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EDITORIAL

AN INTERESTING FRENCH-CANADIAN QUACK.

Mr. Justice W. R. Riddell, LL.D., of Toronto, contributed to the *New York Medical Journal* of 30th October last, an interesting article on a noted quack doctor by the name of Ives Phlem, who lived in St. Anne de la Pérade, on the north side of the St. Lawrence, about 50 miles above Quebec. Phlem was born in Breton, in the north of France, and learned some very primitive principles of surgery. He came to Quebec and practised mainly as a cancer specialist, and kept a small private hospital. He acquired widespread reputation, though he had no legal right to practise.

He had in his hospital for a period of eight months a victim of cancer by the name of Bilodeau. After the dealth of Bilodeau, he sued the widow for his fees and the care of the patient in the hospital. The court refused his fees, but granted him $27.25 for board and lodging. He was ordered by the court not to hold himself out as a surgeon, but this did not deter him, and he persisted in his practice. The date of the trial was 1736.

During the trial, Phlem produced a good deal of evidence on the subject of his skill in treating and curing cancer. He produced the minutes of a mass meeting which endorsed his skill, and a number of affidavits. But to no effect on the court. He died in 1749, and was buried in St. Anne de la Pérade.

Phlem was a bold operator. On one occasion a person with cancer of the jaw consulted him, and he split the tumor open and removed much of the bone, greatly benefiting the patient. Cancer has ever been a field in which the quack has exploited himself. John Wesley, with his tar water; Samuel Thomson, with his red clover poultice; St. John Long, with his corrosive liquid, were noted examples. Phlem, however, though a quack, displayed, at times, good judgment, and operated with skill.

AN IMPORTANT JUDGMENT.

Some time ago, a patient received a burn in the Smith's Falls Hospital by a hot brick, which was placed in the bed to warm it, when the patient was taken from the operating room. When the case came up for trial before Mr. Justice Britton he dismissed the action. From this judgment the patient appealed. The appeal was heard before Chief Justice Falconbridge and Justices Kelly, Riddell and Latchford. These four judges came to a unanimous finding in favor of the patient and granted the appeal, awarding damages to the amount of $900.

The court held that when a hospital furnishes beds, foods and nurses for patients it enters into a contract with them, and becomes liable for acts of negligence on the part of its nurses. This is a most important decision so far as hospitals are concerned. It will have the effect of compelling them to lay down rules for doctors and nurses so as to avoid, as far as possible, the occurrence of accidents for which the hospitals could be held liable.

The judgment will do good, as there has been much doubt in the past regarding the liability of these institutions in this matter. There can be no doubt now as this judgment in a most exhaustive manner sets forth the law. The hospitals will, no doubt, welcome the decision, for the simple reason that they know now their responsibilities, and can take proper measures to protect themselves .

An application for an appeal in this case has been refused, as it is a matter of express controct, and no matter of public interest is involved.

UNIVERSITY AND MEDICAL COUNCIL EXAMINATIONS.

This matter has been discussed fully before Mr. Justice Hodgins. The university authorities, taking the position that the students were carefully trained and put through the test of a severe examination, both written and practical. For this reason these students should not be subjected to further examinations.

On this important topic we have already expressed our views fully. We have takes the position that the objects of the Medical Council could be attained by the appointment of assessors, whose duty it would be to see that a proper standard is maintained by the university. Let us see how things are done elsewhere.

In Manitoba the university examines for the Council. In Quebec a graduate of McGill or Laval can enter upon practice without further examination. In Great Britain the General Medical Council only sets

a standard, and accepts the degrees and diplomas of the universities and colleges. These are registered and their holders may commence practice.

The duty of the Medical Council is to maintain a proper standard, and make all teaching bodies live up to it. We are of the opinion that the Council is wasting a vast amount of money, and expending a lot of time in holding examinations, that can be better done by other bodies. We contend that the Council should stand for efficiency; but this can be secured as now suggested.

PRESCRIPTIONS FOR ATONIC DYSPEPSIA.

℞ Magnesii chloridi ..... gr. xv (1 gram)
Aquæ destillatæ ..... ℥v (150 grams)
S. Sig.: One tablespoonful before or after meals.

In flatulence the author has found the following solution effective:

℞ Sodii bromidi exsiccati ..... xxxviii (2.5 grams)
Sodii phosphatis exsiccati ..... xxxvnii (2.5 grams)
Sodii sulphatis exsiccati ..... xxxviii (2.5 grams)
Aquæ destillatæ ..... ℥viii (250 grams)
S. Sig.; One tablespoonful immediately after meals.

The same solution, taken ten minutes before meals, may be administered to excite the appetite. The author rarely uses hydrochloric acid and pepsin or other ferments. In gastric insufficiency with pain, Pron avoids nux vomica and sodium persulphate, and orders the last mentioned formula for use before meals.—*N. Y. Med. Jour.*

WAR AND THE SEXES.

Henri Coupin, doctor of science, writing in *Presse médicale* for July 26, 1915, on the various theories that have been advanced concerning the origin of sex, particularly that which attributes to war an increase of males, states that recent despatches from the eastern front aver that of 559 children born to fugitives from Galicia and Bukovina, there were 314 boys and only 245 girls. In Vienna, where usually 108 boys are born to 100 girls, since October there have been 140 boys to 100 girls; there has been also a very large number of twin births. Doctor Coupin writes apparently with his tongue in his cheek, and demands that these figures be verified.—*N. Y. Med. Jour.*

ORIGINAL CONTRIBUTIONS

A HOSPITAL'S LIABILITY FOR THE NEGLIGENCE OF A NURSE.

THE case of Levere v. The Smith's Falls Public Hospital, decided during the present month (December, 1915) by the Appellate Division of the Supreme Court of Ontario—the highest court in the Province—is of such importance to hospitals that we have obtained copies of the judgment.

The court was composed of the Chief Justice of the King's Bench, (Sir Glenholme Falconbridge) and Riddell, Latchford and Kelly, JJ.

The decision was unanimous in the result, each of the judges gave his reasons in writing; and as the written reasons of Mr. Justice Riddell include all that is contained in the others we shall here give an outline of that judgment.

Riddell, J. "The Smith's Falls Public Hospital is an incorporated body conducting a public hospital in the town of Smith's Falls; there are no shareholders or capital stock, and the institution is conducted not for private profit but simply as a public charity and for the benefit of the community—a most admirable and commendable object.

The plaintiff, Mrs. Levere, suffering from *prolapsus uteri,* was advised by her physician, Dr. G., to go into the hospital and be operated upon. She accordingly went to the hospital of the defendants and selected her room, agreeing to pay $9.00 a week, "to include her board and attendance and nursing."

She was operated on (successfully) under an anæsthetic by Dr. G., Dr. F. assisting; and then she was taken to her own selected room and put to bed, still unconscious. On recovering consciousness, she felt a severe pain in her right foot; and on the surgeon being sent for, he discovered a serious burn on her right heel about the size of a fifty-cent piece; a blister had formed. Dr. R. thinks the burn must have been at least a quarter of an inch in depth. The plaintiff was treated properly and she left the hospital at the end of seven weeks with the burn about healed; but she still has a scar at the locus of about an inch by an inch and a half. This is not only painful, but also disabling; there does not seem to be much hope of improvement unless an operation be performed, and the result of such an operation is doubtful.

She brought an action against the hospital, which was tried before Mr. Justice Britton at Brockville, May 26th, 1915; the learned judge decided in favor of the defendants (34 O.L.R. 206), and the plaintiff now appeals.

There can in my mind be no possible doubt that the burn was caused by an overheated brick being placed against the foot of the anæsthetised and unconscious plaintiff; that this was done by the nurse in charge, and that such an act was improper. There can be no doubt of the liability of the nurse civilly unless she can justify herself by the command of someone she was bound to obey; but the nurse is not sued here. The sole question is whether the hospital is liable for this act of its nurse.

The Matron was the head of the nursing staff; a trained nurse herself, she was the superintendent of the nurses; she selected the nurses, hired and discharged them, subject to the approval of the Board.

The nurses, in addition to board, etc., received a "honorarium" in money ("honorarium" which really means a gift on assuming an office, is now often used as equivalent to "salary", by these who do not wish to think they receive wages.) The particular nurse to wait on her, the plaintiff had nothing to do with selecting. The Matron appointed her to that particular work and she never became the servant or employee of the plaintiff, but continued the servant and employee of the hospital; she was sent by the hospital to perform for the hospital its contract to supply the plaintiff with nursing.

In the absence of authority and of special circumstance, it would be plain that the hospital is liable for her act. The cases will be examined after dealing with the circumstances most relied upon by the defendants.

It is contended that the nurse was under the orders of the operating surgeon; that she carried out his orders, and consequently the hospital could not be made liable. But this implies a state of affairs which does not exist in the present case.

If the nurse obeyed the express order of the surgeon she was not guilty of negligence at all—that is the duty of a nurse. Of course, she must take some pains to see that she quite understands the doctor's meaning and must not act on what she should know to be a slip of the tongue. To put it in other words, the order she obeys must be a real order, not such as is an apparent order but so expressed that it cannot be supposed to set out the doctor's real meaning.

A nurse holds herself out to the world as being possessed of competent skill and undertakes to use reasonable care. If the command of the surgeon is plainly a slip, she should call his attention pointedly to the order. When his attention has been called to the order and he shows that the order made was that intended, she may obey; "he is the doctor," and it is not negligence for a nurse to act on the belief that he is the more competent.

In Armstrong v. Bruce (1904), 4 O.W.R. 327, the nurse contended

that the surgeon had ordered her to fill the "Kelly pad" upon which the unconscious patient was to lie, with *boiling* water. She did fill it with boiling instead of hot water, with the result which was to be expected. The patient sued the surgeon for damages; the defendant and other surgeons swore that the nurse had been told to fill the pad with hot water (not *boiling* water) and the trial judge believed them. My learned brother (the present Chief Justice of the Common Pleas) said, p. 329: "I have no manner of doubt that if the doctor had said to any experienced nurse that she was to fill that pad with boiling water it would have struck her as an extraordinary thing and one calling for some explanation. . . . It was a thing that could not have been done by Dr. B. unless through a slip of the tongue."

Of course, a surgeon could not shield himself from the result of an improper order. He has at the operating table no more right to make a slip of the tongue than a slip of the knife, and must guard against both equally.

