the reason for this lack of health is to be found in the imperfect metabolism which a failure to employ the various faculties of the body to a sufficient degree

implies. No mechanism is capable of its best work that is not used a certain normal amount. Machinery deteriorates quite as much when out of commission as when in careful use and being well looked after. There is perhaps no analogy between a piece of machinery and a human being, but what is true of the machine in disuse is also true of the human mechanism when out of commission. If it is true of the human being because of voluntary disuse, why not true when a part of the mechanism, the use of which contributes to this state of well-being, is involuntarily out of commission. It seems a reasonable view to take, therefore, that the impairment of the function of several large joints, particularly when they are joints of the lower extremities, must necessarily interfere with the well-being of the individual, and in so far as such interference has to do with the repair of injuries inflicted upon parts of the body it must interfere with the repair of local injuries to these parts. In other words, a vicious circle is established. In conditions, therefore, where an injury has been inflicted upon a joint either through disease or trauma, resulting in the impairment of its function, and where the cause which produced the damage has ceased to act, restoration of function as near as may be to the normal is a "sine qua non."

In the chronic infectious type of arthritis, whether of the mon- or poly-articular variety, anchylosis is not the only thing that impairs function. It is rarely the case that any joint seriously affected goes through to recovery without the estblishment of a greater or lesser amount of deformity, together with more or less limitation in motion. Therefore one of the chief problems in the treatment of infected joints should be to prevent the development of deformity while the process is active, and after the acute stage has passed deformity should be overcome as rapidly as possible. Many a joint recovers from an infectious arthritis with ample motion for function, but with just enough deformity to render that motion of no value or indeed in some cases an actual handicap. In many instances such deformity could have been prevented and the same amount of motion have been preserved had a little care been exercised during the early stages of the treatment.

Having devoted some space to the consideration of the etiology and repair processes in infected joints, it is perhaps as well now to consider some of the types of anchylosis and deformity before considering the methods of treatment.

When the infection has confined itself to the synovial portions of a joint, if the cause is inoperative and can be removed, and if the infection has been a virulent one, involving the joint in serous erosions, then it is necessary to content one's self with preventing the development of deformity, which, if permanent, would impair the functions of the limb of which that joint was a part, and we must wait to see how

much motion Nature may be able to restore. The indications for early operative attempts to forestall anchylosis from this cause will be considered later.

In cases where a villous condition exists in a joint or joints with some slight deformity and where the cause is still operative and indeterminate, the treatment should be directed to the correction and prevention of deformities, and the search for the source of infection should be kept up. General constitutional treatment should be carried out and no function of a joint permitted which results in keeping it irritated, as shown by heat, pain on use, and localized tenderness.

Where cartilaginous erosions have developed, as well as villous changes in the capsule, the hope of getting good function is correspandingly lessened, and here again the chief effort should be directed to the preservation of such, a relation of the component bones of a joint to each other that the functional use of the limb may be conserved. It may be that when the activity of the process has ceased that the preservation of a considerable area of cartilage intact in such a part of the joint that a useful though restricted arc of motion may be had, may prove very serviceable.

If the infection was a subacute one and no serous erosions occurred in the synovial membrane, and, as is the rule under such circumstances, no cartilaginous erosions took place then such limitations are there are in motion are due to the stiffening of the subserous tissues. In these cases recovery is spontaneous, though possibly slow, and it brought about through the absorption of the infiltration by natural processes. Such processes may be favored by various methods of physical therapy, notably massage, hydrotherapy, and dry heat. In the above described conditions anchylosis has not been complete, neither has deformity been great. In those cases where extensive cartilaginous erosions have occurred or where serous surfaces have been established, motion is done away with in the joint and usually considerable deformity has developed. Here the problem of treatment is to ascertain where possible if sufficient areas of apposed, intact cartilage have been preserved, making possible the procurement of useable motion, in amount rendering it worth while to break up adhesions at the same time that deformity is overcome, or whether the best results will not be obtained by correcting deformity without expectation of motion.

Thus briefly and in a very general way have I reviewed the chief types of lesions in the large joints irrespective of their pathology, except that so far tuberculosis has not been considered, though I personally think there is no reason for excluding either tuberculosis or syphilis from the category of infectious arthritides.

Now I wish to aproach the subject from another side and con-

sider some of the operative methods to be employed in dealing with these lesions, and the indications for their selection. The simplest of them all is, of course, brisement forcè. No forceful manipulations of any joint should be undertaken until the acute stage of the process causing the stiffness has subsided. There are two reasons for adopting such a policy. In the first place, an active process will most certainly be continued in its activity if not aggravated, and in the second place if the joint is too sensitive the postoperative treatment cannot be satisfactorily carried out and consequently no good can come from the manipulation. No manipulation should be undertaken without full anaesthesia being induced with ether or chloroform, not with nitrous oxide—at least not at a first manipulation. The arc of motion to be gained or the betterment of position to be secured having been accomplished by the gentle and continuous application of reasonable force, not by the jerky or intermittent employment of extreme force, the manipulation should rest here, for further churning up of the joint results in unnecessary traumatism to the articular structures and makes it likely that fresh adhesions may form as a result of the manipulation. It is always well in practising this method on any joint to secure as much motion as possible in the direction opposite to that in which it is necessary to go in order to correct coexisting deformity, e.g., in a flexed and anchylosed knee where the purpose of the manipulation is to secure extension of the leg as well as motion in the joint, it is best to secure flexion beyond the point where it is held by adhesions before attempting extension. This is equally true if there is some motion in flexion as well as sufficient flexion deformity to justify attempts to correct this by operation. If the psychological moment has been selected for the manipulation the post-operative treatment may be commenced very early after the adhesions are broken up. Fixation need not be by plaster of Paris or other rigid splints unless the object of the manipulation contemplated the overcoming of deformity as well as the procurement of motion. In such cases splinting to overcome the contractural tendencies on the flexor side of the capsule of the affected joints should be employed for a week or ten days before they are removed for inspection of the articulation and often should be continued as removable splints for some time after the passive motion of the joint has been commenced. In the determination of the amount of force which it is permissable to use in a given case one must have in mind the object to be attained, whether the procurement of mobility or the correction of deformity is the more important matter. Some adhesions are so firm that they cannot be broken up manually without the avulsion of cartilage and bone from one side or the other of the adherent joint surfaces, and though by so doing correction of deformity may take place no mo-

tion will ever be possible, and it would have been better to correct the deformity and have secured an anchylosis in good position or a flail joint ,as the nature of the articulation may determine, by an excision. A type of this is commonly seen in the knee, where several degrees of flexion may be present and only a very few degrees of motion, just what is allowed by the play of the patellar tendon where the patella is adherent to the face of the femoral condyles. To break off such an adhesion is of no advantage if motion is contemplated and will not generally secure the correction of deformity. Brisement forcè is applicable where the adhesions are between apposed serous surfaces, and then only when the infection has not been so severe that the larger part of the serous surface has been denuded of synovia. This is only slightly less true where the purpose of the manipulation contemplates the correction of deformity rather than the procurement of mobility.

Arthroplasty. With Murphy's suggestion for the treatment of anchoylosis by means of forming an hygroma between the ends of the bones in anchylosed joints it seemed that a measure had been suggested which was likely to revolutionize the treatment of stiff joints. Various modifications of his technique have been suggested, principally as regards the material employed to interpose between the bones. Artificial membrane suggested by Baer and portions of the fascia lata advocated by Codivilla are the principal modifications of Murphy's technique. From a surgical point of view these make a very strong appeal, for there is no question of the possibility of interposing either a fat or fascial flap from the patient's one joint or a piece of sterilized and chromicized pig's bladder of a strip of the patient's fascia lata between the ends of the bone, and in many cases it will remain and prevent to a certain extent a union of the osseous surfaces. Unfortunately the value of the procedure is not dependent upon its technical possibility. There has been a great tendency to apply the method in all kinds of joints, for all sorts of pathological conditions, and without in many cases any possibility of being able to carry ont an effective after-treatment. In the first place whatever the material used, there are a considerable number of cases from which the interposed tissue will be extruded, and this in no way because of errors of technique. In some others there will be absorption of the tissue or attrition of it so that anchylosis will recur. Infection of the operative field, which is more likely to occur than in simple arthrotomy will be disastrous to the anticipated result. In the joints where it is easiest to accomplish the purpose of the operation more motion is needful for a satisfactory function of the joint than can be expected of the most successful surgical procedure. Anything less than the ideal result is not so good, in most instances, as anchylosis in good position. In those joints where it would

be possible to get along well functionally with the small number of degrees of motion generally resulting from operations of this sort the procedure is the most difficult to carry out and the chance of technical failure is greatest. In deciding for or against this method of treating anchylosis, the question of how to secure the greatest functional value to the patient must be the paramount consideration in nearly every case. Everyone desires motion in a joint, but not everyone realizes that there are conditions in which the amount of motion which is attainable is of no value to the patient functionally and indeed is oftentimes a positive disadvantage. If sufficient motion cannot be secured to permit of the use of the joint without strain then the operation of arthroplasty is a failure. Instability in a joint is of more disadvantage than immobility, provided there is no permanent deformity.

In the knee, where the desire for relief from the condition of anchylosis makes its strongest appeal, it is impossible in my opinion to get sufficient motion in a sufficiently large proportion of cases to justify the operation. At the hip the procedure is difficult and yields no more motion, if as much, as a properly performed excision and is a more serious surgical procedure. It is fair to say that an excision of a completely anchylosed hip is very much more difficult than when anchylosis is incomplete. In the elbow, where motion is very desirable, excision will give more motion than anthroplasty, is a much simpler operation, and though often attended with instability of the joint, yet voluntary muscular control may be relied upon to yield good function. I have never undertaken the operation at the shoulder joint, but do not believe it will yield results superior to an excision.

The consideration which must govern the choice in this matter whatever technical skill may develop to make possible more of these, at present unusual operations, will have to be the one that is frequently weighed last of all, if at all, when these questions are being discussed, and that is the question of function. It seems to be thought in some quarters that if motion may be secured in place of stiffness, that that is the only question to be entertained. As a matter of fact, that is really the least important consideration if its procurement does not result in betterment of function. One must not lose sight of the fact that where small amounts of motion are secured and a slight amount of deformity persists that the right combination of circumstances is at hand for fanning into activity the old process that originally caused the anchylosis. This is particularly true of tuberculous joints, in which some are employing this method of treatment.

It may be that this sounds like ultra-conservatism, but my own experience and the observation of the experience of others leads me very strongly to feel that the best results in the treatment of archylosis are

very unlikely to be obtained from the employment of arthroplasty in any of its present forms. That good results are obtained in some cases is undoubtedly true, but that they can be consistently obtained I think is untrue.

At the present time joint transplantation is exciting a great deal of interest. That it is feasible so far as technique is concerned has been proven on several occasions. Its feasibility, however, is not our justification for adding it to the repertoire of surgical procedures until its fitness has been demonstrated in other respects. Theoretically, it is inconceivable that sufficient control could be obtained over a transplanted joint to ensure satisfactory function or even prevent the development of so much stiffness as a result of the imperfections in the use of the joint that a functioning capacity which was sufficient at first ultimately becomes insufficient. Here again the supreme test to be applied is one of fitness for the service required of the damaged limb. In only the most exceptional circumstances has anyone the right to apply any other test.

In quite a few cases of anchylosed joints it will be found best to correct deformity by osteotomy and leave the anchylosis alone. This is true, of course, in those cases where there is an absolute cessation of the activity of the process causing the anchylosis and where the anchylosis is complete and bony. This method finds its greatest applicability in the hip joint after anchylosing processes; occasionally in the knee, and at the ankle where the Trendelenberg osteotomy is preformed to overcome planter fiexion of the foot. As a rule it should not be employed where there is a small amount of motion left as an accompaniment of the deformity or where the deformity is extreme, so that there must be great angularity at the seat of the fracture. It is often the operation of choice.

As has been intimated in the discussion of arthroplasty, there is a field for formal excision of joints in the treatment of partial bony or fibrous anchylosis. This field includes such joints as the hip, the knee, the elbow, and the shoulder, where there is not absolute bony union, as well as some of the smaller joints of the fingers and occasionally of the wrist. Its indications include deformity as well as mere stiffness. It is especially applicable where some motion is needed, as in anchylosis of both hips, in which case some motion in one hip joint is essential, or where, as in the shoulder, some freedom is sought which will enable a wider use of the forearm. One may be pretty sure of securing motion after an excision in joints where motion is desired if the cartilage over the surface of the articulation left behind is not too completely destroyed. This is quite as certain as in the most successful arthroplasties. In the hip and shoulder one removes by excision only one of the com-

ponent parts of the joint, viz., the head of the femur or humerus, leaving the other side intact or only partially destroyed. Just as in Hüter's operation for hallux valgus the preservation of the cartilaginous surface on the phalangeal side ensures freedom of motion in the great toe joint after the metatarsal head has been removed, so in these other joints there is no need for the interposition of any foreign substance for the purpose of securing motion where any considerable amount of cartilage has been left. In the small joints of the hand, e.g., the metacarpo-phalangeal, excellent results are obtainable by resorting to the same type of excision as that advocated by Hüter in the great toe. I see no reason why this same method might not be attempted at the knee joint, where the head of the tibia was fairly well covered by cartilage and the femoral condyles were not in a condition to permit of preservation, though it is probable that the resulting lateral instability would need to be controlled by apparatus. The end of the femur would also need to be fashioned to fit into the trochlear surface of the tibia.

One other matter remains to be spoken of in this connection and that is the value of the X-Ray in the study of cases of anchylosis. The question of the extent and even the very existence of cartilaginous erosion is the all-important one in many of these cases. The skiagram does not always reveal the true condition in this respect and is not to be relied upon to guide one in the decision as to whether manipulation or some more radical procedure should be employed. If the joint line is obliterated then one may be fairly well assured of the existence of cartilaginous erosion, but where this is not the finding in X-ray examination, then one cannot be sure of what the real condition is. The clinical history and the physical examination are usually more significant of the true state of affairs.

It will be seen from what has been said that the subject of anchylosis in joints is not one to be dismissed summarily. Many considerations must be taken into account if one would treat such cases most satisfactorily. A careful analysis of the history of the case, the probable source and character of the original infection, the likelihood of a recrudescence of that infection, the type of inflammatory disturbance within the joint, whether confined to the soft parts or to the bone or both, the extent of cartilagenous erosion, the amount of motion which has been preserved and the extent of existing deformity, the social status and mental attitude of the patient, and the character of the procedure most likely to yield the best function as well as the likelihood of being able to carry one after treatment designed to establish the results of the particular surgical procedure adopted, all these must be weighed in the balance. There is scarcely a case of infectious arthritis in which at some time or another the question of the treatment of

inchylosis ,either partial or complete, does not arise. If these principles are carefully observed it is the writer's opinion that much of the damage inflicted upon infected joints may be avoided and the patient be brought through his arthritis with much better function than might otherwise be the case.

There is danger that the highly colored pictures of the results obtained by exceptionally skillful technical surgeons in the treatment of arthritic lesions may lead to the indiscriminate employment of those methods in the hands of men whose surgical skill is not sufficiently great. Much of the newer surgical work along these lines has not been tested out for a long enough time to permit of the drawing of definite conclusions. The lure of operative methods in this work, as in other branches of the surgical field, tends oftentimes to blind us in our search for the goal we should be striving to attain. We need to check up the end results of the employment of much of the newer surgery of joints to see if it is destined to secure to our patients the desired end . If it does not it should be discarded, no matter how alluring the technical prospect. The best possible function should be the sole desideratum.

SCROTAL TUMORS.