But granted that an order is a real order of the medical man, a nurse is justified in obeying it unless it is plainly dangerous; and not being guilty of negligence herself she cannot by so acting render her employers liable for damages for her acting in accordance with such an order.

Here the facts do not bring the nurse into such a condition.

Where a patient is or has recently been under an anæsthetic, there is a standing order in all hospitals to keep the bed warm; "it is," says the Matron, "a standing order to warm the bed"; this is taught by "the doctors originally training the nurses." The nurse under whose charge the patient is, attends to the heating of the bed, and to the heating of bricks, if bricks are used for that purpose. It was the duty of the nurse "when she was told that she had charge of the room where the patient was . . . to see that the bed was properly warmed," and, "the doctor would not give her any direct order." Of course, if the doctor finds the bed not such as he thinks it should be, he may give such orders as he sees fit, and these orders must be obeyed; he does not ordinarily inspect the bed. As I have heard it said by a very eminent surgeon: "If I cannot trust my nurse I must give up surgery."

My learned brother at the trial put it quite accurately as follows:

"His Lordship: That narrows it to this extent, it is the duty of the nurse in the first place to do as suggested to her, in seeing that the bed is properly warmed for the patient, and then if the doctor comes in it may be his duty to see if it is over-heated or under-heated, and gives his directions in regard to that, but in the absence of any directions in regard to that, it stands that it is the nurse's duty."

There is much evidence, more or less loose, about this nurse being

under the doctor's orders, and the like; but the above fairly represents the result of the evidence taken as a whole.

In the present case the operating surgeon assisted in placing the patient in her bed after the operation, but took it for granted that the bed was properly heated, made no enquiries and gave no orders—and, indeed, such was the usual course; "they" (the doctors) "consider them" (the nurses) "all right, competent."

It cannot, therefore, be successfully contended that the nurse in placing as she did an overheated brick to the foot of the patient was following the doctor's orders; and it is quite clear that he knew nothing about what she did and that he gave no directions of any kind.

The main contention, however, of the defendants is that they are not liable for the negligent act of the nurse, and many cases are cited in support of that proposition."

His Lordship then examines the cases in England, and shows that there the true test is declared to be whether the defendants undertook to supply nursing or only the nurse—if the defendants' contract was only to supply a nurse to do the nursing they were not liable if they had used due care in selecting a nurse. Moreover, the defendants would not be liable in the English law if the negligence of the nurse took place in the operating room. "As soon as the door of the theatre or operating room has closed on them for the purposes of an operation, or an examination, the nurses cease to be under the orders of the defendants inasmuch as they take their orders during that period from the operating or examining surgeon alone."

The Irish cases relieving hospitals from responsibility are shown to depend on the statutes governing Ireland, while the Scottish cases refer only to the negligence of the surgeon, for which the hospital was considered not to be liable.

In many of the American States the theory of the law was that a hospital conducted or a charity supported in whole or in part by contributions, public or private, and not intended to make a profit, is charged with a trust for all its money and property, and therefore can not be sued so as to take away any of its property from its intended purpose. This is the law of Massachusetts, Pennsylvania, Michigan, Ohio, Maryland and (at least in the absence of a special contract) New York. Rhode Island also has come round to that doctrine by the effect of an express law. The latest American case cited was during the present year in Alabama. There the court held that the hospital was responsible to the fullest extent for the negligence of its nurses.

The same law is laid down in British Columbia.

His Lordship then proceeds thus:

"The only case in our courts of which I am aware did not go further than the trial court. If the law was there correctly laid down—and I think it was—it would be conclusive of the present case in favor of the plaintiff. It is, however, not binding upon us; and it is not necessary in the present case to go so far as was done in that case.

In Everton v. Western Hospital, there was no special contract, the patient being admitted in the usual way to the Western Hospital, Toronto. He was a somewhat dissipated individual, and was suffering from pneumonia. He was placed in a ward on the top flat of the hospital building, about twenty-five feet from the ground, which at the time was frozen hard.

The nurse on duty was proved to be very careful, skilful and conscientious. She had been in the ward, looked at the patient carefully and found him quite quiet and apparently asleep. She then went out quietly into the hall to do something, but was still near the patient. Unfortunately, after this visit by the nurse, he got out of bed and made for the window, which he opened. He was going out head-foremost when the nurse rushed in and seized him by the nightdress; unfortunately it gave way, or she lost her hold. He sustained a fracture of the skull, and died, February 14th, 1903. The wife brought action, and the case was tried before Mr. Justice Britton and a jury at the Toronto jury sittings. A verdict of $250 was awarded the plaintiff against the hospital. There was no appeal.

. . . . . .

After all the cases it is plain that once the "trust fund theory" is got rid of—and it is conceded that it has now no footing in our law—the case is reduced to the question, What did the defendants undertake to do? If only to supply a nurse, then supplying a nurse selected with due care is enough; if to nurse, then, the nurse doing that which the defendants undertook to do, they are responsible for her negligence as in contract—*respondeat superior.*

I am of opinion that the plaintiff should succeed.

The only question remaining is as to the amount of damages to be awarded.

The patient who should have left the hospital in two weeks was forced to remain seven; she was then unable to walk and had to be carried out of the hospital; for more than four weeks she sat in a chair, and when she put her foot to the ground the leg would swell so as to require bandaging; a consultation of doctors resulted in the advice to return to the hospital, she being then just able to hobble, putting a little weight on the toe; she remained in the hospital nearly two months, slightly improving, but not permitted to put weight on the foot; even

at the end of the time she was compelled to use a crutch; and now many months after, and after treatment with electricity, etc., is still lame, the foot being very painful at times; she is forced to have a pillow under the back of the heel in bed or she could not sleep. Dr. G. thinks that the pain is caused by the implication of the nerve in the scar tissue and that an operation would be of advantage. Dr. R. once was of that opinion, but after consulting some who he thinks know more than he does and who have a different opinion, can only say: "My own opinion is still that there is a possibility of something being done by an operation.. . . . It is very questionable whether an operation would be beneficial or may be make it worse"; and he gives reasons. Dr. F. has his own opinion "that if this pain was being caused by a nerve fibre caught in the scar, as I supposed it was that if it could be severed, it might stop the pain."

After an examination of the cases, I laid down the rule in Bateman v. Co. of Middlesex (1911), 24 O.L.R., 84, at p. 87, that, "if a patient refuse to submit to an operation which it is reasonable he should submit to, the continuance of the malady or injury which such operation would cure is due to his refusal and not to the original cause. Whether such refusal is reasonable or not is a question to be decided upon all the circumstances of the case." This rule was not questioned by the Divisional Court or the Court of Appeal; 25 O.L.R. 137, 27 O.L.R. 122.

Dr. R., the plaintiff's own physician, who had attended her before and after being in the hospital, cannot do more than say the operation might do good and might do harm. He does not seem to have advised it. In these circumstances it cannot be said that the condition of the patient is due to unreasonable refusal to undergo the operation. Were I permitted to draw on my own experience I could tell of a patient who refused to allow his arm to be amputated—the surgeon advising the operation, but saying he could not be quite certain that it would do good. The patient made an excellent recovery, with the arm almost as useful as before.

Little evidence is given of pecuniary damage. Perhaps most of such damage is that of the plaintiff's husband, who is not a party to this action, and whom we must leave to bring his own action if so advised.

But the pain and disability, past, present and future, call for a substantial assessment of damages; and with every regard for the defendants' position as a most estimable charity, I think the sum of $900 cannot be regarded as excessive.

The appeal should be allowed with costs, and judgment entered for the plaintiff for the sum of $900 and costs.

It may not be amiss to add a few statements:

(1) We proceed on the ground of an express contract to nurse, and express no opinion as to the law in the ordinary case of a patient entering the hospital without such contract.

(2) As a corollary of the above (while we think an implied contract has the same effect as an express contract in the same terms) we give no opinion as to the contract implied from a patient entering a hospital.

(3) We express no opinion as to what the result would have been had the negligence occurred in the operating theatre.

(4) None of the cases in any of the jurisdictions expresses any doubt that, whether the hospital is or is not, the nurse is liable for her own negligence in a civil action; in some cases also criminally for an assault, simple or aggravated, and in fatal cases for manslaughter.

(5) There is no hardship in the present decision. The hospital can protect itself, as was done in Hall v. Lees, and in some of the American cases.

THE ADVANTAGES AND RISKS OF COMBINED LOCAL AND GENERAL ANAESTHESIA.

By Dr. W. H. B. Aikins,
Toronto.

DURING the last few years considerable attention has been devoted to the development and improvement of methods of anæsthesia. As a consequence of this the efficient administration of anæsthetics is no longer regarded as merely an adjunct to surgery, but is generally recognized to be quite as much a specialty as any other department of medical science, and there is therefore an increasing tendency to limit it to those who have made a special study of the various drugs employed, and of the different methods of administration, with their attendant risks. This has naturally resulted in a great reduction in the number of fatalities occurring under anæsthesia.

The principal general anæsthetics which have been employed are chloroform, ether and nitrous oxide gas. It was formerly supposed that more risk was associated with the use of ether than with that of chloroform, but the more recent statistics indicate that this is a fallacy, and that while the mortality from chloroforom is about 1 in 3,000, that from ether is only about 1 in 30,000. Judging from the statistics collected by Buchanan, which include many millions of administrations, the use of nitrous oxide gas is even safer than that of ether in the hands of an expert anæsthetist, the mortality being about 1 in 5,250,000 administrations.

Both chloroform and ether are followed by unpleasant symptoms, identical with those of shock, such as lowering of blood pressure and marked depression, and in addition they have a deleterious action on the kidneys, and chloroform produces fatty changes in the parenchyma of various organs. To these disagreeable and, in some instanmes, dangerous sequelæ is largely due the more recent development of local anæsthesia, which now occupies a definite place in surgery. It is very extensively employed in ophthalmic, nasal and laryngeal operations, and has also been used in many varieties of major operations.

The recent advances in local anæsthesia may be said to date from the discovery of the properties of cocaine, the active principle of which was isolated by Gardeke[1] in 1855. Kölliker[2], in 1884, first employed it in connection with surgical operations, using a 2 per cent. solution to anæsthetise the cornea and conjunctiva. In 1885 Corning and Roberts showed that complete local anæsthesia resulted from the injection of cocaine into the tissues, and in the same year Halstead[2] first used it in dentistry, injecting it around the inferior dental and lingual nerves before the extraction of a tooth. Many synthetic substances have been from time to time suggested as substitutes for cocaine as local analgesics, and are known by various names, including eucaine, alypin, stovaine (chiefly used in spinal anæsthesia), anæsthesin, novocaine, nirvain, acoine, new orthoform, holocaine and tropocaine. Some of these manifest less toxicity than cocaine, whilst they appear to have equal analgesic value.

Local anæsthesia may be produced by cocaine or the other substances mentioned above by one or other of the following methods, or a combination of both of them:

1. Direct injection of the solution into the tissues to be operated upon, which is described as infiltration analgesia.
2. Injection of the solution into or around the nerves supplying the part to be operated upon, which is termed regional analgesia. This latter method is the one chiefly used in dental operations. In addition to its analgesic properties, cocaine possesses the extremely useful characteristic of rendering the mucosa to which it is applied admost bloodless.

If given in very large doses cocaine produces general anæsthesia. Its analgesic effect, when applied to the mucous membranes, appears to be due to its influence on the terminations of the sensory nerves. Analgesia does not result from the application of the drug to the skin.

Soon after the discovery of the analgesic properties of cocaine anæsthetists began to realize that, although there was no doubt of its value in this connection, it not infrequently had toxic effects, sometimes

terminating fatally, Even in small doses it has a marked depressing action upon the human heart, whilst large doses may result in dyspnœa, delirium, epileptiform attacks, convulsions, sudden collapse, and finally death from toxæmia. Some individuals manifest idiosyncrasy in regard to cocaine, and in such cases comparatively small doses of the drug may lead to cocaine poisoning. These toxic effects of cocaine have led to the preparation of the substitutes which have been previously referred to, some of which are said to possess less toxicity than the original drug.

In this connection Miller[4] emphasizes the fact that whilst these substitutes are less toxic than cocaine, none of them can be regarded as entirely safe, so that the idea that they may be safely given in unlimited doses is bound to result in disaster. His experience indicates that alypin is the best preparation to use. According to Pilcher[5], the mucous membrane of the urethra is particularly susceptible to the toxic influence of cocaine, and he strongly protests against its use before cystoscopy or painful operations in this region.

One of the disadvantages of cocaine and similar preparations is the rapidity with which the analgsic effect passes off, so that sufficient time is not allowed to permit of an extensive operation. This objection has been met by the addition to the cocaine solution of a small quantity of one of the various preparations of the active principle of the suprarenal gland. This combination was first tried in rhinology, with the object of constricting the small vessels at the site of injection, and thus reducing the blood supply. It was subsequently discovered that an important result of this constriction of the vessels is to localize the analgesic solution, and prevent its absorption, thereby prolonging the duration of its analgesic effect and minimizing its toxic influence upon the tissues.

Combined Local and General Anaesthesia. During the last few years many writers, more especially Dr. Crile, have advocated a combination of local and general anæsthesia. In this connection a great variety of drugs has been recommended for producing local anæsthesia, including morphine, scopolamine and atropine, but cocaine and adrenalin are the only two with which I now propose to deal. It should always be borne in mind that there is such a thing as idiosyncrasy in regard to certain drugs, and that a careful enquiry should therefore be made with reference to the previous history of the patient, in order to discover if there have been any signs of intolerance of the particular drug which the anæsthetist proposes to use for the production of local anæsthesia.

Combined local and general anæsthesia is most commonly employed in the surgery of the nose. In 1894 Dr. Scanes Spicer[6] suggested and practised the method of spraying the fauces with a solution of cocaine

in laryngeal operations, and stated that in his experience this plan permitted of lighter general anæsthetization, and lessened irritability, hæmorrhage and salivation. In 1895, "somewhere" in Europe an observer[7] published a paper in which he stated that he had adopted the practice of painting the mucous membrane of the nose with cocaine before administering chloroform, and found that this prevented reflex cardiac inhibition, due to irritation of the fifth pair of nerves by chloroform vapour. This method has also been practised by Gerster and Mayer[8], of New York. Obalinski[9] makes a hypodermic injection of a 3 per cent. solution of cocaine when the patient is slightly under the influence of chloroform, and claims that this procedure reduces the amount of chloroform required, and lessens the severity of the unpleasant symptoms produced by the general anæsthetic. According to Hewitt[10] the advantages claimed for a combination of local and general anæsthesia are:

1. The elimination of the element of fear, to which a certain number of anæsthetic deaths are due.

2. The production of a somnolent or apathetic condition, which facilitates anæsthetization.

3. The absence of excitement during anæsthetization.

4. A diminution of the amount of the general anæsthetic necessary to produce the necessary relaxation and depth of anæsthesia.

5. The diminuation of secretion, especially that of mucous under ether.

6. Lessening of the tendency to vomiting and pulmonary complications.

7. Lessening of the tendency to shock.

8. A longer period of insensibility after the end of the operation, reducing the discomfort and pain.

Frank[11] emphasizes the importance of the elimination of operative shock, and of the absence of straining on the part of the patient during operation, which tends to minimize trauma of the tissues concerned.

In a discussion at a recent meeting of the Royal Society of Medicine of London, Mr. Bellamy Gardiner[12] emphasized the necessity of the proper use of cocaine and adrenalin as an adjunct to intranasal operations. When applied to the mucous membrane an hour before the administration of the general anæsthetic, which is a sufficient interval to permit of adequate absorption, a solution of equal parts of 5 per cent. cocaine and 1 in 1000 adrenalin produces ischæmia, and the local analgesic action tends to reduce shock by blunting and retarding stimulation of this extremely sensitive region. For the general anæsthetic he is in the habit of using chloroform and ether. He points out the impera-

tive necessity of packing the nose an hour before general anæsthetization, as the lapse of a shorter period of time does not in his experience suffice to produce perfect operative ischæmia.

At the same discussion Mr. Seccombe Hett[13] stated that in practically all operations upon the nose and throat he used the combined method of anæsthesia, and found that it tended to prevent mental depression and a condition which he described as traumatic neurasthenia, which otherwise was a common post-operative complication in these cases.

Whilst most writers admit that preliminary local anæsthesia is of great value in some cases, especially in highly strung, nervous and sensitive individuals, and that in many instances its results are practically ideal from the point of view of the patient, surgeon and anæsthetic, there can be no question that in others it involves very real dangers, which have heretofore not been so generally recognized as it is desirable it should be. Several cases have been reported from time to time which show that the procedure is by no means without risk, and is sometimes followed by serious symptoms, or even fatal results. The following case is quoted by Hewitt: Submucous resection of the nasal septum was performed in a woman aged 23. Some time before operation both nostrils were plugged with cotton soaked in 10 per cent. cocaine and adrenalin solution. Chloroform was subsequently administered, and while the corneal reflex was still present solid cocaine was applied to a hyperæsthetic point. This was followed by severe symptoms of cocaine poisoning, but the patient eventually recovered.

Mr. Seymour Jones[14] reports one hundred cases of submucous resection of the nasal sputum, in which a solution of adrenalin and cocaine was injected into several points on the septum, the injections being made when the patients were under light chloroform and ether anæsthesia. A not infrequent result of the injections was "on intermittent heart beat, associated with a pulse of a weak and feeble character." In three of the cases the symptoms were very alarming, and there was intense pallor, temporary cessation of respiration, and greatly dilated pupils. All three recovered.

In the Proceedings of the Royal Society of Medicine, February 3, 1911, Dr. J. Blumfeld[15] reports sudden collapse in the case of a boy aged seventeen, on whom he performed an operation for deviation of the septum. The patient was under the influence of chloroform and ether, and collapse occurred immediately after the injection of 6 minims of a 1 in 4000 solution of adrenalin on the operating table.

In the discussion following Dr. Blumfeld's paper, Mr. L. F. Thomas stated that he had had a case in which the sequence of events was similar, and he had attributed the symptoms to the adrenalin injection.

Mr. Carther Braine quoted a case in which both tonsils were removed under chloroform, a little adrenalin being injected into each tonsil just before removal, the injection being followed by immediate collapse, and death in a very few minutes. Mr. Harold Barwell, who performed the operation, decided at the autopsy that it was a case of "adrenalin death," and that the chief factor in producing the shock was the adrenalin injection.

Mr. A. D. Fleming reported the case of an elderly lady, who underwent an emergency operation for appendicitis when she was in bad general condition, with a pulse rate of 140 and general peritonitis. Operation had been delayed too long, with consequent toxæmia. It was performed under general anæsthesia by open ether and chloroform, and after the operation it was seen that the patient was in a desperate condition, although it was thought that she would probably live for an hour or two. Intramuscular injection of 1 minim of a 1 to 1000 adrenalin solution was followed by sudden death within two or three minutes. Mr. Fleming is of the opinion that much depends on the strength of the solution of adrenalin, although in not a few cases faintness folows a solution of 1 in 1000, or even 1 in 5000.

Dr. McCardie, who also took part in the discussion, said that he himself had had cases, and had heard of them from others, in which symptoms had resulted from injection of a solution of adrenalin and cocaine, injected during anæsthesia. In an operation on the septum he had seen collapse immediately after the injection of adrenalin when a patient was fairly deeply under the influence of ether and chloroform, but never any sign of it when ether was used alone.

Mr. Seymour Jones reported three cases in which severe symptoms were in his opinion due to the action of adrenalin on a system already depressed by the action of chloroform. All three recovered. No cocaine was used, so there seemed to be no doubt that adrenalin was responsible for the sequelæ of the injections. He has had a very extensive experience of combined anæsthesia, and is of opinion that the risk ,which undoubtedly exists, is minimized if the slightest possible anæsthesia is being used during induction and for three to five minutes after, owing to the danger of collapse from adrenalin injections during even moderate or deep anæsthesia. Anæsthesia is induced with a mixture of chloroform and ether, in the proportion of 1 to 2. Induction should proceed slowly, and when the patient is barely conscious, that is, when the breathing is automatic, but the reflexes brisk, the analgesic solution is injected into the posterior part of the septum.