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Clinical lecture delivered at Toronto Western Hospital clinic and reported for *The Canada Lancet.*

GENTLEMEN,—The case you see on the examining table this afternoon will serve as an example of scrotal tumors—the topic of our clinic to-day. You will observe he is a young man about 22 years of age and somewhat emaciated and presenting a tumor in the left side of the scrotum. This enlargement has existed for about four weeks.

The first question to answer here is whether this enlargement is truly scrotal or whether something descends into it from the inguinal canal or abdomen. By taking hold of the cord just below the external ring, with the thumb and fingers in this manner, we at once observe it to be normal in size and consistency and thus exclude hernia, and incysted hydrocele of the cord. This may be further confirmed by comparing it with the cord on the right side, which is normal.

Having decided that this enlargement is entirely scrotal, we next examinine by inspection and palpation . By inspection in this case we exclude varicocele, as we do not see the enlarged tortuous veins of

the pampiniform plexus, neither do we feel the characteristic "bag of worms" on palpation.

We have a rounded swelling here. Is it solid or is it fluid? It certainly feels solid, and we have decided it is not vascular -varicocele.) If it were fluid it must be either (1) a recent hematocele, or (2) an hydrocele. In the hematocele we would have the history of a recent injury and it would not transmit light. If it were an hydrocele it would be translucent, except perhaps in old cases with thickened walls.

This tumor is solid—it feels so—it is heavy and hard—with no sensation of fluid or fluctuation.

Being a solid tumor it is probably one of four kinds, (1) hematocele (old), (2) tuberculosis, (3) syphilitic, (4) new growth.

1. In an old hematocele we will have some history of injury with acute symptoms following. A hemorrhage takes place into the tunica vaginalis, this becomes distended causing considerable pain. Later on coagulation takes place, the acute symptoms pass off, and a more or less solid tumor results.

2. Tuberculosis of the testicle usually commences in the epididymus. Frequently it is secondary to disease in some other part. In the patient before us the lungs are doubtless involved. Here it is liable to occur in young people, and at times both testicles are affected. A tuberculosis testicle is liable to suppurate but not likely to have an associated hydrocele. Testicular sensation remains late—in fact, as long as any healthy gland tissue remains. A rectal examination should be made in all these cases as an early implication of the vesiculae is common.

3. Syphilitic disease of the testicle usually occurs in people somewhat advanced in life. This involves the whole organ. It may be either unilateral or bilateral. It is frequently accompanied by hydrocele, but is not likely to suppurate. Testicular sensation is lost early.

4. New growths—may be (1) innocent or (2) malignant.

(1) Innocent growths are round, smooth, and of slow growth, do not affect the cord or involve the neighboring glands.

(2) A malignant growth is rapid in progress, involves the cord early, and also the surrounding glands. It is usually unilateral.

Now, gentlemen, from what we have seen, this is doubtless a case of tuberculous disease of the left testicle. We will not go into treatment to-day, but will briefly enumerate the varieties of hydrocele which form a large percentage of scrotal tumors .

Hydrocele is a collection of, generally clear, fluid near the testis or cord.

Hydrocele are of three chief varieties:

1. Vaginal hydrocele is a cellection of fluid in the tunica vaginalis. It again may be sub-divided into four somewhat common varieties:

(a) Acute hydrocele—It follows an injury or may be secondary to some acute inflammation in the testicle.

(b) Congenital hydrocele—is where the funicular process has never closed. Here the fluid may be returned into the abdominal cavity by pressure—or it may return of its own accord, while the patient is recumbent.

(c) Infantile hydrocele—here the funicular process has been obliterated at the internal ring. The fluid in this case may be pressed into the inguinal canal, but not into the abdominal cavity as in the congenital variety.

(d) Acquired vaginal hydrocele—is also probably due to some old inflammatory condition of the testicle. It is common in syphilitic patients. It usually transmits light—but may not in cases of old standing with thickened sac walls.

2. Encysted hydrocele of the epididymus. This variety never becomes very large. It is round and translucent. The fluid may contain spermatozoa.

3. Hydrocele of the cord—encysted—The funicular process is not completely obliterated and we find an elastic fluctuating tumor in the inguinal canal.

Now, gentlemen, in order that we may more easily follow the various divisions and sub-divisions of scrotal tumors we will put them on the blackboard in a tabulated form as follows:

- SCROTAL TUMORS
  - 1. Vascular (Varicocele)
  - 2. Fluid
    - a. Hematocele (recent)
    - b. Hydrocele
  - 3. Solid
    - a. Hematocele (old)
    - b. Tuberculous
    - c. Syphilitic
    - d. New Growths
      - 1. Simple
      - 2. Malignant
    - 1. Vaginal
      - 1. Acute, due to
        - 1. Injury
        - 2. Epididymitis
        - 3. Orchitis
      - 2. Congenital.. Funicular process remains open
      - 3. Infantile.. Process obliterated at internal ring
      - 4. Acquired due to
        - 1. Inflammation
        - 2. Gumma
    - 2. Encysted Hydrocele of Epididymus
    - 3. Hydrocele of the Cord
      - 1. Encysted (Similar condition found in female)
      - 2. Diffuse (An œdema)

THE CARRIER QUESTION.*

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AM assuming that the abolition of infectious diseases constitutes the prime duty of, almost the only official duty possible to, the present generation of Public Health men; that the sources of these diseases should be attacked rather than the routes of transmission; that infected persons (or animals) are the only known, or even probable, sources which exist on a scale sufficiently large to be worthy of notice; that, therefore, the study of infectious persons, their origin, history, and recognition, is the obvious first step in the campaign.

Where are these infected persons, these sources of all our troubles? How do they arise? How shall they be recognized and especially how shall the infected well persons be discovered?

Persons sick with an infectious disease have long been recognized as capable of transferring that disease to others. That persons well, acting as intermediaries, may at times carry the germs of disease from the sick to others, has also long been known; but it was supposed the germs were carried, not in, but on the bodies of these intermediary persons, especially on the clothing or the hair. An exaggerated belief in the possibilities of this external carriage led to extremes especially examplified in the old-fashioned port quarantine, fumigation of passengers and baggage, etc., and earnest men within a decade have even advocated for visitors to infectious cases, the wearing of rubber shoes, the washing of the beard with alcohol, and other like pagan rites.

Now, we recognize internal carriers, that is, in the accepted usage, well persons, carrying the germs, not on, but in their bodies, not in the form of a few dried organisms, but in the form of many active swarming organisms, multiplying in the body or escaping fro mthe body in great number through the discharges of the body, not for a few hours or a day, but for several days or even long periods.

The pendulum at first swung so far after this discovery that some of our greatest leaders preached pessimistically that the existence of these infected persons dissipated forever the fond hope of the abolition, or even the effective restriction of the infectious diseases, partly on the ground that such carriers are very numerous, partly on the ground that they are not identifiable. But I believe that the carrier question is not only solvable, but does not really add very much to our existing troubles, because practical experience shows that they are *not* very

* Read at the Toronto Academy of Medicine.

numerous and *are* identifiable. I do not base this on the literature of the subject wholly. It is chiefly the result of rather strenuous experience gained in handling an average of two epidemics a week for some years past, epidemics which involved all the ordinary varieties of infectious diseases, were seen in a wide variety of people, in railroad camps, lumber camps, mining camps, schools and institutions; in rural districts, small hamlets, villages, and cities. It is not often that epidemiologists have the opportunity to handle thus several hundred outbreaks in a very few years, and we made what we could of our opportunities. To. Dr. A. J. Chesley, then my invaluable colleague, and now successor as Director of the Division of Epidemiology in the Minnesota State Board of Health, must be ascribed the bulk of the evidence relating to the practical applications in scarlet fever and measles.

To begin with, some definitions and nomenclature. A carrier in the broadest sense is any person who acts as a conveyor for germs, although inaccurate usage has limited it, rather indefinitely, to well persons, internally infected. The externally infected carrier, he who has germs on his hands, his clothes, his hair, etc., is individually, rather unimportant, and he should be distinguished from the nternal carrier who is really a living incubator. The external carrier can be detected by his close, recent association with an infected person; he can be put out of action promptly by a few minutes' vigorous treatment with soap and water, and even without this, he is not likely to carry infection more than a day. The physician, the nurse, the untrained attendant, the visitor, largely furnish these external carriers. Washing the hands carefully after every contact with infection will abolish 99 per cent. of the dangers they provide. The external carrier individual, is, therefore, little more of a problem than is a non-living, conveyor, like a spoon or a towel, except that he can move by his own volition. As later explained, it is the relative abundance of external carriers which make them of moment, not their individual prowess as germ distributors.

The internal carrier, the living incubator, he in whom the germs have established a definite habitat and breeding ground, is, man for man, many times more dangerous, first, because the germs he carries are so abundant; second, because they are moist, warm, growing; third, because the germs may remain with him for days, weeks, months, years, and sometimes forever; fourth, because he cannot be rid of them by any ready means. The further fact that the well internal carrier cannot always be recognized, as the external carrier usually can be, from history of recent association with infected persons, etc., is itself a valuable, practical distinction. The well internal carrier is at times of great, even crucial importance; and if we class, as we should *all* infected persons, well or ill, as carriers, the internal carrier problem is coincident

with the main problem of infection. Three classes of such internal carriers may be recognized, and I have ventured to suggest names for them, correlating with certain stages in the natural history of infectious diseases.

All infectious diseases present seven more or less well defined stges, infection, incubation, onset, fastigium, convalescence, decubation, and defection. In the incubation period the patient-to-be is well, although the germs are present in the body, busy establishing themselves. In the period following recovery, the ex-patient is well, although the germs are often still present in the body, busy disappearing. This I call decubation. Every complete case of an ideal infectious disease presents, constructively, at least, three periods during which the patient is infected. In the first period (incubation), and in the last period (decubation), he is well; in the middle, including onset, fastigium and convalescense, alone, is he ill.

The decubation period or period of gradual disappearance of the germs, balances the incubation period or period of gradual development of the germs. The defection or final disappearance of them from the body balances the infection or first appearance of them in the body. Of the three periods of infection the incubation period is wtihout lesions of any kind; the decubation period is without active lesions, such as pitting, scaling, paralysis, etc., but the interval between present actual lesions of function or structure, due to the activities of the germ in the body at the time. This is the lesional period. Infected persons in the incubation period I call incubates; infected persons in the decubation period, decubates; infected persons in the lesional period, lesionates. The significance of these distinctions from the epidemiological standpoint is as follows:

Incubates, i.e., infected persons who have not been ill as a result of the infection, may be first divided into those who go on to lesional development and those who do not. Thus the incubation period may be normal, i.e., end by the development of lesions; may be aborted by the early disappearance of the ferms, or may be indefinitely prolonged, without lesions developing at all. The famous Typhoid Mary, who yielded, week after week for at least two years of observation, discharges swarming with typhoid bacilli, was a notable example of a prolonged incubate carrier. She had been infected, the germs had established themselves, developed, and continued to grow in her, but she never had any recognized lesions.

It must be noted, however, that an incubate while necessarily infected, is not necessarily infective, i.e., the presence of the germs in the body does not necessarily involve their escape from the body. In diphtheria and in typhoid fever, the incubate, whether he develop lesions

later or not, is both infected and infective. In measles and scarlet fever, the incubate is infected, but not infective. The diphtheria or typhoid incubate, is, therefore, to be feared as a possible source of infection; the scarlet fever and measles incubate is not. Hence an incubate, although necessarily a carrier, in the literal sense, is not necessarily a carrier in the con ventional, i.e., in the sense of a distributor. To avoid confusion I would suggest that the term *carrier* be defined hereafter as applying to *all infected* persons, the term *distributor* only to those infected persons who are also *infective* persons. Then we can say incubates are always carriers in typhoid, diphtheria, scarlet fever, and measles. They are distributors also in typhoid and diphtheria, but not in the other two.

The lesionate in almost all infectious diseases is the great source of infectious germs. Of course, this has long been recognized, indeed, for centuries the lesional period has been the only infective period really distinctly established and accepted. This period begins with onset and terminates with complete recovery, that is, recovery from the infectious disease itself, not necessarily from all the complication or mixed infections which may be implanted on it. Taking a pure infection and an uncomplicated course for our ideal picture, however, the lesional period is usually infective throughout (lung tuberculosis is one notable exception). A lesionate is, therefore, not only a carrier, but almost always a distributor, actual or potential. The lesionate is also a more extensive and a more constant distributor on the average than is either the incubate or the decubate. It is true that the rate of distribution may vary, that the lesionate may turn out more germs per minute at one stage of his disease than at another. The accompanying lesions themselves may act at one stage to aid distribution more than at another. Thus the catarrh and bronchitis of measles, with its sneezing and coughing, tend to increase the mouth spray over normal excessively; and during the coughing and sneezing stage the patient is, for purely mechanical reasons, a wide distributor. The mechanical facilities for distribution become much restricted, as the coughing and sneezing disappear; even though the number of germs per c.c. of the discharges remain as high as ever.* But, however the lesionate may vary as a distributor, he is usually actively and fairly constantly at it.

The decubation period, the period when the body has become immune the poisons of the germ and sometimes to the germ itself, is the period during which the germs tend to disappear. Just as the incubation period, normally ending in disease, may be indefinitely conance of the germ (defection), sometimes fails to follow its normal, the

*The abundance of the germ itself is only one factor in relative infectiveity, a subject which would require a separate paper to discuss properly.

germs remaining for long periods or even indefinitely. Thus are developed decubate carriers, not only in most cases of many infections ,but in some cases of some infections for very long periods. The well carrier who has been sick and has recovered is simply one in which normal decubation is greatly prolonged. Incubates are necessarily carriers, but not necessarily distributors (i.e., in lung tuberculosis). Thus incubates in scarlet fever, measles, typhoid, and dihptheria are all carriers; in typhoid and diphtheria incubates are also distributors. Decubates in typhoid fever and diphtheria are also both carriers and also distributors; in scarlet fever and measles it is a question whether there be a decubation period proper, i.e., an infected period following disappearance of lesions. If there be, scarlet fever and measles decubate *carriage* must exist; but whether they exist or not, we know that decubate *distribution* does not exist in these two diseases.

The practical application of all this classification and nomenclature to the search for the infective persons is as follows:

The incubate distributor can be recognized, and, therefore, safeguarded under the following circumstances:

(a) When it is known that a person has been exposed to infection; then it may be assumed that he may be infected; and in typhoid or diphtheria that if he be infected he is also infective. In scarlet fever and measles the incubate carrier is not infective.*

(b) After an incubate develops lesions, his previous condition as an incubate can be deduced. This *post-hoc* information does not, it is true, lend any aid to preventing distribution during the preceding incubation period, but in diphtheria and typhoid it does point out other persons, associates of the infected persons during the incubation period, who may have been infected by him, and, therefore, are worth watching.

(c) When infection of others can be traced definitely to him. This is the most common method of recognizing the prolonged incubate, the incubate distributor proper—the man who is internally infective without developing lesions at all.

(d) When systematic laboratory tests of persons suspected of being incubates can be made, and the germs actually found. This has been done as a routine measure chiefly in diphtheria and in cholera. It cannot, of course, be done in scarlet fever, measles, smallpox, or chickenpox, etc.

*Of course, an incubate, because he has usually been recently in contact with the infected person from whom he derived his infection, may be an external carrier for a brief period as well as an internal carrier. Furthermore, the measles or scarlet fever incubate, while not infective during incubation, is extremely likely to cease being an incubate and become a lesionate. But the scarlet fever or measles incubate is not an internal distributor during the period while he is still an incubate.

(e) When, generally by accident, tests made in a routine manner for other purposes happen to discover him.

The lesional distributor can and should be recognized by the symptoms he presents in all typical cases, by every physician who sees him. Unfortunately, however, practising physicians see but a minor fraction of the total lesional distributors, i.e., they see only the severer cases; as a rule, the mild, unrecognized and concealed cases are not called to their attention. Moreover, because practising physicians see little of, and study even less, the infectious cases which are called to their attention, the early and late lesional stages are seldom studied sufficiently by them to make their recognition easy. But the contagious disease specialist, on the trail, with the epidemiological history, and on intimate knowledge of incubation periods and prodromes to assist him, should, can, and does recognize most lesionates in almost any stage of the lesional period, clinically or by culture. To such an expert the recognition of the lesional distributor, however difficult to the practitioner except in the fastigium, is a matter usually of a glance, sometimes of a little careful study, or, at most, of a day or two of observation. The finding of lesional distributors, in early and late stages, of mild, unrecognized and concealed cases, is, of course, one of the chief duties of the epidemiologist.

The decubate distributor is recognizable in the normal decubation period by the history of the recent preceding attack, sometimes by the aftermath lesions, dequamation, pitting, paralysis, etc., or by blood reactions like the Widal or Wassermann or by cultures. When decubation is prolonged until the lesional period has been forgotten, or if as sometimes happens the existence of the lesional period is overlooked or wrongly diagnosed, or purposely concealed, the decubate distributor is in a position parallel with that of the incubate distributor who does not develop an attack at all, and is recognized by the same methods, most satisfactorily by tracing to him new cases of actual disease.

To sum up the situation. The infectious diseases are derived only from sources consisting of infectious persons (or animals). Persons infected externally only, external carriers, are not *sources;* they are merely *routes* of infection like water, milk, fool, flies, and contact in general. The interial carrier is the true source of disease. Such internal carriers are of three classes, incubate carriers who have not yet been sick; decubate carriers, who have been sick, but are now well; and lesional carriers, who actually present lesions, the result of the development of the germs they carry. These carriers are not necessarily distributors in some diseases, notably certain mucous membrane infections, diphtheria, pneumonia, gonorrhea; but are not distributors in others, notably measles proper, scarlet fever, smallpox, chickenpox, German measles, etc. Decubate carriers we know generally only as distributors,

except in lung tuberculosis, where distribution occurs neither in incubation or decubation, and only in part of the lesional period, i.e., the open stage. Of all the conditions which furnish carriers the lesional conditions are the most fertile in germs, the most facile in germ distribution, the most easily recognized, the most easily controlled. Furthermore, and this is of very considerable importance, the lesionates form the very solicitude of the care they require and receive because of the existence of lesions, come most closely in contact with their immediate associates, and are, therefore, prone to give rise to new distributors of all classes. As the lesional period is the highest in infectivity, so the lesional distributor is the centre of the infectious army we have to fight. On the lesional period centre both incubation and decubation; and on the lesional carrier centre both incubate and decubate distributor.

In the campaign against infectious diseases there is but one end—to abolish the enemy. This may be by a frontal attack on the lesional carriers or a flank movement on incubates and decubates. But all methods lead to the same end. Wherever one begins to follow the ramified threads of infection, the disentangling of the mesh always involves these three classes. Plunge in anywhere; to abolish an enemy always means the death or capture of every individual finally. But the easiest, simplest, most direct method is to go to the lesional carriers and to work out from them into the zones of infection which surround them until all incubates and decubates, all mild, unrecognized and concealed cases are successfully located, labelled and held to prevent further damage.

The relative infectivity of the incubates and decubates must be estimated with circumspection. As in war, the relative efficiency of the individual fighter must not be confused with the number of each kind which exists. The Gurka, man for man, is many times a better fighter than the Hindoo. But one thousand Hindoos can do much more damage than one Gurka. So the typical, well-marked lesional carrier is the worst potential distributor we have, but, because often recognized and isolated, does less extensive damage than the typical lesional carrier, the unrecognized, mild, or concealed cases, which runs at large. On the other hand, the external carrier, the person who comes in contact with such cases, is individually a very poor distributor, for a very short time. But he is so numerous that, despite his short life, and weakness, he is a large factor in close, direct, immediate distribution although generally quite negligible as a long-distance operator. The incubate who aborts, ceasing to be infective before lesions have time to develop, is also almost negligible, except at close range . Numerous as he is, his fighting value as an individual is very low. The prolonged in-

cubate, on the other hand, is a much more serious proposition. Like a man-eating lion, he is rarely recognized as such until he has made a killing. The decubate is as dangerous as the incubate. There is generally one for every lesional carrier, in diphtheria, influenza, etc., and the intestinal infections, and although he can and ought to be readily recognized and followed up, yet he often slips away. Under proper epidemiological methods, however, the injury a decubate does can be prevented by the simple and perfectly possible process of maintaining surveillance over him.

The immediately practical points concerning these four diseases are these:

The apparent fact that distributors in scarlet fever and measles are always lesionates permits the handling and control of these diseases on lines closely paralleling those used in diphtheria, but of even more simple and direct application; in diphtheria, cultures are needed to detect the distributor; in scarlet fever and measles, a mere glance at the mucous membranes. If a school has an outbreak of diphtheria, vultures from all present detect the guilty party and negative persons may continue attendance safely. In scarlet fever and measles, examining the children's throats will pick out existing distributors and repeating the examination until the incubation periods have been fulfilled will pick out the new ones as they develop. This method was devised and brought to its highest perfection by Dr. Chesley in his Minnesota work.

Summary.

The modern campaign against infectious diseases recognizes that their solution is the end to be sought; that the control of known foci and the search for unknown foci are obvious necessities to this end; that these foci are simply infected persons (or animals); that the infected persons can be divided for campaign purposes into classes according to their importance, distribution, and ease of recognition; that the factors of relative infectivity of the different classes, on which their relative importance depends, are numerous and intricate, but in sum total indicate the lesional distributor as the first point of attack; that the logical method is to begin with the recognized, reported, frank case but always to extend the investigation include the mild, unrecognized and concealed cases; that beyond these lesionates ,are the incubates, decubates, and external carriers, varying in number and importance, but all presenting ready methods of recognition, if infectious diseases are under proper, constant supervision; and less ready but quite possible methods, even where proper surveillance has not previously been carried out; finally, that the "carrier problem" is but an extension of the already existing problems, adding but little to the difficulties and ready to disappear, with the others, when real control of infection is once established.

CURRENT MEDICAL LITERATURE

MEDICINE.

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

THE TREATMENT OF SLEEPLESSNESS.

Meyers, in the *Deutsche Med. Wochenschrift,* for September, briefly discusses normal sleep and states that it may be divided into two types, "evening sleep" and "morning sleep," according to the time of deepest repose. Adults are usually morning sleepers, healthy children evening sleepers. Lack of sleep during one or the other of these periods should not be regarded as insomnia though it is often so-called by the patient.

Simple sleeplessness is rare, the complaint usually being a symptom of disease. The exceptions to this rule are insomnia following long after influenza and that associated with periodic psychic disturbances.

Sleeplessness in children is usually due to a nervous constitution added to which are either improper conditions for inducing slumber or accidental disturbance of the sleeper. Over-fatigue and intestinal parasites are occasional causes.

The treatment consists in building up the nervous system and in regulation of the patient's life, a measure in which the parents must give co-operation. Hypnotics should be given only as a last resort.

Insomnia in adults is often associated with diseases of the heart, lungs and skin. Painful nervous diseases, of which the rarer are tabes cerebro-spinal lues and brain tumors, often cause sleeplessness as an initial symptom. Particularly in paralytics and in cerebral syphilis and arterial sclerosis is the insomnia apt to appear early.

A second group of insomnias are those associated with toxicoses: alcoholism, morphinism and the abouse of tea, coffee and tobacco.

The most stubborn and protracted cases are in the author's experience due to psychoses, while the commonest in general practice are those accompanying functional neuroses.

The great principle of treatment is the identification and correction of the morbid background upon which the insomnia depends. As specific measures, the proper arrangement of the bed-room to blot out the sleep-destroying suggestions of the day's routine is important.

Baths, hypnosis and electricity are all mentioned before drugs. In the use of the latter the author gives the following suggestions:

1. Begin with the simplest preparations.

2. Vary the drug. One preparation one day, another the next, are more effective than the same drug repeated daily.

3. Combinations of two drugs are often more efficacious than one alone.

4. Give the drug in divided doses, not the entire does at one time. —*Boston Med. and Surg. Jour.*

A CLINICAL STUDY OF A THOUSAND CASES OF ULCER OF THE STOMACH AND DUODENUM.

Julius Friedenwald, M.D., in the *American Journal of Medical Sciences,* August, 1912, gives a careful study of a thousand cases of ulcers of the stomach and duodenum, with the following conclusions:

1. In patients suffering from various gastric disorders 7.8 per cent are affected with ulcers.

2. The largest proportion of ulcers occurs between the ages of 20 and 50.

3. More than twice as many males are affected as females.

4. Anæmia is present in a large portion of the cases of ulcer.

5. A history of over-indulgence in food or drink can be obtained in almost half of the number of cases of ulcer.

6. The greatest proportion of cases of ulcer presents a normal acidity—46 per cent. normal, 30 per cent. hyperacidity, and 23 per cent. a subacidity. Hyperacidity is proportionately more frequently observed in males, and subacidity in females. In recent ulcers, and especially those accompanied by recent hæmorrhage, the acidity is very high, while in chronic forms the acidity is low.

7. The average duration of symptoms is twelve years.

8. Pain occurs in 94 per cent. of cases, and is most frequent in cases associated with a high acidity. Pain appears almost immediately after taking food (gastric ulcer), and at times long after (duodenal ulcer.) In many instances there are one or more periods of intermission of pain as well as of the other symptoms; these periods vary from one to many months.

9. An epigastric tender area is present in at least 90 per cent. of all cases, a dorsal tender area in 32 per cent.

10. Vomiting is a very prominent symptom, occurring in 67 per cent. of cases.

11. Hæmatemesis is present in 22 per cent. of cases, and melæne in 51 per cent. Occult blood is present in 81 per cent. of cases.

12. Of the thousand cases of ulcer, 52 per cent, are duodenal and 40 per cent. gastric.

13. Of the duodenal ulcers, 48 per cent. show normal acidity, 35 per cent, hyperacidity, and 16 per cent. a subacidity. Hyperacidity is more frequently observed in males, and subacidity in females.

14. Pain is present in 96.5 per cent, of duodenal ulcers, and is most prominent in cases with hyperacidity.

15. Distinct periods of intermission from pain and other symptoms, varying from one to twelve months or more, are exceedingly common in this affection.

16. Epigastric tenderness is present in 89 per cent. of the duodenal cases, a tender area to the right or left of the median line in 7 per cent.

17. Vomiting occurs in 21 per cent. of duodenal cases, and is more frequent in those accompanied by high acidity.

18. Melæna occurs in 54 per cent. of duodenal cases, and occult blood is found in the stools in 83 per cent.

19. Seventy-two per cent. of cases of peptic ulcer treated by the Leube method are cured, 66 per cent. by the Lenhartz method, 47 per cent. by the ambulatory treatment administering nitrate of silver, 50 per cent. with sub-nitrate of bismuth, and 40 per cent. with olive oil. Of the cases treated by the Leube method, 74 per cent, remained permanently well, while 77 per cent. of those treated by the Lenhartz method also remained well.

20. Seventy-one per cent. of the cases operated on are cured, 91 per cent. remaining permanently well.

Ninety-one cases were operated on, and 7 died; 10 had perforations, and of these cases 4 died.

BLOOD-PRESSURE IN RENAL DISEASE.

The relation of arterial hypertension to urinary excretion is dealt with by Lawrence (*Amer. Jour. Med. Sci.*, September, 1912). He first gives a general review of the opinions expressed by observers of note upon the subject. Bright's theory of a poison circulating in the blood and stimulating the heart to increased activity and hypertrophy is opposed to Traube's idea that the increased tension and consequent cardiac hypertrophy are due simply to the mechanical effect of the blockage set up by destruction of vessels in the diseased kidneys. The generally accepted view of Cohnheim is a combination of these, whereby the changed character of the blood is supposed to set up contraction of the renal vessels, so that to maintain the circulation through the kidneys an increase of pressure with consequent hypertrophy becomes

necessary. Experimental evidence, however, raises objections to the idea that the increased pressure is of a beneficient purposive nature; thus Senator showed that ligature of the renal artery or extirpation of the kidney does not produce a general rise of pressure, while other observers have found that an artificial increase of the general blood-pressure does not cause an increased blood-flow through these organs nor an increase of the urinary secretion. Clinically, too, it is observed that when the blood-pressure is very high in acute Bright's disease or in uræmia a beneficial effect is produced by administering drugs to lower this. The writer accordingly undertook the observation of 20 patients suffering from cardio-renal disease with a blood-pressure over 180 mm. of mercury so as to determine the effect upon the kidney function of artificially varying the pressure. In all 205 observations were made. Three cases, all of patients in the last stages of cardio-renal disease, showed a lessened urinary output when the blood-pressure was lowered, while on the contrary 12 cases showed an increase of urine and urinary solids when the systolic pressure was lowered by the administration of nitrates. For example, one patient with a systolic pressure of 230 mm. secreted 90 c.c. of urine in one hour, while after lowering of the blood-pressure by sodium nitrate to 190 mm. he secreted 485 c.c. of urine in one hour. The writer, however, came to the general conclusions that (1) no definite relation can be established between changes in the systolic or diastolic pressure *per se* and a change in urinary output; (2) when, however, the pulse pressure increases in the presence of a falling systolic pressuse (*i.e.* when diastolic pressure falls more than systolic pressure) there is a diuresis.—*Edinburgh Med. Jour.*, Nov., 1912.)

THE HISTOLOGIC MECHANICAL LESION OF PERTUSSIS.

The issue of the *Journal of Medical Research* for November, 1912, contains the report of an important piece of research by Drs. F. B. Mallory and A. A. Hornor on the histologic lesion in the respiratory tract in pertussis.

In 1900 Bordet and Gengou discovered in the sputum from cases of pertussis a bacillus, which they obtained in pure culture in 1906, and which has since been generally accepted as the etiologic agent of the disease. Their results were further confirmed in 1908 by Khinenko, who succeeded in producing with this bacillus a similar disease in monkeys and puppies, from whom he obtained the organism again in pure culture, and whose blood gave the characteristic complement-fixation test. None of these investigators, however, had determined the exact lesion produced by the disease on the respiratory mucous membrane .

From a microscopic study of tissues from three patients who died of pertussis, Mallory and Hornor have now been able to demonstrate that this lesion consists in the accumulation of large numbers of bacilli between the cilia of the epithelium lining the trachea and bronchi. The lesion, which is apparently peculiar to the disease, presumably "interferes seriously with the normal ciliary action and thus with the removal of secretion and of inhaled particles, in consequence of which the lungs must be more exposed to infection by inhalation than under ordinary circumstances." This would explain the frequent liability to broncho-pneumonia as a complication, and probably offers a mechanical explanation of the characteristic whoop, a symptom due to spasm from the continuous irritation.

It remains definitely to identify Mallory's bacillus with that of Bordet and Gengou, or to obtain the true causal agent and test it in the same manner. Experiments to this end are now in progress.

The work of Mallory and Hornor, though not yet completed, has nevertheless been already carried sufficiently far to constitute it an original, scientific contribution of great merit and value. Its ultimate demonstration should serve to determine the true etiology and explain the exact mechanical lesion of pertussis, and very likely to suggest means for relieving and controlling the symptoms and effecting the early cure of this very serious disease.—*Boston Med. and Surg. Jour.*, Nov. 21st.

SUBCUTANEOUS PURGATION.