Dr. Depree[16], anæsthetist to St. Mary's Hospital, reports the case of a man aged 26, operated upon for deflected nasal septum under

chloroform anæsthesia. When placed on the operating table he was slightly under the influence of chloroform and adrenalin injected into the nose. Symptoms of severe collapse immediately developed, and although every possible method was tried to revive the patient, death rapidly ensued. Ten minutes before the induction of anæsthesia cotton wool, moistened with a 10 per cent. solution of cocaine and adrenalin was inserted into the nostrils. No organic adnormality was discovered on post-mortem examination.

Dr. Goodman Levy[17], who had done a good deal of experimental work in this connection, in commenting on the paper published by Mr. Seymour Jones, in which he states that in a hundred cases of submucous resection of the nasal septum symptoms of collapse followed the injection of cocaine and adrenalin in combination with chloroform and ether anæsthesia, but that all recovered, says that there is no doubt that the large proportion of recoveries is largely due to the fact that only a small quanaity of adrenalin has passed into the circulation. Very few fatal cases have so far been reported, but it is by no means unlikely that many deaths which are really due to adrenalin injection have been attributed to other causes. In response to private inquiries made by Dr. Levy, one surgeon, who had been in the habit of injecting adrenalin in cases of submucous resection of the nasal septum, when the patient was absolutely under the influence of chrloroform, informed him that he had had what he termed two cases of "rapid death," both of which exhibited symptoms similar to those which are seen experimentally in "adrenalin death." This surgeon was inclined to attribute the fatal result in these instances to injection of the adrenalin directly into the circulation through a small vessel. The solution used in these cases was a "very few drops" of 1 in 4000 adrenalin and a solution of 2 or 3 per cent. novocaine.

The extensive series of experiments on cats carried out by Dr. Goodman Levy has thrown considerable light on the effects of adrenalin, when used in combination with chloroform or ether. When injected into animals under chloroform it has a very marked influence upon the heart, the heart beat being considerably accelerated and rendered more forcible. This effect varies in intensity according to whether the animal is under light or deep anæsthesia at the time the injection is made.

If the injection is made under light anæsthesia the ensuing reaction is very severe and almost invariably fatal, although in exceptional instances spontaneous recovery occurs. In the fatal cases, after the preliminary stage of an acclerated and forcible heart beat, the latter becomes incoördinate and finally ceases altogether, its ventricles reacting to the adrenalin injection in a manner which he describes as "fibrilla-

tion." Fibrillation of the ventricles is brought about by the fact that the individual muscle bundles supplying them, which interlace in so many directions, begin to contract independently. This results in incoördination of the heart beat and cessation of ventricular function. A characteristic of many of these "adrenalin deaths" is persistence of respiration for a short time after the heart has ceased to beat.

In animals deeply under the influence of chloroform at the time of the injection the effect is much less severe, and if the dose of adrenalin is very small and anæsthesia sufficiently deep it may be so slight as to be almost imperceptible. Under these circumstances the animal as a rule recovers.

The animals anæsthetized by ether, much larger doses of adrenalin were given without producing the symptoms described, and in control animals, not under the influence of a general anæsthesia, the injection of adrenalin did not result in them.

From the results of these experiments, and in view of the cases reported in which severe and fatal collapse has occurred after the injection of adrenalin in patients under chloroform, Dr. Levy concludes that "adrenalin death" does occur in the human subject, and suggests the following possible explanations of the fact that it apparently does so occasionally in a series of cases.

1. If it is in all cases readily absorbed from the submucous tissues, the reaction may occur in individuals who are abnormally susceptible to the drug.

2. If equal susceptibility to small doses of adrenalin is the rule, the results may be due to accidental injection directly into small veins.

From the investigations which have been carried out up to the present no definite decision can be arrived at as to which of these assumptions is the true explanation of the effects of adrenalin, and possibly both may come into consideration in individual cases. But the experimental and clinical work which has been done in this connection indicate that the reaction does not occur under ether anæsthetization, but it is still a question as to how far it is modified in cases in which the mixture of chloroform and ether is employed.

There is still some difference of opinion as to whether the danger incurred is greater unled light or deep inæsthesia. Dr. Levy concludes from his experiments that in the former case the risk is immensely greater, and that it is therefore unjustifiable to inject adrenalin, however small the dose or however weak the dilution employed. On the other hand Dr. McCardie states that he has observed faintness and syncope after the injection of adrenalin during moderately deep anæsthesia, and is of the opinion that it is desirable that the anæsthesia

should be minimal. Dr. Blumfeld also finds it difficult to realize that the danger of injecting adrenalin is less in deep than in light anæsthesia.

It is clear from what has been said that there is at any rate great risk incurred by the injection of adrenalin or cocaine in patients who are under chloroform or ether anæsthesia, and it is not improbable that collapse from this cause may explain some of the many deaths which have been reported as due to chloroform or cocaines. Whilst there is no doubt that the hæmostatic properties of adrenalin and cocaine and its derivatives are extremely valuable in many operations, I should like to protest most emphatically against their indiscriminate use in combination with chloroform or ether anæsthesia.

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THE ATTITUDE OF THE DOMINION GOVERNMENT TOWARDS TUBERCULOSIS.

By George D. Porter, M.B.

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WHILE recognizing the importance of preventive measures against disease in times of peace, their results show up more vividly, and their benefits become more strikingly apparent in times of war. Even now, with a larger army in the field than ever before, the percentage of disease, according to Sir James Crighton Browne, "is lower than in times of peace, and the unprecedented healthfulness of the British army is a splendid tribute to sanitation."

Interest in the more chronic diseases, such as tuberculosis, will naturally give place for a time to a greater attention to those acute infections, such as typhoid, typhus, dysentery, tetanus and septicaemia, which are always threatening our armies in the field and in the trenches. It must be borne in mind, however, that the soldiers' very strenuous life, with its hard campaigns and prolonged exposure, to say nothing of the injurious effects of inhaling noxious German gas, will inevitably leave many of them in just that physical condition so favourable to the inroads of tuberculosis. Col. Primrose has already reported from the front that in a large percentage of the cases examined, which proved to be tuberculous, it was obvious that an active condition had been engrafted upon a healed lesion. "It is not surprising," he says, "that there is a danger of pulmonary tuberculosis developing in those who are predisposed thereto."

The measures of relief instituted in the past will, therefore, be most useful for the future when we may look for a larger number of tuberculous amongst us than we had before. This has already been demonstrated by reports from Switzerland where it is said "twenty-five hundred tuberculous prisoners will shortly arrive there from belligerent countries for special treatment," while in Canada a number of tuberculous soldiers have already been received in some of our own institutions.

According to Osler, the tuberculosis problem is a medico-sociological one. "On paper the problem looks simple—to put all in healthy environments, with good housing and proper food, which are essential preliminaries to healthy habits; to recognize the disease early and to put patients in the best possible circumstances to promote cure, and to guard the community against dangers associated with advanced incurable cases. The first is a basic, economic question—re-housing will take at least a couple of generations. An abundant supply of good food means better wages, and a stricter protection against external contamination. The second is met by efficient home treatment and by hospitals, dispensaries and sanatoria. The third by a closer supervision of dangerous cases, and better provision for their segregation."

Owing to the great area of our Dominion, the scattered population, and the extreme changes in its climate, the tuberculosis problem in Canada is a very difficult one to deal with. Until 1898, when the National Sanatorium Association founded its first sanatorium at Gravenhurst, we had no special provision for the tuberculous anywhere. In 1900 the Canadian Association for the Prevention of Tuberculosis was organized at Ottawa for the purpose of preventing the spread of tuberculosis by an educational campaign consisting of the circulation of

literature, lectures, the formation of societies for the purpose of enlisting the co-operation of the people generally with the medical profession, the governments, and other organizations to provide suitable accommodation for the tuberculous in hospitals and sanatoria, to establish dispensaries, to supply visiting nurses, to advocate the enactment of suitable laws for the prevention of the disease.

This Association was subsidized by the Federal Government and now receives an annual grant of ten thousand dollars.

When organized there was practically no legislation regarding notification, disinfection, and matters dealing with the housing problem. With one exception there was no special provision for the tuberculous in Canada. Now we have some thirty-five institutions scattered over the country, about fifteen special dispensaries, numerous visiting nurses in various centres, and over one hundred local societies.

The accommodation in the various institutions now totals over 1,800 beds, or one bed for every 4,407 of population. All of these, with the exception of the one in Nova Scotia, have been the result of private initiative and private philanthropy, assisted later on by the Provincial and Municipal Governments, thus proving the value of voluntary agencies just as we see the value of voluntary agencies in war relief work to-day.

(In Scotland the ratio is one bed for every 1,750 population, while in the United States it is one bed for about 2,900.)

In Ontario the ratio is one bed in 2,403 of population. As will be seen in the Provincial Health Reports for Ontario there has been a marked decrease in deaths from tuberculosis in the last decade, and, while there is not sufficient evidence to prove that this decrease is due to the increase in accommodation. yet it is significant that in those provinces where little or no accommodation is provided for the tuberculous there is no decrease in their tuberculosis death rate. Manitoba, which comes second in the matter of provision also comes second in its decrease in such death rate.

While it may be too much to say, as Newsholme has deduced from English figures, that such a cause is sufficient, yet we may assume that these results are due in a large measure to the proper care of the tuberculous, segregation of the advanced cases, better hygiene and social conditions generally. Where the people are wise enough to make provision for such cases they are generally more apt to attend to other sanitary matters as well. On the other hand, where apathy prevails regarding this disease, apathy is likely to prevail towards sanitation generally.

Besides this, the Sanatorium idea has influenced the treatment of

the tuberculous in their own homes, as well as improved our mode of living as shown in the better ventilation of public buildings and private homes generally. This can be seen by the more prevalent custom of sleeping with the bedroom windows open and in the increased number of open air sleeping balconies everywhere .

The Federal Government takes the ground that under the British North America Act the care of the sick is a provincial and municipal matter, and it therefore does not assume responsibility for the provision of the tuberculous.

Under the Department of Agriculture, reports upon tuberculosis and literature bearing upon its prevention have been issued from time to time, together with literature upon the question of Bovine Tuberculosis, while the Conservation Commission has issued reports upon the same subject.