Dr. Paul Barnot, *Paris Medicale*, June 29,, 1912. The indications are: 1. Anything preventing the use of the mouth, as incessant vomiting, lead colic, voluntary poisoning—when both apomorphine and purgatives may be administered hypodermatically—coma, etc. 2. Requirement of two small doses to be efficient by mouth or contraindication to local irritation, as in gastric ulcer, appendicitis, gastro-enteric neoplasm. 3. Need of continuous action, as when the digestive tract has been exhausted by laxatives or by anaesthesia.

He prefers sulphate of magnesium 2—20 cc. of 1 per cent. solution, but for a more marked action, 1—3 cc. of a 10 per cent. solution may be used. In obstipation affecting the colon, peristaltic hormone, cascarin, senna, etc., are preferable. Generally speaking, salines the better absorbed and produce less local oedma if approximately of physiologic strength (isotonic). Zulzer and Dohrn's peristaltic hormone solution is employed in a dose of 10—20 cc. subcutaneously or even intravenously. Senna is used as an infusion, sterilized in an autoclave, 1 cc. of 5 per cent. solution or 5 cc, of 1 per cent. solution. Ext. rhamni

purshianae may be similarly employed. Phenolphthalein is used with a small amount of sodium carbonate.—*Buffalo Med. Jour.*

EXPERIMENTAL GRAVES' DISEASE.

Bircher claims to have elicited typical symptoms in dogs by intraperitoneal implantation of pieces of thymus gland, freshly removed from living patients with enlarged thymus, or from those recently dead during narcosis in whom enlarged thymus was found.—*Buffalo Medical Journal.*

SURGERY

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

A STUDY OF 3,268 VENEREAL PROPHYLACTIC TREATMENTS.

Holcomb, in the January issue of the *U. S. Naval Medical Bulletin*, makes a report and tells us the treatment is as follows:

1. Wash penis, head, shank, and under fernum with 1:5000 bichloride of mercury solution with a cotton sponge.

2. Pass water. Take urethral injection of two per cent. protargol solution and hold to count 60.

3. Rub 50 per cent. calomel ointment well into the foreskin, head, and shank of penis, with particular care about the frenum.

Either side of the frenum is the most frequent site of sores.

Of the 56 cases of gonorrhea occurring in the first 24-hourinterval, 26 were recurrent cases; the remaining 30 were primary infections.

There were 1,385 exposures in which the treatment was taken within the first eight hours, and among these men there were 19 infections, or 1.37 per cent.

There were 731 exposures in which the treatment was taken in the interval of eight or twelve hours after exposure, and among these men there were 25 infections, or 3.41 per cent.

There were 920 exposures in which the treatment was taken in the interval of twelve to twenty-four hours after exposure, and among these men there were 46 infections, or 5 per cent.

In the first instance one man out of every 72.9 contracted an infection; in the second period one man out of every 30.2; in the third instance one man out of every 20.

Since compiling the above table, and to include the months of September and October, the total number of prophylactic treatments have increased from 3,268 to 3,624, with the following results; 1.41 per cent., or one man in 70; 8 to 12-hour period, 892 gave 27 infections, 3.26 per cent., or one man in 30; 12 to 24-hour period, 968 gave 48 infections, or one man in 20.

Gonorrhea was the most frequent disease contracted and had 62 infections to its credit. It is interesting to note the period of incubation in some of these cases. Undoubtedly all cases with an incubation period of over ten days should be thrown out, as there is probably a question of veracity on the part of the man, who to escape punishment refers his exposure to the last time he took the prophylactic treatment. There are nine who come in this class. We have not excluded them in our statistics, but leave the reader to judge.

There are several factors that should be taken into consideration with regard to the statistics of the prophylaxis of this disease.

A large percentage of the men returning from liberty come on board under the influence of intoxicants, and as a consequence are careless in taking the treatment. Some of the men, who have sensitive urethras, complain of pain on taking the injection. Needless to say, under these conditions the full benefit is not obtained.—*Therapeutic Gazette.*

CONSERVATIVE TREATMENT OF GIANT-CELL SARCOMA.

In an important paper (*An. of Surg.*, Aug., 1912) Dr. J. C. Bloodgood states that up to present time there is no proof that giant-cell sarcoma ever metastasizes. Conservative treatment is justifiable. In some localizations of the tumor, curetting should be the operation of choice, but where resection in continuity does not interfere with function it should be given preference. Curetting is justifiable to preserve function, even when conditions suggest a great probability of recurrence; it has succeeded when the entire lower end of the femur was involved. Among 26 cases subjected to curetting there were five recurrences; one has remained well after a second curetting; three after resection, and one after amputation. The author in confident that the number of successful cases of curetting will depend chiefly on the number of attempts. Primary resection was resorted to in 22 cases; one recurred and was cured by amputation. After curetting or resection the wound should be disinfected with pure carbolic acid followed by alcohol or chloride of zinc solution. The operation should be always done, if possible, under an Esmarch. Bone transplantation after curet-

ting, which was first suggested and practised by Bloodgood, will, he thinks, grow in value as we attempt curetting more frequently. It is not necessary to transplant bone at the primary operation unless a single bone like the humerus or femur is divided in its continuity. In simple cases, however, the transplantation may be performed at the same time. It is simpler, when possible, to get the bone for filling the defect by splitting the bone which has been resected. This can be accomplished through a single wound. When this cannot be done on account of the large defect, the upper third of the fibula can be removed without injury to the function of the limb, or large pieces may be chiselled from the tibia without destroying the continuity of the bone. In every case in which the X-ray shows a medullary shadow the urine should be examined for Bence-Jones bodies; the latter indicate the presence of a multiple myeloma or metastatic cancer. A positive diagnosis of either a bone cyst or a giant-cell sarcoma cannot be based upon X-ray examination, but must be made at the exploratory incision. The less experienced surgeon should always aid himself with a frozen section. In the author's opinion the term "giant-cell sarcoma" should be replaced, at least temporarily, by the designation, "giant-cell tumor," as it gives a wrong impression of the malignancy of the lesion. —*International Jour. Surgery.*, Sept., 1912.

PURGATIVES BEFORE OPERATIONS.

Ralph Waldo, M.D., New York, contends that it is a bad practice to give purgatives a day or two before performing a laparotomy. If you do, the patient is apt to suffer severely from gas pains for several days following the operation, and an evacuation from the bowels is difficult to obtain. If the operation is to be performed in the morning, a simple enema should be given the night before, and if during the afternoon, this should be done the same morning.

As soon as a patient has been put to bed after a laparotomy an enema of one pint of hot water (110 F.) containing one ounce of whiskey should be administered. This hastens reaction and prevents the severe thirst that is so apt to follow laparotomies. Hot saline is not absorbed as rapidly as hot sterile water and so should not be used.

If a patient is thirsty after a laparotomy small quantities of water, hot or cold, should be given at short intervals. I usually instruct the nurse to let the patient have all the water she wants in teaspoonful amounts. If a large quantity of water is given at a time, it is apt to cause vomiting. On the other hand, a small quantity at frequent intervals will frequently arrest nausea and vomiting.

Severe vomiting with possibly acute gastric dilation will be very much relieved by washing out the stomach. In fact, this procedure will save many a life.

The too free use of cathartics following a laparotomy usually does more harm than good. A simple enema once or twice a day is usually all that is necessary.

A rectal tube inserted four or five inches once in two hours, and allowed to remain twenty minutes each time, will frequently allow gas to escape and stimulate peristatic action.—*International Journal of Surgery*, Sept., 1912.

TINCTURE OF IODINE DISINFECTION.

Dr. F. Bruning (*Zentbl. f. Chir.*, No. 19, 1912) made the curious observation that while in hundreds of cases in which he had used a 10 per cent, tincture of iodin infection never was observed, he witnessed such an occurrence within eight days after resorting to a 5 per cent. solution. As the resulting infection was of a severe character, he has since returned to the 10 per cent. tincture.

DIVULSION FOR HEMORRHOIDS.

Simple divulsion will sometimes cure a case of hemorrhoids.

Divulsion may be done under local anesthesia by means of the infiltration method with one-fifth of one per cent. cocain.—*Dr Jerome Wagner.*

SURGERY OF THE THYMUS GLAND.

Dr. Charles H. Mayo states that there is a lack of uniformity in opinions as to what constitutes a persistent thymus. It has been shown that a decision should not be made on macroscopic examination alone, but that a microscopic investigation is also essential. The effect of previous infective diseases on the structure of the thymus is an important consideration in determining the normal. It is held that an enlarged thymus is commonly associated with goiter, and that this condition is responsible for many of the post-operative deaths. It has also been stated that many of the deaths from anesthesia are due to an enlarged thymus in association with a "status lymphaticus." From the series of deaths following operation for exophthalmic goiter in the Mayo clinic this view of the importance of the thymus is not supported. In some of the cases the thymic structure proved to be nothing more

than a vestige, and but one case gave evidence that the thymus was a factor in the death. The treatment indicated for an enlarged thymus which is producing symptoms is thymectomy. The operation is not difficult, as a rule, and the only evil consequences which have followed it have been due to sepsis or other complications, and not to the operation itself.

TINCTURE OF IODINE IN SKIN DISINFECTION.

In the April issue of the *Wisconsin Med. Journal,* this subject is dealt with. It points out that this tincture has come into comman use for disinfection of the skin prior to operation, some care and discrimination should be exercised with a view to obviating the unpleasant results from its use.

When a hot, wet dressing is to be used after the operation, the use of the tincture is fraught with danger as a severe dermatitis is very likely to follow even though the iodine has been apparently washed off with alcohol.

The use in the preparation of the patient of a wet dressing or the use of a small amount of water in the form of lather for shaving the part, may result in a dermatitis, unless the skin is thoroughly dehydrated with alcohol, followed by ether, and thoroughly dried before the plication of the iodine.

THE RADICAL OPERATION FOR THE RELIEF OF CANCER OF THE RECTUM AND RECTOSIGMOID.

W. J. Mayo, in an article *Annuals of Surgery,* Aug., 1912, based upon 71 cases submitted to radical operation for cancer of the rectum and rectosigmoid at St. Mary's Hospital from Jan. 1, 1910, to April 1, 1912. These are presented in two groups, those through a perineal or posterior incision in a single stage and those through the abdomen or abdominal combined with perineal or sacral incision in one or two stages. Of the first group there were 27 cases (local operation 2, Harrison-Crepps 5, Quenu-Tuttle 12, and Kraske 8.) Of the second group there were 44 cases (obdiminal and abdomino-perineal in single stage 14, and perliminary colostomy with secondary posterior operation in two stages 30.) The technic of the various operations and their indications are given. In general it may be said that Mayo advocates the perineal or sacral single stage operation in the elderly, the very obese, or the poor surgical risk; and considers the sacral operation, either as a primary operation or as the second stage of the abdomino-

sacral method, the operation of choice for the actual removal of the rectum. In his hands the abdominino-sacral operation in two stages has a mortality of less than half that of the abdomino-perineal operation in one stage.

THE TREATMENT OF INFECTION OF THE URINARY TRACT BY THE BACILLUS COLI.

Infections of the urinary tract by the bacillus coli is by no means rarely met with in clinical medicine and surgery, and, furthermore, it is a state which is met with both in the very young and the very old as well as in middle life. In some instances the symptoms are definitely associated with the urinary organs either because the patient suffers from pain or discomfort or because the presence of pus in the urine is manifest even to the naked eye. In other instances, however, distinct, localized urinary symptoms are absent and may be supplanted by other symptoms which do not seem to be connected with this portion of the body, and only after the urine has been centrifugalized and the deposit examined under the microscope is pus discovered, and the presence of the colon bacillus recognized. It is hardly necessary to add that before considering that the bacillary content of the urine is due to infection every precaution should be taken that the urine is not contaminated by the air, by the external genitals, or by its being received in a vessel which is not surgically clean.

The urinary symptoms, as we have said before, vary materially. In some instances where the kidney is involved the symptoms may be those of an intense, diffuse nephritis which may go on to the development of multiple small abscesses, the infection being unilateral or bilateral. In other instances only the pyelitis is present, and this again may be unilateral and bilateral. When an acute nephritis is present rigors, followed by sharp fever, often develop, and there may be signs of sepsis throughout the general system with partial suppression of urine and a heavy cloud of albumin on boiling. In the cases in which there is pyelitis, with or without the infection of the bladder, the symptoms are usually more moderate, but nevertheless the patient may be very ill. Casts and blood are very rarely found, but albuminuria may be marked. As one would suppose, this form of the disease is rarely fatal. Then again there are cases of chronic infection of the pelvis of the kidney, or of the bladder, in which the symptoms may be very mild, and at times quiescent, with outbreaks of fever and general wretchedness, leading to the supposition that there is a stone in the kidney or in the pelvis of that organ.

In examining the urine in cases of pyelitis and cystitis due to the colon bacillus it is well to remember that although it may be cloudy and opaque it is usually acid and without odor. Its turbidity does not disappear on the addition of acid or on heating, and even filtering does not clarify it, but the centrifuge, as we have already said, may reveal pus cells and the bacilli. As pointed out by Mackey in the *British Medical Journal* of May 4, 1912, the colon bacillus may be so clumped as to cause the microscopist to report that there are masses of granular debris. The exact character of these masses can be determined by using the stains which are employed for the purpose of discovering this bacillus. The treatment of these cases varies somewhat as to whether they are acute, subacute, or chronic. Undoubtedly a good many recover spontaneously, particularly if some other cause for the infection has existed, such as pregnancy or one of the acute infectious diseases. With the termination of pregnancy, or of the acute illness, the vital resistance wins in the battle. So far as drugs are concerned it is well to remember that those which render the urine alkaline are better than those which render it acid, and potassium citrate or bicarbonate may be used for this purpose. As a rule, the ordinary urinary antiseptics fail in colon infection of the genitourinary tract. It is in this class of cases, however, whether they be acute or chronic, that vaccine therapy produces some of its most satisfactory results, either a stock or autogenous vaccine being employed. Where a stock vaccine fails an autogenous vaccine should be resorted to. The injections are commonly given about twice a week and the dosage should be ascending. Mackey starts with 50,000,000 and increases his dose by 50,000,000 at each administration until 600,000,000 are used. Indeed, the ultimate dose may amount to 1,500,000,000.

Concerning operative treatment it is noteworthy that washing out the bladder does not seem to be very wise, since it often changes a pure infection of the bacillus coli into a mixed infection. Irrigation of the pelvis of the kidney is practically impossible for the majority. Where operative interference by the use of the knife is thought of it is well to remember that pregnant women usually recover from this infection when the pregnancy is terminated without operative interference; also, if the infection be severe and involve both kidneys, it will do the patient no good and indeed much harm to diminish her eliminative powers one-half by extirpating one organ. If the ureteral catheter proves that only one kidney is involved, the infection is persistent, and the health of the patient is being undermined, the question of operative interference is, of course, to be considered. Finally it is interesting to note that Mackey emphasizes in concluding his article the fact to which we have already drawn attention—that infection of the urinary tract by

the bacillus coli may present symptoms so little associated with this tract that they may be assigned to other causes. It is well, therefore, to bear this quiescent form of colon bacillus infection in mind.—*Therapeutic Gazette.*

THE ARMY MEDICAL OFFICER IN ANCIENT TIMES.

Sir Henry Morris notes that in times as remote as that of the siege of Troy army doctors were held in the highest esteem, The two sons of Æsculapius, Machaon and Podalirius, were, according to Homer, very important persons in the Greek army. A stir was made in the third great Trojan battle, when Paris, "the spouse of Helen, dealing darts around," struck Machaon in the right shoulder. The wounded surgeon was carried off the battlefield by Nestor in the old warrior king's own chariot; and Achilles, sulking in his ship, having watched the progress of the battle, sent Patroclus to inquire what had happened. It was when describing these events that the poet exclaimed:

> A wise physician skilled our wounds to heal
> Is more than armies to the public weal.

Amidst all the greatest heroes of the Greek army—Agamemnon, Ajax, Ulysses, Achilles, and many other—Machaon was always spoken of as "the great Machaon," as in the following lines from Pope's translation of the *Iliads*

> Of two famed surgeons, Podalirius stands
> This hour surrounded by the Trojan bands;
> And great Machaon wounded in his tent
> Now wants that succor which so oft he lent.

In the sixth and fifth centuries, during the wars of Persia with the Asiatic States, Darius I. (521-485 B.C.), the "King of the whole civilized world," and "the King of Kings," as he called himself, as well as his successors, had Greek physicians and surgeons in their suites. In the accounts of the wars of the Persians against the Greeks we read of the physician Ctesias of Cnidus as being for seventeen years (414-398 B.C.) in the service of the kings of Persia. Ctesias is specially remembered, not as constantly accompanying Artaxerxes II. (404-359 B.C.), but as being a great historian, like Herodotus and Xenophon, of the Persian wars. The Persians, to their honor, conducted their wars with great humanity, and threated their prisoners with kindness, and in many instances even with liberality and favor.

Philip, an Acarnanian, was physician and surgeon to Alexander the Great, and accompanied him through his Asiatic wars. There is an interesting story told of them. When Alexander was lying seriously ill at Tarsus a letter reached him warning him that Philip had been bribed by Darius III. to poison him. Having read the letter, Alexander handed it to Philip to read, and after doing so swallowed a potion which Philip had prepared for him. This proof of the unshaken confidence of the king in his physician was soon followed by Alexander's recovery.

In the second century of the Christian era the illustrious Galen was specially summoned by Marcus Aurelius to be with him in his campaign in Northern Italy.—*The British Medical Journal.*

THE SURGERY OF THE SPLEEN.

By William J. Mayo, M.D., Rochester, Minn.

At the present time we possess a fairly accurate knowledge of the functions of all the abdominal organs with the exception of the liver and the spleen. The liver we know to be essential to life, and to have to do with absorption from the intestinal canal. The spleen is not essential to life. It removes from the blood stream broken down red blood cells, has a digestive function, and is concerned with the metabolism of iron. Its nerve supply is from the splanchnic nervous system, and it probably has an internal secretion like that of the liver. Stimulation of the nerves supplying the spleen produces contraction of the organ. Adrenal secretion acts directly upon the bloodvessels, and furthermore upon the splanchnic nerves, thus influencing widely other abdominal organs. Splenic secretion does not thus affect the splanchnic nerves. The spleen may be affected secondarily by diseases of the liver, also primary disease of the spleen may involve the liver, as in Banti's disease. The common source of blood supply in the celiac axis furthermore indicates the close relationship existing between the liver, stomach, and spleen. In the embryo the liver, spleen, adenoid tissue, and red bone marrow all unite in the formation of the blood cells. The spleen retains this function throughout life. In the fetus the spleen forms both red and white blood cells, but soon after birth is confined exclusively to the formation of the white blood cells. Its chief function, therefore, is twofold, the destruction of the broken down, red blood cells, and the formation of white blood cells.

Pathologically, the spleen may be enlarged, either with an abnormal increase in the white blood cells, as in leuchemia, or with a deficiency of red blood cells, as in splenic anemia. In some cases of malaria, the spleen is found chronically enlarged and containing the malarial organisms. Normally, the spleen is held concealed within the lower chest cavity, and, as a rule, cannot be felt unless abnormally enlarged. When thus enlarged, the spleen margin may be felt beneath the free border of the ribs upon the left side. When thus found enlarged, with an increased number of white blood vessels, leuchemia exists.

Embryologically, the white blood cells are the first formed. Leuchemia may thus be regarded as a reversional disease. Whenever the spleen has been removed in leuchemia, the diagnosis being correct, the patient has eventually succumbed.

Splenic anemia is an entity, presenting an enlarged spleen, diminished red blood cells, and hemaglobin, but an unchanged white cell and differential count, marked decline in general health, and is often associated with hemorrhages, most commonly from the stomach.

Banti's disease may be considered a late form of splenic anemia, showing the additional symptoms of jaundice and ascites. We have done eighteen successful splenectomies for this condition. When both liver and spleen are enlarged, the difficulty in diagnosis arises as to whether the disease present is primarily a cirrhosis of a Banti's disease. Following splenectomy in Banti's disease, pain in the long bones was observed in twenty-five per cent. of the cases, due probably to hyperplasia of the red bone marrow. In two cases we have observed essential hyperplasia of the spleen, without anemia and with fair general health. An enlarged spleen may be observed in tuberculosis, and where this is primary in the spleen, the organ may be removed with success. Ten such cases have been reported, with seven cures.

Where a free mesentery exists, permitting wide range of mobility, the spleen may become enlarged, with which condition anemia may develop. This may be associated with sudden severe atacks of pain, due to torsion of the pedicle, producing splenic crises. Operations aiming at the fixation of such a spleen are less successful than splenectomy. Removal is safe and easy under such conditions. In one case in which fixation was done, the spleen remained where placed, but the pain continued. Cysts of the spleen may occur from an intracapsular hemorrhage. Primary sarcoma of the spleen is rare, as is endothelioma. Of the many cases of endothelioma reported a large proportion are simply hyperprasis. Primary sarcoma, when removed early, may result in cure, one patient operated upon by the writer in 1905 doing well at the

present time. The diagnosis is made late as a rule with the patient beyond the possibility of a complete removal and operative cure. Here ligation of bloodvessels may be employed. In the operative procedure two types of incision are used. For removal of the larger spleens, the vertical incision is employed, dividing the fibres of the left rectus muscle obliquely along the free border of the ribs, and continuing downward as far as necessary along the outer border of the rectus sheath, without regard to the nerve supply. For smaller spleens the transverse incision may be used. The spleen is packed off, and a pedicle clamp is applied to the spleen pedicle three inches from its hilus. The vessels are ligated individually, the spleen is cut away, the clamp removed, and bleeding vessels are ligated if they appear, and the cut end of the pedicle is whipped over, covering this entirely with peritoneaum. A long pedicle prevents the slipping of the ligature, and possible death from hemorrhage in a patient unable to withstand bleeding.

The first death at the Mayo clinic resulted from this occurrence. The ligatures often tend to cut through the friable tissue, hemorrhage following. It is essential in splenectomy that the pedicle ligatures never slip or cut through, and this can be prevented by assuring a sufficiently long pedicle. A gauze pack may be left in the peritoneal cavity if oozing persists, following the separation of adhesions to the diaphragmatic surface. The tail of the pancreas may be removed with the spleen, as has occurred several times, without bad effect, even in one case in which a divided pancreatic duct was evident. In the pedicle accessory spleens or spleniculi may be found, one or more, varying in size from that of a hazelnut to two or three inches in diameter. The clamp, also, may include a fold of the stomach, but without harmful results.

The reported mortality varies from eighteen to twenty-seven per cent. It should not be more than from five to ten per cent. At the Mayo clinic, twenty-seven splenectomies have been done, with two deaths.—*New York Medical Journal.*

The Duchess of Connaught Fund for the extension of the Victorian Order of Nurses reached the splendid sum of $220,000. This amount Miss Pelly has turned over to the trustees of the Victorian Order. This will permit of the sending of these nurses to many remote districts and new portions of the country.

PERSONAL AND NEWS ITEMS

Ontario.

The water investigation has cost Ottawa up to date $27,762. There was a serious outbreak of typhoid fever, and this lead to a searching examination of the city's water supply.

Dr. Hastings, Medical Health Officer for Toronto, investigated the slum districts recently in a number of large American cities, and reports these conditions as very bad.

The Toronto General Hospital has adopted the rule that not more than three visitors will be allowed a patient in any one day, and not more than two at a time. In addition to the visiting hours in the afternoon, close relatives will be permitted to visit from 7 to 7.30 on Tuesday and Friday. Unless in case of emergency, children under 12 cannot visit patients. Day visits are allowed from 3 to 4 on Tuesday, Friday and Sunday.

The Toronto Orthopedic Hospital has made application, through Dr. B. E. McKenzie, to be put on the list of Toronto institutions entitled to receive city aid.

During the month of November there were 412 deaths in Toronto. Their ages were as follows: Under one year, 100; one year, 16; two years, 5; three years, 1; four years, 1; 5 to 9 years, 7; 10 to 14 years, 8; 15 to 19 years, 10; 20 to 29 years, 26; 30 to 39 years, 36; 40 to 49 years, 41; 50 to 59 years, 44; 60 to 69 years, 45; 70 to 79 years, 43, and over 80 years, 21.

During November in Toronto 72 quarts of milk were condemned by the health inspectors. In addition to this, 106 cans and 2,688 bottles were condemned as being dirty.

The Sir Oliver Mowat Memorial Hospital was opened at Kirkleatham, Kingston, on 12th December, by Hon. W. J. Hanna. The hospital is for the treatment of tuberculosis.

Dr. W. E. Olmstead, health officer of Stamford Township, Niagara Falls district, has closed the public school, District No. 6, as the result of scarlet fever.

There have recently been several cases of smallpox in Toronto.

The death rate from tuberculosis last year in London fell 25 per cent. below that of the previous year. This goes to show the value of preventive measures.

Owing the regulations governing the international postal service, the Post Office Department has been compelled to issue an order that stamps used for the purpose of raising money must be put on the back

of the letter and not on the same side as that of the Government stamp.

It has been decided that the Ontario Government will build institutions for defectives where the municipalities agree to maintain these.

A druggist in Toronto was sentenced to ten days in jail for selling "itching powders" and "smelling bombs," the latter containing carbon bisulphide. Such joke selling does not pay.

In the middle of December there were nine cases of smallpox in Berlin, Ont. The case were placed under strict quarantine.

Dr. N. T. McLaurin was operated on for appendicitis three weeks ago. He made an excellent recovery.

Dr. Shirreff, Medical Health Officer for Ottawa, recently handed in his resignation. There has been a considerable amount of criticism arising out of the epidemic of typhoid fever in that city some time ago.

It is evident that the recent Hospital Act is not to be regarded as a dead letter. A private maternity home in Toronto was deprived of its license, owing to an irregularity in the return of the birth of a child.

The committee entrusted with the arrangements of the cricket match played for the benefit of the Hospital for Sick Children, Toronto, has forwarded the secretary of that institution a cheque for $224.12.

Over $1,500 was raised recently by the Wimodausis Missionary Club, of Toronto, at their bi-annual "At Home," held in the Foresters' Hall, 22 College Street. From 2.30 until 10 p.m. a brisk sale of fancy articles, home-made delicacies and candy was carried on. The proceeds are to be devoted to the maintenance of a district nurse, Mrs. Groshart, who is connected with the Hayter Street Mission. Besides this, a part of the funds will be used for various missionary enterprises. The club has been in existence some 12 or 14 years, and is identified with charitable work in the city.

Ottawa is to have a new smallpox hospital on Porter's Island. The hospital is to contain accommodation for sixty patients.

Dr. W. H. Hill, of the Hygienic Institute, of London, is giving instruction on health matters throughout Western Ontario.

There will be an extension added to the hospital at Niagara Falls. The new addition is to be called the Susan Thompson Pavilion, and is to be paid for out of the legacy left by the late Susan Thompson.

Major R. W. Leonard has given $800 for a cottage on the grounds of the Sir Oliver Mowat Hospital for Tuberculosis at Kingston. The cottage will be known as the "Rowland Cottage."

It has been decided to enlarge the Ottawa General Hospital. An appeal will be made for funds. It is estimated that the sum of $200,000 will be required.

The town of Freeport is to have a sanitarium. Already $15,000

has been voted for this purpose. The province assists in the purchase of the site and the maintenance of the patients.

The grand jury of the County of Lincoln made a presentation that the hospital should have made provision for the feeble-minded in order that they be not sent to the jail.

The efforts to raise a large sum as a memorial to King Edward is making good progress. The fund is for the treatment of tuberculosis, and it is hoped soon to reach the million-dollar mark.

An effort is being made in Toronto to oversee the giving of charity so as to prevent overlapping, and also to furnish aid that will best suit the needs of each family.

Dr. W. L. MacBeth, of Toronto, had the unpleasant experience one dark night to run against an elderly man and injure him so seriously that he died. The jury acquitted the doctor and regarded the accident as unavoidable. Dr. MacBeth did everything in his power for the injured man.

Dr. John L. Davison's many friends were more than delighted at his miraculous escape from a fearful death when his car almost plunged over the edge of one of the bridges crossing a Rosedale ravine.

There has been some more cases of smallpox in Toronto recently.

In Hamilton during the recent smallpox scare 5,000 persons were vaccinated by the health officers. There were 56 cases of smallpox.

The Million Dollar Fund for the National Sanitarium work is growing by leaps and bounds. It is fully expected that the sum aimed at will be forthcoming.

Two new wings have been added to the Victoria Hospital, London, and an addition will soon be made to St. Joseph's Hospital of the same city.

The grand jury of Lincoln County a short time ago made a strong presentation that feeble-minded persons should be sent to hospitals and not to jails.

It is stated that the careful milk inspection in Toronto is saving to the people $200,000 a year, by cutting out the water that was formerly added.

The new Act is doing good work in Ontario by bringing infant homes under careful inspection. There is a marked reduction in the death rate.

Dr. Wm. Spankie, who has been Public School Inspector for 35 years in Frontenac, was presented on 21st December, by the teachers of the county, with a gold watch.

The Ottawa city council recently adopted a resolution asking the Federal Government to establish a Department of Health. This arose out of the epidemic of typhoid fever which the city had gone through.

In 1912 the death rate in Toronto from acute infectious diseases was 85 per 100,000. In 1911 it was 102.

During the past year 115 cases of infectious diseases were reported in Brantford. There were more cases of tuberculosis and typhoid fever than for the year previous.

The Chatham Board of Health decided that houses where there had been infection should be disinfected at the public cost.

In Ontario for October there were reported 798 cases of contagious diseases, with 134 deaths.

During the past year in the Ottawa Maternity Hospital, 403 patients were admitted. There was a credit balance of $267. A new wing will be added, at a cost of $75,000.

The Kingston General Hospital is adding a new wing, to be called the Empire wing.

During the past year the Guelph General Hospital gave treatment to 1,100 patients.

The Sarnia General Hospital last year cared for 573 patients. There were 88 cases of typhoid fever, and 132 surgical cases.

Last year the Hamilton Hospital cared for 4,200 patients. The total expenses were $104,318, and the daily cost was $1.26. It is proposed to advance the rate on city patients from 70 cents to $1 a day.

The County of Essex is to have a sanitarium for tuberculosis at Union. Plans have been approved of.

Quebec.

At a recent meeting of the Corporation of McGill University, that body discussed a matter which may have an important bearing upon the development of professional education on this continent. The movement to establish a medical course for women students of the University, which was broached recently in the form of a petition to the corporation, has been gaining ground steadily. This movement is a characteristic expression of what has been in progress for several years.

Dr. F. X. Plouffe, of Montreal, has been acquitted of the charge of performing a criminal operation.

The Jewish people of Montreal propose erecting a hospital in the eastern part of the city. Though conducted by the Jews and with a full Jewish staff, all cases of patients will be admitted.

There is a movement on foot to establish in Quebec City a hospital for the treatment of tuberculosis. It has been promised support in a number of influential quarters. Hopes are entertained for an achievement of the desired institution.

At the quarantine station at Grosse Isle, during one year there

were quarantined 367 vessels. The total number of persons examined was 193,313. Six vessels had on board smallpox, two had cholera, and one had typhus fever. There were transferred from the vessels to the hospital 102 patients. There were 7 deaths and 2 births.