The Federal Government has also taken steps to prevent the spread of bovine tuberculosis through milk from infected cows. An Order-in-Council has been passed providing for the co-operation of the Federal authorities and the cities and towns all over Canada for the eradication of bovine tuberculosis from herds supplying milk to such municipalities. It is specified that the city or town must first provide for licensing all milk vendors, for clean and sanitary dairies, for the prohibition of the milk sales within two years of the test of the cattle of any dairy unless a clean bill of health is shown, and for the appointment of a municipal instructor. On fulfilment of these conditions, and on application being made by the municipal authority to the Veterinary Director General, Federal Inspectors will be sent to make tuberculin tests. Any diseased cattle may be slaughtered. and compensation to the owners is to be allowed at the rate of one half the appraised value of the cow in a case of open tuberculosis. and one-third value if destroyed as a re-actor at the request of the owner. No compensation is to be paid to the owner unless. in the opinion of the Minister of Agriculture. he assists. as far as possible, in carrying out the instructions of the inspector as to disinfection and other necessary precautions.

This then, with the exception of any assistance to the Indians under the Department of the Interior, is the extent of the Federal Government's aid to the tuberculosis problem.

While admitting the great importance of education in this work; and without creating an intelligent interest in the public mind and securing their co-operation, no permanent improvement can take place; yet it has been felt by the great majority of workers in this field that some financial assistance should be given towards the care of the tuberculous.

Needless to say, many suggestions have been offered and schemes brought forward from time to time, but whether in the form of provincial subsidies based upon the amount of work done for the tuberculous, or upon the population of the various provinces, objection could be taken on the ground that the largest and richest Province (Ontario) would receive the largest grant. Some of the smaller ones, such as the Maritime Provinces, on the other hand, where less work has been done, but where tuberculosis is somewhat more prevalent, would receive the least. Then again, the Western Provinces claim they have become more or less resorts for the tuberculous on account of more favourable climatic conditions, thus placing comparatively heavier burdens upon them.

Apart from some form of insurance, the Federal Government might avoid these difficulties and still assist in this work by subsidizing the various provinces according to the number of the tuberculous in each Province, as shown in the notification returns for this disease. Some such policy would not only assist in bringing to light many more cases, but it would afford the various local authorities an opportunity of dealing efficiently with them. Among other things, local institutions or special wards in general hospitals for the advanced cases and more widely scattered and larger sanatoriums for the incipient cases, assisted by the municipality, the county, the Province and private philanthropy, as is done in Ontario to-day, would be greatly assisted by Federal support. This, together with legislation favouring better conditions of labour, proper housing, and all those measures found useful in raising the health of the people, would certainly lessen the great mortality and the enormous financial loss from this most widespread and impoverishing disease. As the attainment of this object is dependent upon administrative measures and government support, as well as upon scientific and philanthropic efforts, may we not hope that in the near future our Federal Government will follow the lead of other countries and assume its proper share in protecting the health of the people and assist, not only by educational methods alone but by liberal financial support, all approved efforts now being made against tuberculosis in our Dominion.

An Australian nurse writes to the effect that the Canadian hospital at Saloniki is in a very efficient condition, and that the patients are very well pleased with the care they receive. It is not mentioned whether this refers to the University of Toronto Hospital, No. 4, or the Canadian Hospital, No. 5.

CURRENT MEDICAL LITERATURE

INSANITY AND THE WAR.

The horrors of war from every conceivable standpoint have been vividly pictured during the past year. From the aspect of public health it was pointed out that in war it is not the survival of the fittest but the survival of the most unfit. It is the flower of he race that is stamped out or deprived of, the faculty ever to bloom again. It is the weeds, at any rate physically, that are left. A nation which loses its best in war necessarily deteriorates, for those who are left are deficient in vitality and are unable to reproduce a sturdy stock.

In THE LANCET, Sept. 4, 1915, the question is treated editorially from another and more optimistic point of view. It is generally held that the experiences of war as now waged, the strain exerted on the nervous system of continual shell concussions while one is cooped up in a trench, must have the effect of bringing about grave psychological disturbances not infrequently terminating in insanity and neuroses. But the question may be asked, is such really the case? And does war leave behind it enormous wreckage in the guise of nervous and mental sufferers, more or less permanently incapacitated and uninfluenced by treatment?

The writer in THE LANCET states that facts do not support this point of view and bases his contention upon the recently published Eighty-fifth Annual Report of the Belfast District Lunatic Asylum in which the superintendent, Dr. Graham, refers to the remarkable decrease in the number of admissions for the year as compared with the twelve months preceding. He declares that in such a time of upheaval as the present it is natural to suppose that mental suffering ending in brain collapse should be the order of the day, whereas the figures do not bear out the suggestion. He further holds that "it is not the great tragedies of life that sap the forces of the brain and wreck the psychic organism. On the contrary, it is the small worries, the deadly monotony of a narrow and circumscribed existence, the dull drab of a life without joy and barren of achievement, the self-centered anemic consciousness; it is these experiences that weaken and diminish personality and so leave it a prey to inherited predispositions, or to the slings and arrows of outrageous fortune."—*Medical Record.*

TOTAL COLOR BLINDNESS.

According to the very plausible view of Kriess a subject with total color blindness is a "rod seer"; that is, he has failed to develop the

retinal cones which alone make possible color vision, and his visual perceptions are due solely to the retinal rods. Instead of color he perceives only tones. To bear out this theory histological studies are necessary, and it is seldom indeed that the eye of a totally color-blind subject can be obtained either at autopsy or as a result of enucleation. At a meeting last May of the Naturwissenschaft-medizinische Gesellschaft of Jena (*Münchener medizinische Wochenschrift*, June 1) Hegner reported two cases of total color blindness in one family, the other children of which had normal vision. As is common in such cases the eyes were otherwise defective. After astigmatism had been duly corrected by glasses vision was only five thirty-fifths. There was lively nystagmus as well as photophobia. The fundus was normal and there was no central scotoma. The typical displacement of the distribution of lightness from yellow to green could be demonstrated, as could also the notable shortening of the spectrum at the long wave end.—*Medical Record.*

CEREBRAL OEDEMA IN CHRONIC ALCOHOLISM.

Sceleth and Beifeld say (*Amer. Journ. Med. Sciences*, June, 1915, that long-continued over-indulgence in alcohol (seven to ten years) an individual develops delirium tremens for reasons as yet undetermined. The disease usually manifests itself in three stages—the incipient form, the fully developed classical form, and the comatose form (wet brain). The writers, who see about 2,500 cases of alcoholism every year, find that about 10 to 15 per cent. of the cases of delirium tremens pass into the comatose form. The transition from delirium to cerebral oedema is fairly well marked. The semi-coma which succeeds the active delirium is striking, and the delirium now becomes the low muttering type. The symptoms of wet brain are essentially meningeal—semi-coma, generalized hyperaesthesia, and muscular rigidity (Kernig's sign and neck rigidity) standing out prominently; the more marked are the latter two features the graver is the prognosis. The cerebro-spinal fluid is to all appearances normal. The mortality is nearly 75 per cent. Associated with the cerebral oedema complex there is very often a patchy bronchopneumonia, which clouds the diagnosis and is usually responsible for death. Necropsy reveals no gross lesions apart from the more or less marked fluid accumulation in the pia arachnoid space, a widening of the sulci, and a narrowing of the convolutions, to account for the symptoms of changes in the brain. The differential diagnosis must concern itself particularly with the possibility of a concomitant skull fracture, which may easily be obscured by the nervous manifestations of coma-

tose delirium tremens. Among other conditions from which "wet brain" has to be diagnosed are: (1) A grave asthenic form of delirium tremens characterized by profound asthenia, pallor, cold skin, a rolling of the eyes from side to side, and often subnormal temperature; (2) the various forms of meningitis, which can, however, usually be ruled out by the negative bacteriological, serological, and chemical cerebro-spinal fluid tests, according to the type present; (3) uraemic coma, which shows cardiovascular signs, retinal changes, commonly exaggerated knee-jerks, absence of hyperaesthesia, and occurrence of convulsions and vomiting; (4) cerebro-spinal lues; (5) cerebral haemorrhage, thrombosis, and embolism; and (6) certain conditions due to alcohol—namely, pachymeningitis haemorrhagica interna, and the acute superior polioencephalitis of Wernicke; in these, however, gross nervous changes are distinguished characteristics. The duration of "wet brain" varies; commonly it is about three weeks, but may be from two to welve. Apart from symptomatic treatment but little can be done. Cardiac stimulants are in order, and persistent efforts must be made to force liquids; in the severer cases nasal tube feeding may be needed. Elimination must not be neglected. The writers have found ergot harmful here, whereas it is useful in the asthenic form of delirium tremens which they have specially described in this paper. Lumbar puncture, praised by Dana, has failed to do good in their cases. They suggest a trial of scientific hydrotherapy whenever it is available.—*British Med. Jour.*

TREATMENT OF GOITRE BY INTESTINAL DISINFECTION.

Fr. Messerli (*Rev. méd. de la Suisse Romande,* March 20th, 1915) has made a second series of investigations as to the effect upon goitre of continuous intestinal disinfection. Eleven cases are described. The patients were recruits in the Army Medical Service. As before, the author in some of the cases gave benzo-naphthol 0.5 gram (7.7 grains) three times a day, but in other cases he gave either thymol 0.1 gram (1.5 grains) twice a day, salol 1 gram (15.4 grains) twice a day, creosote 0.55 gram (0.77 grain) three times a day, or, in two cases, laxative pills containing aloes, jalap, resin, and rhubarb; the pills last named were intended to disinfect the intestine mechanically by the light purgation they induced. The measurements of the thyroid were made at two levels in each case. The length of treatment varied in the different cases from twenty to thirty-eight days, but in most cases was thirty-eight days. The goitre in 8 cases was follicular hypertrophic goitre, in the remainder was parenchymatous. A large majority of the patients came from the country.—*British Medical Journal.*

ICTERUS AND PICRIC ACID POISONING.

The frequent therapeutic use of picric acid chiefly as an external application has given rise to an occasional instance of poisoning by means of this drug when taken internally by accident or with suicidal intent. The toxic dose for a human being is four to five grains; the lethal dose is not known. The symptoms caused by the absorption of picric acid are a yellowish coloration of the skin and musocæ, gastro-intestinal irritation, prostration, and a change in the color of the urine which resembles that seen in catarrhal jaundice. Owing to the close similarity between the objective evidences of picric acid poisoning and those of the various types of jaundice, the differential diagnosis between the two is a subject of no little practical importance. This furnished the theme for an experimental investigation by Marcelle Wahl (*Presse Médicale,* August 5, 1915). He found that there is no means of making an absolutely positive differential diagnosis between the two conditions. The absence of biliary pigments in the urine would be strong presumptive evidence in favor of an apparent icterus being caused by the absorption of picric acid. Chemical analysis of the urine fails to be of any service in the above differentiation, owing to the fact that almost all of the picric acid absorbed is eliminated in the urine in the form of derivation products.—*Medical Record.*

TREATMENT OF CHOREA.