The old Foundling and Baby Hospital in Montreal has became too small. A new one is to be erected with one hundred cots, near the grounds of McGill University.

On 13th November, Montreal had 22 cases of smallpox in the hospital. None of the cases had been vaccinated. Seven new cases came into the hospital in one day.

The Society for the Prevention of Cruelty to Women and Children, of Montreal, makes the statement that in some baby homes, or "farms" in that city, the death rate is as high as 97 per cent. Children are received to be taken care of, but are neglected. An effort is being made to have these homes brought under medical inspection.

The annual report of the Hospital for Incurables at Notre Dame de Grace showed an income of $74,388, and an expenditure of $71,059. There were 357 admissions and 204 deaths during the year.

In a number of places in the province there are cases of smallpox. The Boards of Health are taking active steps to push preventive measures.

The Salvation Army in Montreal is going to erect a hospital to be called after General Booth.

An influential committee have undertaken to raise $700,000 for the Notre Dame Hospital, of Montreal. This will free the hospital of debt.

The third annual report of the Royal Edward Institute for the Treatment of Tuberculosis showed an income of $11,892, and an expenditure of $12,285.

Ste. Justine Hospital for Children, Montreal, is to be enlarged by adding 600 beds. It now has accommodation for 406.

The present Foundling Hospital, of Montreal, is unable to care for all the children seeking admission. Last year nearly 400 cases were refused. A new hospital is needed and an effort is now being made to secure one.

Maritime Provinces.

The Medical Associations of the Maritime Provinces are doing good work. Their meetings are held regularly and well attended.

A sanitarium is to be established in Cape Breton for the treatment of tuberculosis. The various cities and towns are contributing to the fund required.

A hospital costing $12,000 has been opened at Summerside, in Prince County, P.E.I.

A hospital will be opened soon at Mud Lake, Hamilton Inlet, Newfoundland. Dr. Wakefield, of the Grenfell Mission, will be in charge.

Extensive improvements will be made to the General Hospital in St. John's, Newfoundland.

At a recent meeting of the Medical Board for New Brunswick the subject of the free distribution of antitoxin was discussed, but no decision was arrived at.

Infectious diseases in St. John, N.B., have declined in number very markedly as compared with a year ago.

In Amherst, N.S., 1,217 school children have been examined and 889 of these have been referred to their physician.

St. John, N.B., last year had 89 deaths from tuberculosis. This is fewer than for the year previous.

The Medical Association of Kentville, N.S., passed a resolution at its meeting urging that the Victoria Hospital be enlarged, and accommodation furnished for tubercular patients.

The Halifax branch of the British Medical Association has ceased to exist, and a new local association has been formed in its place.

Western Provinces.

There will be erected in Moose Jaw, Sask., a new hospital, at a cost of $300,000.

In many cities of the western provinces, typhoid fever has been very prevalent. Pouring sewage into the rivers, and then drinking the water is the real cause.

At Lamont(in Alberta, a hospital was opened a short time ago by Hon. Duncan Marshall, Minister of Agriculture. The hospital can take care of 20 patients, and cost a little over $10,000.

A new hospital will be erected at Penticton, B.C., in the High River district.

The hospital at Chilliwack, B.C., had a successful year. There was a credit balance of $353.

The new St. Paul's Hospital, now in course of erection at Saskatoon, will be a four-storey building, and afford accommodation for 75 patients. The old hospital will become the nurses' home.

Edson, in Alberta, is discussing the need for a new hospital. The present building has accommodation for only five patients.

Funds are now being collected for a hospital at Ganges, on Salt Spring Island, B.C.

The hospital at Humboldt, Sask., was opened a short time ago. It cost $35,000.

Medicine Hat is to have a Roman Catholic Hospital, and the site has been secured for it.

The hospital buildings, which are to be erected at Saskatoon next year, are estimated to cost about $400,000.

Dr. G. A. B. Hall, Medical Health Officer for Victoria, B.C., gives a good account of the health of the city.

It is proposed to organize a sanitary association in each of the provinces of Manitoba, Saskatchewan and Alberta.

Dr. Beeman has been appointed Medical Health Officer for Magrath, Alberta.

Dr. J. P. Cade has been appointed Medical Health Officer for Prince Rupert, B.C.

New hospitals are to be erected at Sedgewick, Alta., and at Davidson, Sask.

The officers of the Manitoba Medical Council are; President, Dr. M. Charles, Manitou; vice-president, Dr. E. L. Pope, Winnipeg; treasurer, Dr. W. A. Gardner, Winnipeg; registrar, Dr. J. S. Gray. The University of Manitoba is represented by Drs. Thornton, McCalman, J. S. Gray and W. A. Gardner. Drs. Thornton and Gray were chosen as the delegates on the Dominion Medical Council.

The Vancouver General Hospital went behind last year. There was a defiicit of over $15,000. The city and the Government grant 45 cents a day each per patient. The operating expenses for the year averaged $2.35 per patient daily. The hospital collected on an average 71 cents a day from patients. This would leave a daily deficit of 74 cents per patient. It is thought by the management that larger grants should be asked from the city and the Government.

Rosetown, in Manitoba, is to have a hospital. It is much needed.

The General Hospital of Winnipeg has a daily deficit of $100. An appeal is being made for support from the citizens.

It is probable that a new addition will be made to the hospital at Wakan, in Saskatchewan.

The hospital at Prince Albert, Sask., has a new set of officials and nurses. Miss Shaw, of Hamilton, is in charge.

Canora is to have a hospital. Dr. A. S. Grant, of Peterborough, Ont, has given the money.

There will be a hospital erected at Bow Island, Alta.

The Edmonton city council has made a grant of $225,000 to the Royal Alexandra Hospital, and one of $150,000 to the South Side Hospital.

The Isolation Hospital in Vancouver has been completed, at a cost of $75,000.

The daily cost of patients in the Vancouver Hospital was $1.94. South Vancouver, Point Grey and Burnaby are being asked to aid in the support of the hospital, as many patients come from these places.

Dr. E. C. Arthur has advised that the Isolation Hospital at Nelson, B.C., be pulled down and a more modern and commodious one erected.

More hospital accommodation is needed at Victoria, B.C. A considerable sum of money has been secured for this purpose.

The General Hospital at Nicola, B.C., has done good work during its first year of operation.

A number of cases of bubonic plague were recently reported in Popovka, Southern Russia.

Dr. H. W. Moorehouse, of Danville, Ill., chief surgeon to Wabash Railway System, died 20th December.

The British Medical Association has rejected the Government's final concessions. The Government claims that it has a sufficient number of medical practitioners who will accept its terms to enable the Act to go into operation. The Government's offer was $1.80 per head, while the medical profession demanded $2.04.

From Abroad.

The royal assent has been given to a bill to curtail the evils of the white slave traffic. The bill permits a constable to arrest, without a warrant, a suspected person. Procurers may be imprisoned and also flogged. A number of noted procurers have fled from London.

Recent researches go to show that the belief that Jews are less subject to tuberculosis than other denominations is correct. The ratio is about 35 to 40. While this is true, they are more liable to other respiratory diseases.

Dr. John B. Deaver, of Philadelphia, advocates draining the gall bladder as a means of dealing with typhoid cariers. This might be effective treatment, but the difficulty arises of securing the consent of these carriers to such an operation.

A section of the Royal Society of Medicine, London, has been inaugurated for the study of medical history.

On Friday, Nov. 29, Dr. Elie Metchnikoff, of the Pasteur Institute, Paris, delivered the Lady Priestley lecture on "The Warfare Against Tubercle," before the Royal Society of Medicine, in London.

The will of the late Dr. Arthur Tracy Cabot, of Boston, which was

filed on Nov. 10, in the Norfolk registry of probate at Dedham, Mass., contains bequests of $20,000 to the Massachusetts General Hospital, and $20,000 to the town of Canton, Mass., for the procuring or maintenance of a hospital there. It also provides that the income of $50,000 from a fund of $100,000 given to the president and fellows of Harvard College shall be used for the general purposes of the Harvard Medical School.

It is announced that the new Mikado of Japan has conferred the Imperial Order of the Sacred Treasure of the Third Class upon Dr. John C. H. Berry, of Worcester, Mass., who, as a medical missionary, established the first modern Japanese hospital at Kioto, and made other "signal contributions towards the improvement of medical and sanitary organizations" in Japan.

A bronze tablet in memory of Dr. D. B. St. John Roosa has been recently unveiled at the Post-Graduate Medical School and Hospital, in New York, of which he was president from its foundation in 1881 until his death in 1908.

Dr. Arthur Tracy Cabot, of Boston, a noted genito-urinary surgeon, and successor to Dr. H. J. Bigelow, died recently.

Dr. Robert Fletcher, principal assistant librarian at the Surgeon-General's Office, Washington, died Nov. 8th, 1912. He was born in Bristol, England, in 1823.

Prof. M. J. Rosenau has come to the conclusion, after careful study, that infection of poliomyelitis is carried from the sick to the well by means of the bite of the common stable fly. He succeeded in infecting healthy monkeys by means of these flies.

The success of the oatmeal diet has been one of the greatest puzzles in diabetes. The theory has been advanced that oatmeal starch has a distinctive composition which allows of its absorption in a way different from other carbohydrates. Another suggestion is that oatmeal contains some substance which favors carbohydrate oxidation either through stimulation of internal secretion or through an action like that of glutaric acid.

Dr. James W. McLane, formerly one of the most prominent obstetricians in New York, but for several years retired from active practice, died at his home in this city on Monday of this week. He was born in New York, August 19, 1839; was graduated in arts from Yale in 1861, and in medicine from the College of Physicians and Surgeons in 1864.

By concerted action in seventy-two cities in twenty-two states, post office inspectors on November 20 arrested or prepared to arrest 175 men and women charged with having used the mails in the sale of illegal medical and sugical devices. The raids, which were ordered by

the Postmaster-General after six months' preparatory work, embraced alleged quack doctors, druggists, and proprietors of so-called medical establishments. Two arrests were made in New York. The raid, which as a whole was the largest ever made in the history of the Post Office Department, furnished an excellent example of the power which can be exercised through the postal laws to wipe out illegal practices apparently beyond the control of the State authorities.

Carcinoma kills nearly as many people in Michigan as tuberculosis. Dr. Robert L. Dixon, secretary of the State Board of Health, has just compiled at set of figures for the first eight months of 1912, which show the average death rate per one hundred thousand population from these two diseases. The record accords tuberculosis 135, while cancer is a close second with a rate of 128. Prior to the age of thirty more women die of tuberculosis than men; after thirty more men die of this disease than women.

The Women's National Health Association obtained a grant of £25,000 out of the sum of £145,000 which is Ireland's share of the £1,500,000 voted to the United Kingdom for the erection of sanitariums. Two sanitariums have already been established with this money—Peamount and Rossclare.

The twenty-seventh annual report of the National Association for Supplying Female Medical Aid to the Women of India, compiled by the honorary secretary, Lieutenant-Colonel F. O'Kinealy, I.M.S., sets forth the transactions of the year 1911. It gives evidence of continued progress of this excellent movement.

Edinburgh has lost a striking and delightful personality by the death of Dr. David Menzies. He had been suffering fro nearly a year from cardiac disease, aggravated, if not brought on, by excessive devotion to his work; though he entirely appreciated its serious nature, the end came rather unexpectedly on November 8th. An Edinburgh man by birth, Dr. Menzies received his professional education at the medical school of the university, and became M.B., C.M., in 1876, and F.R.C.S. Edin. some three years later.

Citric acid, according to Hemenway, has been found of great value in cases of threatened eclampsia, with marked edema and albuminuria. Following combination advised; Acidi citrici, 30 Gm. (7½ drams); liquoris sodii phosphatis comp., 80 Gm. (2½ ounces); water, 40 Gm. (10 drams); 1 dram in a full glass of water every three hours; later, twenty minutes before each mean and at bedtime.

It is announced that the Retzius gold medal has been awarded by the Swedish Medical Society to Dr. John Newport Langley, professor of physiology at the University of Cambridge, England, for his work on the nervous system.

Dr. Edward Curtis, of New York, emeritus professor of materia medica and therapeutics in the College of Physicians and Surgeons, died at his home on November 28. Dr. Curtis was born in Providence, R.I., in 1838, and was graduated from Harvard College in 1859. He then began his medical studies at the College of Physicians and Surgeons, forsaking them to enlist in the United States Army on the outbreak of the war. He was finally graduated from the Medical Department of the University of Pennsylvania in 1864, and was appointed to the Army Medical Museum, where he developed the art of photomicrography. In 1870 he returned to New York and in 1878 was made professor of materia medica in the College of Physicians and Surgeons, an office which he relinquished in 1886 when he was made emeritus professor. From 1878 to 1904 he served as medical director of the Equitable Assurance Society of New York. He was the author of many scientific treatises and a member of the American Association for the Advancement of Science, and the New York State and County Medical Societies. Together with Dr. Woodward, of the Surgeon-General's staff, he performed the autopsy on President Lincoln in 1865.—*Medical Record.*

In Australia the same problems are up for solution as in Canada. The mosquito is the cause of much disease and is being destroyed by putting coal oil and tar in the breeding waters. Tuberculosis is another life topic, and headway is being made. Then the pure food question has had its share of attention with good results. Now the universities are being put on a better footing.

Judge Backus, of Milwaukee, who has the trial of Schrank, who attempted to assassinate Ex-President Roosevelt, has appointed five Milwaukee alienists to determine Schrank's mental condition. These alienists were sworn in as part of the court. This course has been adopted to avoid contradictory medical testimony by an array of doctors on both sides.

In England doctors reporting communicable diseases are paid two shillings and sixpence for every case. This has the effect of securing better results and a much more complete return of contagious diseases than was the case when no remuneration was accorded the reporting doctor.

Laws for the sterilization of criminals exist in eight States: Washington, New York, Indiana, New Jersay, and four others. In Indiana over 800 persons have been operated upon.

The medical profession keep in mind the International Medical Congress in London from 6th to 13th August.

OBITUARY

J. T. REID.

Dr. J. T. Reid, formerly of Calgary, and at one time a school principal in Winnipeg, died on 11th December, 1912, in the hospital there. He died as the result of an overdose of morphine, which it is thought was taken by the doctor by mistake.

W. B. QUARRY.

Dr. Quarry, who was a well-known practitioner of Windsor, Ont., died on 12th December, 1912. He was born in Ireland 82 years ago. He leaves his widow and a son and daughter. He was interred at Mount Carmel. He practised at Sandwich for 30 years.

WILLIAM McLEOD.

Dr. W. McLeod, of Saskatoon, was instantly killed by a fall from his horse.

WILLIAM J. ROE.

Dr. Roe died on 1st November, in Georgetown, where he had practised for over 40 years. He was educated in part in Dublin, and Rolph's School, Toronto.

J. J. ANDERSON.

Dr. Anderson, of Brandon, Man., died there in his 52nd year. He was at one time superintendent of the asylum at Brandon, but resigned this position. He went to Brandon in his boyhood from Ontario.

ANTOINE LONGPRE.

Dr. Longpre, of Papineauville, was in his 81st year at the time of his death. He studied in Montreal and New York, and graduated in 1857. He was well known in his own town, where he had practised for more than 50 years.

E. H. ROULEAU.

Dr. Rouleau, of Calgary, died after a short illness. He had acted as Belgian Consul for 15 years. He was born at the Isle of Verte, in Quebec, in 1843. He was a graduate of Laval.

SYDNEY WRIGHT.

Dr. Wright, of St. Thomas, Ont., died at Peru, Indiana, from an attack of heart failure.

R. H. WINTER.

Dr. Winter, a resident of Lambeth, Ont., died at Queen Charlotte, B.C., in September last. He was in charge of the Government hospital. His death resulted from an accident.

EDWIN F. JEFFRIES.

Dr. Jeffries was one of the staff of the Hospital for the Insane at Hamilton. He died of typhoid fever in his 26th year. He was a native of London, Ontario.

H. G. STOREY.

Dr. Storey had practised in Blenheim, Ontario, for 18 years. His death occurred on 5th November, in his 47th year. He was a graduate of the University of Toronto. He took an active interest in Masonry and politics.

PETER MacLAREN.

Dr. Peter MacLaren, for many years a widely known medical man of Bruce County, practising in Paisley, died two weeks ago, following an operation for appendicitis. Dr. MacLaren, for several years past lived retired at the home of Mr. W. A. Hargreave, at 108 Albany Ave., Toronto. Originally he belonged to Perth.

The Caledonian Society at Paisley and St. Paul's Presbyterian church, Toronto, numbered him among their membership. His wife died a year and a half ago.

BOOK REVIEWS

OBSTETRICS.

The practice of obstetrics, designed for the use of students and practitioners of medicine, by J. Clifton Edgar, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College; visiting obstetrician to Bellevue Hospital, New York City; surgeon to the Manhattan Maternity and Dispensary; consulting obstetrician to the New York Maternity and Jewish Maternity Hospitals. Fourth edition, revised, twenty-second thousand, with 1,316 illustrations, including five colored plates and 36 figures printed in colors. Philadelphia: P. Blakiston's Sons & Company, 1012 Walnut Street, 1913. Price, in cloth, $6.00.

This superb volume of nearly eleven hundred pages is not unduly thick, as very excellent but thin quality of paper has been chosen. The publishers have spared no effort to make this edition as fine a specimen of the book-making art as it is possible to turn out. The paper is of superior quality. The type is clear and of excellent face. The illustrations are well executed and printed, and the binding is substantial and durable. The lover of a fine book would say that this meets all the conditions of critical taste.

But the important part of every book is the text. Professor Edgar is well-known as an author and teacher on the subject of obstetrics. The author states that the work has undergone a thorough revision. The sections on pathology have been largely rewritten.. New matter has been added on blood-pressure, sepsis, anaesthesia, vaccine and serum treatment, pelvimentry, funnel pelvis, haemorrhage in the newly born, pubiotomy, extra perritoneal Caesarean section, and the Momburg belt for haemorrhage.. Fifty-one of the illustrations are new. The author follows an orderly and scientific method of division of the subject. The physiology of the female genital organs is followed by the physiology of pregnancy, and this in turn by the pathology of pregnancy. Next is taken up the physiology of labor, and then the pathology of labor, divided into a series of sub-sections. The physiology and pathology of the puerperium are then discussed fully. This is followed by the pathology of the newly born. The book ends with a complete account of obstetric operations. It would not be possible to go over all the many valuable points raised by the author. On the subject of vaccines in the treatment of puerperal sepsis, he does not speak highly. On the other hand, he recommends the use of polyvalent serum. He condemns the use of the curette in streptococcic infection, as it only breaks down the defence tissue and aids the inroad of further infection. In cases of ordinary sapraemia from the retention of some decomposing tissue the curette is useful. Turn to any portion of the book and sound advice

meets the eye of the reader. Operations are explained step by step and in clear language. This volume would make an excellent addition to any doctor's library. It would be fortunate both for the profession and parturient women if the teachings of such a work became the rule of general practice. It is a repository of knowledge on the subject of obstetrics.

INTERNAL SECRETORY ORGANS.

The Internal Secretory Organs, Their Physiology and Pahtology, by Professor Dr. Arthur Biedl, Vienna, with an introductory preface by Leonard Williams, M.D., M.R.C.P., physician to the French Hospital, assistant physician to the Metropolitan Hospital. Translated by Linda Forster. London: John Bale, Sons & Danielsson, Oxford House, 83-91 Great Titchfield Street, Oxford Street, W., 1912. Price, 21s net.

It is only a few years ago when but little was known definitely about the important functions of the thyroid and thymus glands, the suprarenals, the pituitary body, the pineal gland, the active secretions from the genital organs, the work of the pancreas, and the functions of the kidneys, other than the urinary one. But a vast amount of work has been done on these organs, both clinically and pathologically; and a host of conscientious doctors have been carrying on experiments in the laboratory. From all these sources medical science of to-day has been greatly enriched. This book of Professor Biedl lays on the table of the reader what is known up to date on the subject of the internal secretions. This work is technical and scientific, yet it is written in a lucid style, and the translation merits much praise. It is free but accurate.

The publishers have long been known as those who get out their books in attractive form, and they have lived up to this reputation in this instance. In every detail of a pleasant book to read we can recommend this volume.

The author opens up with a discussion of the internal secretions on their physiological value. In this discussion he goes into the question of the hormones. One set of these is anabolic, or assist in building up tissues; the other set is katabolic, or such as tend to break down tissue. The term "hormone" is derived from the Greek, and signifies to stimulate or awaken. The author is particularly clear on the influence of the parathyroids over muscular action, and goes fully into the effect of the removal of these glands in causing tetany. But these glands have far-reaching influences on metabolism, in addition to that of causing tetany by their removal.

Under the head of the thyroid gland attention is paid to the interaction of this gland and the pancreas. The thyroid has an influence on the metabolism of carbohydrates. The removal of the thyroid also

reduces the metabolism of fats. In the same way the metabolism of salts is lowered. The author discusses carefully the conditions arising from athyrosis, hypothyrosis, and hyperthyrosis. This portion of the book is most interesting. The table of comparison between cachexia thyropria and grace's disease brings out in clear light the effects of loss and excess of the active secretion of the thyroid gland.

Some interesting comments are given on the thymus gland, and especially on the condition known as the status thymicolymphaticus.

A large portion of the book is devoted to the study of the suprarenal glands. This is reasonable, as these are now known to be extremely important in the animal economy. One of the noteworthy features of the discussions on the suprorenal active principle is its power to raise blood pressure; and the reverse, its absence permits of its fall.

The remarks on the pituitary filand, or the hypophysis cerebri, are noteworthy. It has now been discovered that this gland plays a very important part in the vital functions of the body, and that it is necessary to the life of the animal. It is the anterior lobe that seems to possess this quality. When the anterior lobe is partially removed the animal lives, but there are disturbances of metabolism and derangement of the activity of the sexual organs. When the suppression in function occurs in young animals there is very marked backwardness in growth and development. The posterior lobe may be removed without this result.

Pituitary gland extract has the effect of increasing blood pressure similarly to that of adrenalin. If further injections be given there will be a fall in blood pressure due to a depressant action.

In the disease known as acromegaly there are some changes found in the hypophysis. These are increased volume, selerosis in its connective, and various neoplasms.

Much valuable work is done on the secretions of the generative glands; but we pass on to the pancreas and diabetes. On this subject he sums up the case thus: "The comparative scarcity of instances in which diabetes is accompanied by serious anatomical lesions of the pancreas, and the enormous preponderance of cases in which no anatomical pancreatic lesion is demonstrable, together with the doctrine that serious disease of the pancreas may be unaccompanied by diabetes, are weighty arguments against the pancreas as a constant factor in the pathogenesis of clinical diabetes." But, again, "the chemistry of the pancreas may be altered without demonstrable marphological changes." This subject requires further study. This book should receive much attention from the medical profession.

FOOD.

Food in Health and Disease, by Nathan S. Davis, Jr., A.M., M.D., Professor of the Principles and Practice of, in Northwestern University Medical School, physician to St. Luke's Hospital, Mercy Hospital and Wesley Hospital, Chicago; member American Medical Association, American Climatological Association, etc. Second edition. Phladelphia: P. Blakiston's Son & Company, 1012 Walnut Street, 1912. Price, $3.50.

This valuable work on Food in Health and Disease has now appeared in a second edition. We welcome it, as it contains a sound exposition of the present-day views on this important subject. We can very heartily recommend this volume. Its advice can be safely followed. It is full of most important information.

ILLINOIS CHARITIES COMMISSION.

Second Annual Report of the States Charities Commission to the Hon. Charles S. Deneen, Governor of Illinois. Springfield, Illinois, December 31, 1911. Springfield, Ill.: Illinois State Journal Co., State Printers, 1912.

This volume contains a good deal of useful information on the subjects of public health, hospitals, jails and kindred topics. It will furnish useful reading to all who are in any way interested in such work. We can advise our health authorities to consult this report.

THE PREVENTION OF TUBERCULOSIS.

The Canadian Association for the Prevention of Tuberculosis. Twelfth Annual Report, with transactions of the annual meeting held in Toronto, Ontario, May 20th and 21st, 1912. Toronto: William Briggs, 1912.

Time flies. It does not seem long since the Association for the Prevention of Tuberculosis was formed, and now we have before us the 12th annual report. This organization has done great service to the country and should receive every possible co-operation. We hope that very many will study this report.

SEA-FISHERIES OF CANADA.

Commission of Conservation, Canada, Hon. Clifford Sifton, chairman; James White, secretary, 1912. Printed by the Mortimer Company, Ottawa.

The Commission of Conservation is doing useful work. It has now issued many reports on various resources of Canada. This one is interesting and throws much light upon one of the great industries and sources of Canadian wealth.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and L. F. Appleman, M.D. December, 1912. Philadelphia and New York: Lea and Febiger. Six dollars per annum.

The contributors to this volume are Joseph C. Bloodgood, M.D.; Charles W. Bonney, M.D.; John Rose Bradford, M.D., F.R.C.S.; Edward H. Goodman, M.D., and H. R. M. Landis, M.D. The subjects dealt with are: Diseases of the Digestive Tract and Allied Organs, Diseases of the Kidneys, Genito-urinary Diseases, Surgery of the Extremitis, Therapeutic Referendum, etc. There is ample material here for a good deal of careful study. The one who reads this volume will not fail to be greatly benefited by it.

PROFITABLE PRACTICE.

Building a Profitable Practice, being a Text Book on Medical Economics, by Thomas F. Reilley, M.S., M.D., Professor of Applied Therapeutics, Medical Department, Fordham University, New York City. Philadelphia and London: J. B. Lippincott Company. Price, $2.50. Montreal: Charles Roberts.

This book is so interesting and full of good things that when once one begins to read it he keeps on reading. The author has seen the weak points in the conduct of the practice of many physicians, and has dealt with these in a most judicious manner. This volume would prove an inestimable boon to most young practitioners as a guide in the building up of their practices. We can recommend it in the highest words.

NAPOLEON'S ILLNESS AN DDEATH.

The Illness and Death of Napoleon Bonaparte, a Medical Criticism, by Arnold Chaplin, M.D., F.R.C.P. With three illustrations. London:Hurschfeld Brothers, Limited, 263 High Hilborn, W.C.; Glasgow: Alexander Steinhouse, 40 University Ave., 1913. Price, 2s 6d.

The author reviews the various accounts of the last illness of Napoleon and somes to the conclusion that the case was one of chronic gastric ulcer, on which malignant disease finally appeared. The book is well written and is worthy of a wide sale.

MISCELLANEOUS MEDICAL NEWS

MEDICAL INSPECTION OF TORONTO SCHOOLS!

That Toronto's Public school medical inspection system is doing rather thorough work is indicated by the report for November, as published recently.

The figures tell their own story:

Total number of exclusions for contagious disease, 173.
Total number of exclusions for exposure to contagious disease, 128.
Total number of exclusions for suspected contagious disease, 43.
Total number of exclusions, 344.
Number of examinations of school buildings, 3.
Number of consultations with parents, 91.
Number of cultures taken, 96.
Number of home visits, 118.
Number of school visits, 1,432.

The dental inspector took 49 teeth out of the mouths of 23 children at Jesse Ketchum school.

The school nurses made twice as many visits to houses as to the schools. They visited houses 3,031 times, to 1,509 school visits. They excluded 63 pupils from school as suspects, and gave a total of 4,158 treatments.

BIRTH RATE.

People thought that Germany had but to sit tight and hold on and France, in perhaps a couple of generations, would cease to be a menace. The falling birth rate in France was expected to take care of any danger from her.

But the official statistics of the medical department of the Prussian Ministry of the Interior that have just been made public shed an entirely new and alarming light on the matter as far as Germany is concerned. So much so that the Government has decreed a thorough investigation into the causes that are responsible for the decline in the birth rate and the methods by which it may be restored to normality.

The figures made public show that while in 1875 the births in the German Empire were 42.6 for every 1,000 of the population, in 1910 they had fallen to barely 31 per 1,000. That the conditions were still worse in 1911 may be inferred from the fact that in that year in the Kingdom of Prussia there were 34,000 less births than in 1910, 65,000 less than in 1909, and 86,000 less than in 1908.

Last year the deaths exceeded the births in France by almost 35,000. The total number of births in 1911 was 263,000 less than the usual number of births during 1910 and 1911 the birth rate came perilously close to the death rate, and it is said on good authority that the current year shows no improvement, but rather the reverse in the condition. From 1876 to 1885 the births to 1,000 of population were 34.2; from 1886 to 1895, 30.9; from 1906 to 1911, 28.6—a sufficiently depressing showing.

The birth rates for the years 1901 and 1911 respectively for the countries named follow, the figures emphasizing the scope and increase of the evil: Holland, 31.1-30.5; Belgium, 31.7-28.8; Norway, 31.0-29.2; Sweden, 29.7-26.4; Finland, 36.1-31.0; Austria, 38.4-36.5.

It may be said that since 1880 the increase to the thousand of population in all the States east of the Missouri, and especially in Connecticut, Massachusetts, New Hampshire and Maine, has declined steadily.

CONTAGIOUS DISEASES IN ONTARIO.

Despite the improvement in the reporting of tuberculosis as a result of the new regulations, officials of the Provincial Health Department are still far from satisfied with the manner in which the extent of the disease is being recorded. What percentage of tuberculosis cases is never heard of can hardly be determined, but investigation shows that in the weekly reports from local boards only forty per cent. of the deaths from the disease are the subject of notification.

The month of November was not as satisfactory, so far as the public health is concerned, as November of last year. Typhoid and diphtheria showed an increase, and the total number of communicable disease cases reported showed an increase of nearly 150. The returns show:—

	—1912—		—1911—	
	Cases.	Deaths	Cases.	Deaths.
Smallpox	33	0	28	0
Scarlet fever	165	12	188	9
Diphtheria	287	13	244	20
Measles	91	1	108	2
Whooping cough	44	2	28	2
Typhoid	142	27	103	13
Tuberculosis	148	80	72	49
Infantile paralysis	3	0	3	0
Spinal meningitis	1	1	3	3

LUNACY DUE TO DRINK INCREASES.

Some idea of the appalling ravages made by the drink scourge in present-day France may be formed by the terrible series of statistics showing the relation between alcohol and madness which specialists attached to the principal Paris lunatic asylums have just made public.

These figures reveal that since 1868, when exact records were started, the proportion of male lunatics whose loss of reason is caused by drink has increased from 14 per cent. to 47 per cent.; while on the female side the percentage has risen from less than 2 to 20.

Most of these unfortunates are psychopaths descended from other alcoholics.

TORONTO'S STATISTICS FOR NOVEMBER.

There were 833 births, 479 marriages and 461 deaths registered at the City Hall last month, as compared with 1,020 births, 458 marriages and 487 deaths in October last, and 830 births, 541 marriages and 496 deaths in November, 1911. The deaths from tuberculosis last month numbered 23, as against 20 the previous month and 17 in November, 1911. Six typhoid fever cases proved fatal in November, 1912, one more than in the corresponding month in 1911, and one less than in October, 1912. Nine deaths from diphtheria occurred last month. In the previous month there were 10 and in November, 1911, 12 deaths from diphtheria. One death resulted last month from each of the following diseases: Measles, whooping cough and cerebro spinal affection.