J. Comby, in *Bulletins et mémoires de la société medicale des hôpitaux de Paris,* April 22, 1915, ascribes chorea, in most instances, to a mild acute encephalitis, not specific in origin, but which may be due to one of a number of different causes, among which rheumatism is the most important. The author's treatment brought about rapid recovery in thirty-three cases of chorea, and is described as follows: Rest in bed for two weeks is ordered, in partial isolation and with special provision for mental rest. A milk diet is given, six ounces (200 grams) of milk—which may be diluted with plain vichy, or Vals water—being administered every two hours. With each feeding, in children over seven years of age and of average robustness, one tablespoonful of the following solution is given:

℞ Arseni trioxidi ..... gr. 1/12 (0.005 gram)
Acaciæ ..... ℥iss (6 grams)
Aquæ aurantii florum ..... ℥i (4 grams)
Syrupi ..... ℥iiiss (18 grams)
Aquæ, q. s. ad. ..... ℥iv (125 grams)
Misce.

The amount of arsenic in the preparation is increased each day by one-twelfth of a grain (0.005 gram) until five-twelfths of a grain (0.025 gram) is reached, and is then given in descending doses down to one-twelfth of a grain, the entire course of medication thus occupying nine days. If vomiting occurs once or several times, the arsenic is stopped temporarily or permanently. In children less than seven years of age, the amount of arsenic in the initial dose, as well as the increases in the succeeding doses, should be either two-fifths or three-fifths of the amounts above mentioned, the treatment being otherwise carried out in the same way as for older children. Thus given, arsenic, though on the threshold of toxic action, is well borne, and the course of treatment being brief, the child suffers less than it would from more moderate doses given for weeks. Experience in hundreds of cases has convinced the author of the safety as well as the efficacy of the procedure. The effect of the drug is ascribed to fixation in the cells of the brain and medulla and consequent correction of their disordered function.—*New York Med. Jour.*

TREATMENT OF LARYNGITIS.

Harold Barwell, in his work on *Diseases of the Larynx,* recommends the following combinations for inhalation from hot water in laryngitis:

I.

℞ Acidi benzoici ..... gr. iii (0.2 gram)
Kaolini ..... gr. xii (0.8 gram)
Triturate and add
Aquæ ..... ℥ss (15 c. c.)
Tincturæ tolutanæ ..... ♏xviii (1.15 c. c.)
Shake and add
Aquæ, q. s. ad. ..... ℥i (30 c. c.)
Sig.: To be inhaled from hot water.

II.

℞ Mentholis ..... gr. xvi (1 gram)
Alcoholis ..... ℥ii (8 c. c.)
Magnesii carbonatis ..... gr. viii (0.5 gram)
Aquæ, q. s. ad. ..... ℥i (30 c. c.)
M. Sig.: To be inhaled from hot water.

In each case one dram (4 c. c.) of the preparation should be added to a pint of water at 130 deg. to 140 deg. F. and inhaled for five to ten minutes. The patient must remain in a warm room for half an hour afterward.—*New York Med. Jour.*

A GREEN BACKGROUND IN THE OPERATING THEATRE.

Sir Berkeley Moynihan communicates to THE LANCET for September 18, 1915, a note on the value of green as a background for the surgeon's work. It has long been the custom of surgeons, he observes, to use white sterile towels or sheets around the area upon which an operation is to be done. There are many disadvantages in the use of white. A large expanse of white, especially when the sun is shining, is wearisome to the eye and causes fatigue, and it detracts from the value of the light upon and within the wound. It is not sufficiently realized that good illumination is not needed, except upon the part which is concerned in the operation. Light should be concentrated upon the wound and not widely diffused. For the last two and a half years Sir Berkeley has used towels and sheets of green color instead of white. Green is a restful color, offers no sharp contrast to the colors of the wound surfaces, and allows ligatures and sutures to be clearly seen against it. He has tried black towels, but the change from black to colors in an operation theatre is sudden and trying, and ligatures do not stand out clearly against such a background. He has painted the walls of his operation theatre green, and has a green colored material on the floor. The great relief to the eyes which results from the use of a green material around the wound is remarkable. The ordinary green "casement cloth" from which his towels and sheets are made is of good color, retains its color on washing and sterilizing, is easily obtained, and is cheap.—*New York Med. Jour.*

TRANSPLANTATION OF THYROID.

C. Goodman, New York (*Journal A. M. A.*, Nov. 6, 1915) says that while the hemolysis and agglutination tests are considered of great importance in blood transfusion, he thinks they can be reasonably accepted as of like utility in the transplantation of some of the more solid tissues. Accordingly, before transplanting the thyroid he has first made these tests and operated only when the reactions were absent. Owing to difficulties in obtaining and handling the blood (which have since been met to some extent) he thus far reports results in only seven cases. Prior to using the tests he had been unable to obtain any results whatever from homotransplantation. Since using them, however, he has in two instances at least obtained a satisfactory preservation of the transplant for one and three weeks respectively. Hence, he feels justified in concluding that the hemolysis and the agglutination tests are to a certain extent some indication of the tolerance of the tissues of one animal for those of another.

THE BOWEL MOVEMENT.

"It may sound like a Hibernianism, but food does go down the (alimentary) tract more easily because it is put in at the upper end." This quotation, from a recent article by Alvarez in *The Journal of the American Medical Association* is the text of an editorial in its issue of November 6. "Nothing in the daily life of man is of greater import for his comfort and health than the proper evacuation of the alimentary canal. For some reason, the origin of which is not easily discovered, civilized man in the higher walks of life has attempted to establish an artificial habit with respect to this function. On copious movement of the bowel early every day—soon after rising—is regarded by thousands as conforming to a normal, healthful, physiologic routine. Precisely as the failure to perform this act once a day is popularly looked on as a menace to comfort and even good health, so its more frequent occurrence is not uncommonly the occasion for worry lest diarhea or other forms of impaired alimentary behavior may be at hand," says *The Journal.*

"What is the physiologic moment for the evacuation of the bowel? Is there any urgent theoretical reason why it should occur at any particular time, or rather, why habit should select for it the time immediately after rising? To the individual employed in business or other vocational pursuits, convenience may dictate the advantage of discharging a disagreeable duty at the most convenient moment, so as to be relieved from personal inconvenience during the remainder of the day. One may as reasonably, however, establish the habit of one meal a day or two meals at fixed hours, and disregard 'the call of the stomach.'

"Even the most cursory observation of the higher animals shows that the emptying of the bowel does not conform to the fixed routine of infrequent defecation to which man has intentionally become resigned. The newer physiology of the alimentary tract clearly teaches that there are natural periods when peristaltic waves are initiated which would naturally induce an emptying of the lower bowel in due time. Every part of the intestine is in a state of activity which can be played on and modified by impulses reaching it from all portions, above and below. Hertz has demonstrated in the case of man that, with the passage of food out of the stomach, the ileocecal valve relaxes, and material travels through the colon at the same time. These features have been emphasized by Alvarez, who notes that the promptness with which a mouthful of food introduced in the stomach causes material to pass through the ileocecal valve or to rush through the colon shows that the human intestine exhibits the characteristic long-distance reflexes.

"Every one can recall the desire for evacuation which is frequently felt after a liberal meal. In children the movement of the bowel soon

after feeding is familiar. Both adults and children have schooled themselves to repress the natural postprandial impulses to defecate; these impulses are not compatible with our social engagements. Custom in this respect is regulated by convenience rather than by physiologic considerations.

"The question may well be raised whether this disregard of natural stimuli is not a potent factor in the widespread manifestation of constipation. Undoubtedly, habitual response to the normal incentives to defecation soon after the introduction of food in the stomach would be a wholesome reform. The facts of physiologic science speak for it. The roentgenologist knows that a contrast meal will go down the bowel faster if followed, a few hours later, by food. The effect of more than one stool per day, moreover, would bring timely relief from those all too familiar symptoms of malaise which have made up a nation of 'pill-loving' sufferers. Of course, the 'patent medicine' interests would suffer, but the bowel of man, which, according to Keith, contains enough muscular tissue in its colonic wall to form a mass as large as the biceps of a blacksmith's arm, ought to be expected to do its duty unaided."

TREATMENT OF OPHTHALMIA NEONATORUM.

G. A. Neuffer, in the *Journal of the South Carolina Medical Association* for February, 1915, states that he has met with universal success in this condition by means of the following treatment: A sixty grain (4 gram) to the ounce (30 c. c.) solution of silver nitrate is at once applied to the conjunctiva and immediately precipitated with a solution of sodium chloride made by dissolving one teaspoonful of the salt in a glassful of water. This application is repeated once every twenty-four hours, until one is satisfied that the disease has been controlled. Only in extreme cases are more than two applications necessary, and often one proves sufficient. In addition, anounce (30 grams) of boric acid is ordered dissolved in a quart (litre) of hot water and the solution kept constantly warm. With this the nurse or mother is instructed to wash out the eyes as often as any pus collects, even if this is required a hundred times a day. One drop of a one per cent. solution of an organic silver preparation is dropped into each eye three times a day as long as there is any pus; after this an astringent lotion is substituted. The author also has squares of lint kept on a block of ice and applied constantly, with frequent renewals, for forty minutes in each hour. The treatment described should be applied both day and night until the condition has been mastered.—*New York Med. Jour.*

THE "AUTOLYSIN" TREATMENT FOR CANCER.

"Modern science calls for proof—proof as indubitable and unqualified as the case will permit. Scientific men accept new theories and new alleged facts only when they are supported by reliable evidence. Especially is this true in the realm of scientific medicine. Unlike the exact sciences, there are in medicine so many elements which may vitiate definite conclusions that the careful physician is slow to accept claims made for new therapeutic agencies. And rightly so; for human health and life are too valuable to be made the sport of untried theories and unsupported claims. In a world largely dominated by commercial instincts, this unwillingness on the part of the physician to accept, at its face value, every claim made for a new therapeutic product has long been a source of irritation to the exploiter. It is not surprising, then, that the refinements of twentieth century advertising have been brought to bear in overcoming the physician's caution—a caution exercised wholly in the interests of his patients; hence the spectacle, during recent years, of the exploitation of additions to materia medica—some of which may have had an appearance of at least quasiscientific value—brought to the notice of the public, rather than to the medical profession, by every art known to the modern advertiser. At the same time a semblance of scientific standing has been given the products by publishing in such medical journals as would accept them articles describing these products. The theory, apparently, on which such methods are based is that by creating a sufficient demand on the part of the public for these products, the physician will be dragooned into using preparations which his sober judgment tells him have not passed through the refining fires of scientific investigation. It is only necessary to call to mind the Friedmann "consumption cure" campaign, and the resurrection of the discredited scopolamin-morphin anesthesia under the popular name of "Twilight Sleep,' to realize the potentialities for harm that this method of exploitation carriers."

With this introduction, *The Journal of the American Medical Association* takes up, in its issue of November 6, a discussion of the Horowitz-Beebe "Autolysin" treatment for cancer.

"The most recent example of this pernicious method of bringing into the public eye new therapeutic agents is exemplified," says *The Journal,* "in what has been called the 'autolysin' treatment for cancer. Early in the publicity movement for this treatment *The Journal* (issue of July 24, 1915) urged caution, calling attention to the secrecy and the unscientific character of the formula. 'Autolysin' was brought into the limelight of publicity chiefly through the medium of sensational newspaper and magazine articles. This was accomplished before the

preparation had been so tried out as to establish, without question, its value or lack of value. Its exploitation makes the thoughtful wonder whether it belongs in the realm of scientific discovery or in that of crude commercialism. As is always to be found in such cases, the failures are minimized and the successes are heralded. Its use for all practical purposes has been wholly in the hands of its friends and promoters. Naturally, reports emanating from such sources must be looked on as *ex parte* statements, rather than as scientific records. The time has evidently come, as it will come in all such cases, when we may expect to hear the other side. A little while ago (issue of September 18) *The Journal* published a disclaimer from a Detroit physician whose name had been connected with one of the magazine articles boosting the treatment." Elsewhere in the issue for November 6, is an article by Dr. R. Weil giving his experience with the exploitation of this treatment. Also, *The Journal* submits some correspondence relative to the exploitation of this new product, dealing with the commercial aspect of the case.

"Some of the best brains in the world," *The Journal* continues, "are working on the problem of the prevention and cure of cancer; so far the solution is not in sight. When it comes it will come as a gift of medical science to humanity. It will not come in the form of secret and mysterious combinations controlled by a few individuals to be doled out to those who are able, or willing, to pay the toll demanded. It will be determined after a series of experiments carefully conducted under scientific control in various institutions and under the observation of disinterested, scientific workers. Only under such conditions will it be possible to declare, with any degree of scientific accuracy, that a successful treatment has been established.

"Whether the 'Autolysin' mixture may possess some elements of value in combating the scourge of cancer must be left to the future to decide. Even should it be found of use this would not alter the fact that the methods of exploitation have been unworthy of scientific men, and in their effects on the public, the very refinement of cruelty."—*Jour. A. M. A.*

TREATMENT OF DIABETES INSIPIDUS.

R. Fitz, in the *Archives of Internal Medicine* for November, 1914, recommends that cases of diabetes insipidus be treated not only for syphilis if it exists, but also by dietetic measures corresponding to the excretory capacity of the kidneys. A bland—though sufficiently nourishing—diet which will not excite a violet polyuria should be ordered. In a case reported by Fitz, the best therapeutic results were obtained

by giving the patient food containing relatively small amounts of sodium chloride and nitrogen. The patient had a restricted diet for a considerable period, then was allowed to eat anything he chose for three days. The results of this change of diet were so striking that the patient himself noticed them and asked to be given his previous diet. An acute infection with fever—sometimes beneficial in diabetes insipidus—and a lumbar puncture exerted no favorable action on the symptoms in this case.—*New York Med. Jour.*

CHRONIC INTESTINAL STASIS.

W. S. Bambridge writing in THE LANCET says that the indifference with which Lane's earlier pronouncements concerning chronic intestinal stasis were received has been largely overcome. The author describes the symptoms and diagnosis of chronic intestinal stasis and in addition calls attention to a series of symptoms and diseases which Lane believes to be the outcome of chronic intestinal stasis and which have been called the end-results. Lane has enumerated a rather comprehensive list of diseases which he believes to be traceable to chronic intestinal stasis or to the lowered resistance which results therefrom, among which may be mentioned rheumatoid arthritis, tuberculosis, goitre, and cancer. It is to the last-named disease that the author wishes to direct especial attention. He is not prepared to say at the present time how far, in his opinion, chronic intestinal stasis affects the development of cancer. The whole problem of cancer is so involved that he can to-day merely hypothesize concerning its etiology. The interrelationship, however, of ulcers of the gastrointestinal tract and cancer of this region, of chronic irritation and cancer, and of these conditions with chronic intestinal stasis, furnishes food for serious consideration.—*Medical Record.*

GLUCOSE SOLUTIONS AS PROPHYLACTIC AGAINST SHOCK.

Burnham (*Amer. Journ. of Med. Sciences,* September, 1915) urges the value of glucose solutions as a prophylactic against post-operative shock. It has been shown that fat administered to animals and presumably stored in the liver increases the susceptibility of the organ to the injurious action of chloroform, the fat determining the fixation of the chloroform and the occurrence of necrosis, while experiments with carbohydrates, on the contrary, show that they protect the body proteins from distintegration. It is therefore important that patients

should be put through a course of forced carbohydrate feeding for a short period immediately preceding operation, and should receive them in an available form soon after operation. When there is no contra-indication to oral feeding the patient should be given a meal containing a considerable quantity of carbohydrate food in the shape of bread or cereal eight to twelve hours before operation, and about three hours before anaesthesia is commenced a feed containing 100 to 200 calories in the shape of easily absorbable carbohydrate—for example, six ounces of coffee or orangeade to which has been added one ounce of lactose. By such means the organism is assured of a good store of readily available glycogen during the anaesthesia. Where oral feeding is impossible, as during or soon after anaesthesia, subcutaneous or rectal injections of glucose solutions afford a clinically available method for nutrition, the solutions being freshly prepared and sterilized as they are more easily contaminated than ordinary saline. For hypodermocylsis 4 per cent. to 5 per cent. solutions are recommended, as much as 2 to 3 litres, representing from 90 to 210 grams of glucose, being given in twenty-four hours according to symptoms. For proctoclysis 12 to 16 ozs of a 5 per cent. solution dissolved in ordinary tap water may be given during the operation, and its administration continued by the Murphy drip method after the patient is back in bed. By either or both of these methods from 300 to 500 calories a day may be given without discomfort, and though the quantity is not sufficient to supply all the total energy requirement, it is of importance in the prevention of excessive nitrogen waste. Notes of three cases are given in which glucose solutions were administered as a routine procedure without regard to urinary findings or symptoms of acidosis, being used as a prophylactic against shock in cases where saline solution would be ordinarily used. When acidosis is suspected and acetone is present the administration of alkalis or of carbohydrates is indicated, sodium bicarbonate being given until the urine becomes neutral, often as much as 50 to 100 grams being needed before this takes place. To summarize: Glucose solution should be given (1) as a routine after every operation where post-anaesthetic shock is to be feared; (2) as a routine where post-operative oral feeding may be difficult or insufficient for a considerable time; and (3) either before or after operation as an emergency measure for the relief of an existing or threatened acidosis.—*Brit. Med. Jour.*

GALYL, A SUBSTITUTE FOR SALVARSAN AND NEOSALVARSAN.

A Foerster, in THE LANCET, states that the drug referred to in this paper is a discovery of Dr. Mouneyrat, to whom we owe hectine, and

is named Galyl (1116). Like salvarsan, it is a derivative of arsenobenzol, which was first prepared by Michaelis in 1881. In galyl two molecules of arsenobenzol are linked with two phosphoric groups; it is tetraoxy-diphospho-amino-diarsenobenzene, and it contains 35.3 per cent. of arsenic and 7.2 per cent. of phosphorus, is a yellow powder of a tint different from those of salvarsan and neosalvarsan, and is insoluble in distilled water. It, however, dissolves rapidly in a weak solution of sodium carbonate, from which it can be precipitated readily by the addition of an acid. The tubes in which the drug is dispensed, contain the small amount of sodium carbonate required for solution, and thus the handling and dissolving are no more complicated than in the case of neosalvarsan. The solutions are yellow, with a brownish-green tint when fairly concentrated, and differ considerably from the bright yellow of salvarsan solutions. Galyl is best administered by means of intravenous injections, as intramuscular injections are painful and may lead to necrosis like salvarsan. Any of the methods used for the latter drug are admissible. Salvarsan, whether employed intravenously or intramuscularly, does not yield any better results. Headache, slight fever, or diarrhea may be untoward effects. The dose of galyl for an adult is 0.3 gram. It is much less expensive than salvarsan.

STERILIZATION OF WATER WITH IODINE.

A. Gascard and G. Laroche claim that by the following procedure complete destruction of the bacteria in water can be effected with the least possible amount of iodine sufficient for the purpose. One c. c. of tincture of iodine (French Pharmacopœia) is diluted with nine c. c. of ninety-five per cent. alcohol. Into a series of tumblers numbered from one to five and each containing 100 c. c. of the water to be sterilized are dropped, respectively 1, 2, 3, 4 and 5 drops of the dilute iodine tincture. The contents of each tumbler are shaken up. After an interval of twenty minutes a little starch paste is added to each glass. Several of the specimens will then acquire a blue color. Adding three to the number of the glass in which the least amount of iodine was required to produce a blue color gives the number of drops (from the same dropper) of undiluted tincture of iodine which must be added to one litre of water to sterilize it. The effect of the iodine in the water is completed in half an hour. To remove the taste of iodine from the water, as many drops of a ten per cent. solution of sodium thiosulphate (hyposulphate) as have previously been used of tincture of iodine are

added. Water thus treated has no special taste and contains in one litre, on an average, only about 0.014 gram of sodium iodide, together with a little harmless sodium tetrathionate.—*New York Med. Jour.*

THE DUODENUM IN DIABETES MELLITUS.