CANADIAN MEDICAL EXCHANGE OFFICE.

Dr. W. E. Hamill, medical broker, who conducts the Canadian Medical Exchange for the purchase and sale of medical practices and properties between vendors and vendees, informs us that at no time during the past eighteen years that he has been conducting this business has he had such an inviting list of offers for sale as at the present time. Most of the practices are located in the Province of Ontario, but he has many in New Ontario, Manitoba, Saskatchewan and Alberta. Bona fide buyers who will agree to treat confidentially information received from the Medical Exchange can get full data of any offers on the books, with names and locations, and secure a short cut to the goal desired free. Besides the practices he has for sale, he also has a number of locations without a doctor, where the inhabitants have petitioned him to send them a doctor, and where population and area without opposi-

tion would warrant anyone in doing at least $3,000 a year cash. A letter to 75 Yonge Street, Toronto, will show you just how he conducts this business.

FUND ASSURED FOR MEDICAL RESEARCH.

That a medical research fund of from twenty to fifty thousand dollars annually has been subscribed by business and professional men for the medical faculty of the University of Toronto, is the announcement made by the faculty. Dr. A. MacPhedran, professor of medicine, has been engaged over a year in securing the fund .

President Falconer of the University, Professor MacPhedran, Dean Clarke, Professor Leathes, Professor Brodie and Professor Mackenzie have been appointed by the Board of Governors of the University to direct the work of research, including the recommendation of appointments to fellowships. It has been decided to devote a portion of the fund to an investigation of tuberculosis.

THE TORONTO HOSPITAL FOR INCURABLES.

The thirty-eighth annual meeting of the Toronto Hospital for Incurables was held recently and reports of the work of the last year were presented. The lady superintendent, Miss Elizabeth Ross Greene, informed the gathering that there were at present 183 patients in the institution, that 85 had been admitted during the past year, and that 56 persons had died there during the same period. Twenty of those who died suffered from cancer of a most malignant form. At present Miss Greene said there were in the hospital 15 men and 59 women who were absolutely helpless, and 7 cancer cases. There were 135 patients sent to the institution by the city. To this statement Miss Ida Zella Groat, the secretary-treasurer, added that a year ago the hospital had an overdraft of $5,448. This had now increased to $10,257. In 1911 the cost per patient per day was 72 cents, now the cost was 73 3-5 cents a day. However, the city had recently agreed to pay the hospital 50 cents a day for each city patient instead of 35 cents a day. The new rate would be payable from January 1, 1912. The city would thus still be indebted to the amount of $5,000 to the hospital.

TEACH PUBLIC KEEP HEALTH.

The New York Department of Health has now begun the publication of a series of paper covered books, which will be of benefit to

physicians in their practice and instructive to the public. The Board of Health holds closely to the idea that education in the care of health does more to diminish disease than all other agents combined. It is the old idea of a pound of prevention, and the present Board of Health has developed it almost to a science, since it reaches the public in every way that the public can be reached, through circulars, placards, pamphlets, newspapers and moral suasion, exercised in person by its physicians and nurses.

In the new series of publications it is intended to consider one affliction at a time and show precisely what the Health Department has done to lessen or eradicate it. At the same time each individual of the community is made to understand what he must do to guard his own health and what he should do to aid the department in conserving the health of the public. In this regard the first book of the series, just off the press, has a strong personal appeal.

It appears from perusal that every one has a personal interest in the subject, whether he knows it or not, even if it is pulmonary tuberculosis, from which very strong men feel particularly free, though from the records it would appear that none is assured of immunity. Dr. John S. Billings, jun., chief of the division of communicable diseases, is the author. He tells of all the work that has been done and of the fight the doctors of the city made on the measures adopted by the Board of Health to give the department absolute control in the regulation of this malady, particularly the resistance they offered in the Legislature to the prevention of the sanitary code, which made it necessary for every case of tuberculosis to be reported and registered.

DR. ADAM H. WRIGHT HONORED.

On the 29th of November last many of the friends of Dr. Adam H. Wright honored him with a banquet on the occasion of his retiring from the trading staff of the University of Toronto. He was presented with an address and a silver tea service.

Professor W. H. Ellis read the following poem:

When you and I were babes, Adam,
In good Prince Albert's time
The word went forth that war should cease,
Commerce should link all lands, and Peace
Should dwell in every clime.

When you and I were boys, Adam,
In Queen Victoria's days,
Those guns that now so silent stand,
Where meet the rulers of our land,
With olive decked and bays,

Roared from the Russian ramparts grim,
Their muzzles all ablaze,
While old Todleben, with his back
Against the wall, foiled each attack
In Queen Victoria's days.

When you and I were young, Adam,
In good Victoria's time,
We stood together, side by side,
When Mewburn and Mackenzie died,
And Tempest, "ere their prime."

But say not "they have left no peer"—
That were unwelcome praise
To those three friends of ours long dead,
Whose blood for Fatherland was shed
In good Victoria's days.

In royal Edward's time, Adam,
Fresh prophecies were rife.
They told us nickel-pointed shot
And flat trajectories and what not
Could rid the world of strife.

But now that we are old, Adam,
We see with startled eyes
Quick-firing guns won't stop the Jap,
Nor Serb nor Bulgar care a rap
Who wins the Nobel prize.

When you and I were young, Adam,
There were no telephones;
There was no ultramicroscope;
And no X-rays for those who grope
And pry among the bones.

But, though with diagnostic aids
They were but ill supplied,
There were a few who shrewdly guessed
(Old What's-his-name among the rest)
At what went on inside.

When you and I were young, Adam,
It was damnation stark
To doubt that all that breathe the air,
Came, male and female, pair by pair,
Straight out of Noah's ark.

"*Mutantur,*" Adam, "*tempora*
Mutamur atque nos,"
And now we're not a bit afraid
To tell just how the world was made
In detail and in gross.

In pre-Archæan periods
Of elemental stress
The C and H and O and N
Collide, rebound, combine, and then
React with $H._2S$.

Colloidal specks from this ensued
Which grew, and grew, and grew,
With lively motion all endued,
Till they attained a magnitude
Of 0.01.*u*.

Then, somewhere over .01
And under .05
Amœboid feelers out they sent
And took some liquid nourishment
And, lo, they were alive!

In pre-Archæan periods
Let fancy have her fling,
But, Adam, will your faith allow
Such goings on can happen now
When George the Fifth is King?

Well, times may change, and we may change,
But find him when I can,
I'll drink a health to one who's stood
For all that's honest, kind and good;
So, here's to you, Old Man!

Speeches were delivered by Colonel Gooderham, John King, K.C., Dr. C. K. Clarke, Dr. J. A. Temple and Mr. I. H. Cameron. The speeches were all of a brilliant character, and this might be said in a special sense of the one delivered by Mr. Cameron.

Dr. J. T. Fotheringham read the address, which is as follows:

To Professor Adam Henry Wright, B.A., M.D., M.R.C.S., Eng., etc., Toronto.

Dear Sir,—We, whose names appear herunder, on our own behalf, and in the name of your colleagues in the University of Toronto, your friends and former pupils, and the medical profession at large, desire to express and place on record our high appreciation of the services you have rendered as a teacher, as a practitioner of the Healing Art, and as a citizen, alike to the University, the profession and the public, during the nine and thirty years which your professional career has so far smoothly run.

We salute you as one of the pioneers in the once rough field of abdominal surgery, and in pediatrics in this country, as well as a most successful teacher, author and practical exponent of the Ars Obstetrica; and we recognize, with gratitude and admiration, the wide and beneficient influence which you have exercised in these and other respects on behalf of the whole people.

We specially remember, too, how constantly, in matters pretaining to the University, and in professional intercourse, your precept and example have conduced to the promotion of good will, and the amicable adjustment of divergent views and interests. Among medical editors in Canada you have long been *doyen*, and your prolonged and honorable service to the body medical in this capacity, demands mention and acknowledgement, as does also your briefer tenure of the post of chairman of the Provincial Board of Health.

The close this year of the history of "K" Company, Q.O.R., reminds us that as a member of that military organization, which suffered more severely than any on the field of Limeridge, you have maintained the honor of your college and your country in active service. For these stated reasons, and many more unexpressed, we heartily pray that Lucina and her sister deities, Porrima and Postvorta, and all their train, may long attend your path, to and fro the Porta Carmentalis, as you go out and in among us. For we rejoice to know that although

you are retiring from the professional duties of the chair which you have so long adorned, you are to remain among us, actively participating, as heretofore, in daily practice, and in all else that pertains to the advancement and welfare of Medicine and her devotees. *Vive valeque atque salve, et quem eors, dierum cunque dabrit, luero appone!*

Dr. E. E. King made the presentation of the silver.

Dr. Wright, in reply, gave a fine account of the advances made by medicine during the years he has been engaged in active practice. He said he graduated in 1873. He spoke of the leading events in the history of medicine, mentioning the schools founded by Herophilus, Erisistraters, and the Alexandrian. After referring to the present medical faculty of the University of Toronto, he expressed his deep thanks for the honor done him.

MEDICAL PREPARATIONS, ETC.

BOVRIL.

In cases where the patient remains obstinately too thin, in spite perhaps of the ingestion of large quantities of "nutritious diet," we are faced with an urgent problem, especially when we find that the food induces dyspepsia, and thus sets up a vicious circle which it is hard to break. Preparations such as cod liver oil are apt to be resented by the alimentary tract, and many which are not nauseous are too bland and insipid to induce an adequate digestive reaction. But, as Dr. Osler and many others have insisted, the key to the treatment of phthisis and many other diseases, is the state of the alimentary canal, and we are frequently liable to find ourselves in an impasse when forced feeding causes the alimentary canal to be a barrier instead of a gateway.

In these circumstances a solution of the difficulty is found in the results of the new researches on Bovril. It has been shown that here we have a nutrient, indeed, something more than a nutrient, which promotes or compels the absorption of other foods.

EXCREPT FROM EXPORT PRICE LIST OF MESSRS. MACKIE & CO., DISTILLERS, LIMITED.

NOTICE.

Customers will greatly oblige by using their influence to have our labels destroyed when bottles are empty, and by reporting to us any

refilling or other fraudulent practice.

Owing to the prohibition crusade throughout the world against the licensed victuallers' trade, it is more and more necessary, if we are to have the support and respect of the public, that we maintain our principle of conducting business honestly and giving high-class value—thus not allowing any opportunity of casting aspersions.

In the interest of all, honest merchants will recognize this, and do all they can to put an end to any practices which bring dishonor on the whole trade.

ANALYST'S REPORT.

City Analyst's Laboratory, 138 Bath Street,
Glasgow, 1st November, 1912.

I herewith certify that I have taken samples of every vatting of Mackie's White Horse cellar blend of Scotch whisky used in bottling to this date, and the results of my analyses indicate that it is a pure whisky, regular in composition and up to the high standard which has characterized it in previous years. I am also of opinion that it is a very old high-class whisky of excellent quality, and that it has the mellow flavor and fine bouquet characteristic of age and maturity.

ROBERT M. CLARK, B.Sc., F.I.C.
Public Analyst for the Counties of Lanark and Renfrew,
and the Burghs of Paisley, Kilmarnock, and Ayr.

AUTUMNAL AILMENTS.

The autumn months constitute the season during which the average practising physician is called upon to treat the following conditions: 1. Typhoid fever, which is, more often than not, contracted at some unhygienic summer resort. The patient may return home during the first week or so, with headache, malaise, etc., or the premonitory or primary symptoms may appear after reaching home. 2. Malarial infection, in certain sections, which is more than usually rife in the spring and fall seasons. 3. The after results of the gastro-intestinal disorders of infants and young children, due to improper feeding, etc., during the heated term. In almost every instance, when the acute symptoms have subsided, a condition of anemia and general devitalization is the final result that constitutes the essential indication for treatment. In convalescence from all forms of illness resulting in general debility. Pepto-Mangan (Gude(is the one ideal tonic and reconstructive. It not only revitalizes the blood, but also tones up every physiologic function. It stimulates the appetite, improves the absorptive capacity,

increases energy and ambition and restores the blood to its normal condition. It is, thus, a general tonic and reconstituent of marked and certain value.

A SEVERE BURN.

By H. B. Lee, M.D., Summerville, S.C.

My first use of Antiphlogistine in burns and scalds was accidental. I was called by telephone to Mr. J. T., aged twenty-seven, weight 180 lbs., brickmaker, a steampipe having exploded between his legs ,scalding him badly. I ordered that no grease of any kind be used, but that cloths soaked in a strong solution of bi-carbonate of soda should be laid on the parts till I could get there. I stopped at a drug store to procure another salve I had used in such cases, and by mistake the clerk gave me two boxees of Antophlogistine. When I reached my patient I found him suffering intensely with a big blister extending from the crotch to the ankle on the inner side of bot hlegs, at least three inches wide and surrounded by a red inflamed surface two inches wide on each side.

I had used Antiphlogistine before in pneumonia and in sprains, so when I found that by mistake this had been sent I decided to try it. I covered the entire injured parts with a thick layer of Antophlogistine (applied cold), put absorbent cotton over all, and after bandaging loosely to keep things in place, took Mr. T. home in my buggy. When I first saw him his face was contorted with pain and he could not suppress the groans that the agony wrung from him, but, as I covered more and more of the burnt surface with the dressing, I could see the expression of pain leaving his face. I gave him some medicine to relieve pain and when I called again that evening I found he had not touched the anodyne. I asked him why he had not touched his medicine. "Well, doctor," he said, "you told men to take that every two hours while I was in pain and I have not had any pain."

The next day I let him leave his room and in three days he was back at work. I did not touch the dressing for five days, and when I took it off the parts had healed entirely.

There are two important points in the use of Antijhlogistine. First: put it on thick, thick, thick, using it hot for internal inflammations and cold for burns and scalds. Second: never put cloth over the Antiphlogistine, except a thin layer of gauze, if necessary, but put absorbent cotton in thick layers over your first dressing. Don't try to remove it as long as it sticks to the skin for it will let go as soon as it has done its work. I have used this preparation (Antiphlogistine) frequently since

then in severe burns and scalds and yet have to meet my first disappointment in its curative power.

VIBURNUM COMPOUND (HAYDEN'S).

Few remedies employed in the treatment of diseases of women have gained the commendation of so excellent an authority as Dr. H. Marion Sims, who was called the father of gynæcology, who said (Vol. 2, Grailly Hewitt, on "Diseases of Women"): "For severe dysmenorrhea, I have found Hayden's Viburnum Compound of great service." Like expressions since the time of Sims have been uttered by many of the best men in the medical profession.

Viburnum Compound (Hayden's)* has stood the test of time for 45 years and is the recognized standard viburnum compound by which imitators would measure, most of them saying in some words or other: "Ours is just as good as viburnum compound (Hayden's)."

In the treatment of dysmenorrhea whether of congestive, neuralgic or membraneous type, this valuable preparation acts most promptly and effectively. In menorrhagia where the flow is excessive as a result of any one of the several causes, it affords relief by imparting tone to the uterus and stimulating its contraction. Abundant clinical evidence has conclusively proven that it is as effective as ergot without possessing the narcotic and objectionable properties of that drug.

In obstetrical cases, viburnum compound (Hayden's) is of particular service. It modifies the pangs of childbirth by its soothing effect upon the nervous system, and by its anti-spasmodic action upon the uterus, making it particularly serviceable in cases of rigid os. On account of its great value and high reputation viburnum compound (Hayden's) is extensively imitated, all of the imitations that we have seen being of comparatively little worth. Only when the original viburnum compound (Hayden's) is specified can definite therapeutic results be assured.

German savants are now telling us that man's best period is from 40 to 60. These are his years of best judgment and widest experience.

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*New York Pharmaceutical Co., Dedford Springs, Mass.