N. Mutch (*Practitioner,* May, 1915), brings forward evidence which, he thinks, shows that specific lesions are present in the duodenum of diabetic patients which probably precede the dissolution of the pancreas. In healthy subjects the vertical length of the duodenal shadow, measured orthodiagraphically after a bismuth meal, is less than 3½ in. in adults. In nine severe cases of diabetes in adults the length varied from 4½ in. to 5½ in. But the duodenum is not only elongated but is also increased in calibre; and on examination after death the walls are seen to share the same change, being thick and fleshy and somewhat milky in appearance. The same structural alterations can be traced also in the upper jejunum. This enlargement is almost invariably associated with ileal or colonic stasis, and in some patients delay is so extreme, and the consequent modification of the lower bowel so advanced, that there can be no doubt but that alimentary stasis preceded the onset of diabetes. This was the case in a patient, mentioned by the writer, whose duodenum showed strong antiperistaltic movements. The increase in size of the upper part of the small intestine is held by Mutch to be the predominant change in the alimentary canal in these diabetic cases, while lower bowel delay and duodenal regurgitation, although present, are not sufficiently pronounced to account for the enlargement. He gives particulars of observations on the duodenal contents removed at laparotomy in a variety of conditions, and adds the following summary of the facts substantiated in his paper: (1) Diabetes mellitus is associated with great enlargement of the duodenum which cannot be accounted for wholly by coincident intestinal stasis. (2) A profuse growth of *Streptococcus brevis* was obtained from the duodenum of a boy suffering from severe diabetes. Such an infection has not been found in any other condition. (3) Ileal stasis is usually present in diabetes mellitus, and, in proportion to its severity, affects the prognosis adversely. (4) The urine of diabetic patients usually contains one or more products of the action of *B. coli* on tryptophane and tyrosin. In conclusion, Mutch suggests that the explanation of these phenomena is that chronic duodenitis is the determining factor in the production of diabetes mellitus, and that ileal delay increases the severity of the disease by causing stagnation in the duodenum.

PERSONAL AND NEWS ITEMS

The Military Hospitals Commission met in Toronto recently to consider the subject of accommodation for convalescent soldiers. Those present were Senator Lougheed, Sir Henry Pellatt, Lloyd Harris, F. W. Avery, S. White, C. Smith, J. S. McLennan, M. Siraia, W. D. McPherson, and W. K. George. Various institutions in Toronto were visited. As the patients are still soldiers, these hospitals will be run under military rules.

It is stated that Col. Alfred Gooderham, of Toronto, is founding a Canadian Red Cross hospital in England.

Drs. H. B. Anderson and H. A. Bruce, both of Toronto, have been appointed to organize the Convalescent Home for Soldiers.

There is to be a new hospital in Derbyshire, England, for convalescent Canadians. It will be under the Canadian Red Cross, and Dr. Hodgetts has made arrangements for the location of the hospital in Peak Hydropathic Institution at Buxton.

The Health Board of Windsor has refused admission to two children of Mr. McCallum because they had not been vaccinated. Mr. McCallum declares he will run as a trustee candidate on the anti-vaccination ticket to test opinion.

Toronto is passing through an epidemic of measles. Many of the cases are of a decidedly severe type.

The Canadian Government has offered, and the offer has been accepted, $50,000 in aid of the Anglo-Russian hospital fund. Queen Alexandra, who is taking an active interest in this work, has expressed her keen appreciation of this generous gift.

The offer of Laval University to equip a military hospital has been accepted by the War Office.

At a recent meeting of the Academy of Medicine, Toronto, a resolution was submitted and unanimously adopted, expressing approval of the action of the Provincial Government in placing serum and vaccine for the treatment of diphtheria and typhoid fever, free of charge at the disposal of the medical profession. This places Ontario in advance of any other Province or State.

Dr. E. L. Trudeau, who did so much for the advancement of the sanitarium treatment of tuberculosis, died in 15th Novembef at the age of 67 years.

Mrs. Isaac L. Rise, of New York, has given to the Beth Israel Hospital, of New York City, $1,000,000 for the establishment of a convalescent home.

Dr. A. M. Buchanan, of Glasgow, noted as an anatomist, died at the age of 71 recently. He taught anatomy for many years in Anderson's College, Glasgow.

The National Committee for the Prevention of Blindness in the United States has already accomplished much. Some 80,000 of the committee's publications have been distributed.

Dr. Charlton Bastian died on 17th November, in his 78th year. He was a noted authority on nervous diseases; and for many years he urged the view that life can originate without prior life. For him the dictum *omne vivum ex vivo* was not true.

The directors of the United States Bureau of Mines has announced that the price of radium has been reduced from $120,000 to $36,000 a gram.

The first operations for the sterilization of the feeble-minded were performed recently at the State Home for Feeble-minded, Wisconsin.

Dr. Harry Morell, editor of *The Western Medical News,* is acting as pathologist to the Duchess of Connaught Hospital at Cliveden.

Dr. Croll, of Saskatoon, is with Hospital No. 2 now in France. He has the rank of captain. This hospital has been ordered to some Mediterranean station.

Dr. J. A. Cullum, of the 26th, at the risk of his own life saved a number of Canadians from a crater caused by the explosion of a German mine.

Dr. John MacLean, C.P.R. surgeon at Swift Current, Sask., has gone to join the army as a surgeon.

Dr. H. F. MacKendrick, of Galt, who was in France in charge of 31 Casualty Clearing Hospital, had to return home on account of the severe illness of his wife, who has since died.

Lieut.-Col. Dr. W. T. Connell, who was in France with the Queen's University Hospital, returned some time ago for the work of the session, as he is in charge of the department of bacteriology.

Dr. (Capt.) James Roberts, of Hamilton, has been in charge of the military hospital at Lemnos since the retirement of Dr. Casgrain through illness.

Dr. Walter McKeown, of Toronto, who was a member of the staff of the University of Toronto Base Hospital No. 4, is in England, and has been appointed to organize a Canadian Medical Pension Board in England.

There are two base hospitals on the Island of Lemnos. It is about 30 miles from the Gallipoli peninsula.

The many friends of Dr. Allen Baines will have learned with much regret of the death of his wife.

Ford City, Ontario, raised $75,000 for the Canadian Red Cross Fund. This was $34 per head of the population.

Queen's University fears that it may have a deficit of $30,000. A deputation waited upon the Government and laid the case before the members of the Cabinet.

A deputation consisting of Hon. Sir E. B. Osler, Mayor Church, Controller Thompson, Dr. C. K. Clarke, Mr. J. K. MacDonald, Dr. Helen MacMurchy, Dr. C. M. Hincks, Rev. Lawrence Skey and Mrs. Meyers waited upon Hon. W. J. Hanna and pressed the claims of the feeble-minded. Mr. Hanna received a report from the deputation and said he would take the matter up with his colleagues. He said it was a large and an important matter and should not be done by half measures.

Dr. W. J. Charlton has been re-elected Mayor of Weston by acclamation.

Dr. J. T. Fotheringham, of Toronto, who has been serving abroad with the rank of Lieut.-Col., has been appointed temporary colonel.

The Department of Justice has decided to appoint Dr. W. T. Connell as consulting physician and surgeon to the Provincial Penitentiary at Portsmouth. Dr. Robert Hanley will be attending physician. Both appointments take effect January 1st. Dr. Daniel Phelan retires after nineteen years' service.

Dr. Jaques Bertillon, director of medical statistics of the French army, in a special report, which he has prepared, states that the mortality among the sick and wounded in hospitals is only 18 in 1,000. Last year the mortality ratio was 53 to 1,000. In peace times the Paris hospitals show a mortality of 106 in every 1,000.

Dr. F. Etherington, in charge of the Queen's Military Hospital, located at Cairo, has sent word that the hospital will be increased from 600 to 1,000 beds.

Hon. Dr. T. S. Sproule, who sat in the House of Commons for East Grey for 37 years, has been made a Senator. With the exception of Sir Wilfrid Laurier he had the longest record in the Commons of any one now a member.

A permanent medical board for Exhibition camp, composed of Lieut.-Col. Acheson, Capt D. A. McClenaghan, and Capt. A. H. Rolph, has been appointed to examine and determine all cases of sick soldiers in camp whether they are fit or otherwise for service.

The Academy of Science, Paris, has announced a new remedy, apparently based on Dr. Ehrlich's "606," since it is derived from arsenic.

A chemist named D'Anysz is the discoverer. It is said that the remedy is more active and less dangerous than "606." The discoverer has decided for the time being to call his remedy "102."

Dr. B. D. Munro, of Toronto, had a very painful experience when his car accidentally struck Camp Policeman Baker, and crushed him to death between the car and a girder of the Dufferin Street bridge.

Dr. Alexis Carrel, of the Rockefeller Institute, famous for his feats in surgery, and who recently discovered a "perfect antiseptic" for use in the treatment of wounds, will be honored by the French Republic. Announcement is made that he will receive the next promotion to the rank of officer in the Legion of Honor.

Dr. James A. McCammon, sheriff, has been appointed officer commanding the 156th Battalion to be raised in Leeds and Grenville.

OBITUARY

ALGERNON WOOLVERTON.

Dr. Woolverton, of Hamilton, died in Florence, Italy, 9th December, where he had gone for his health, which had been in poor condition for two years. Dr. Woolverton was well known in this city, and was a son of the late Dr. Woolverton, of Grimsby. He was a graduate of the University of Toronto, and for several years was medical superintendent of the old Federal Life Association. He served on the local Board of Education and Library Board, being chairman of the latter for a term. In his earlier days he took an active interest in sports and was a good cricketer and lawn bowler. He is survived by his wife and one daughter, who resides in Boston. The Library Board sent a message of condolence to his wife.

ALFRED BOWLBY.

Dr. Alfred Bowlby died at his home in Waterford, Ont., on 22nd November, having attained the great age of 95 years, 2 months and 13 days. He had been ill about three weeks; previous to which he had enjoyed a life practically free from any bodily ailment. He retained the possession of all his faculties in a wonderful degree and was able to continue the practice of his profession as a physician until the last.

Dr. Bowlby was born at Round Plains, on the Windham side of the road, in the year 1820, and in Norfolk county he spent all his long life. His father, Adam Bowlby, was born on the Annapolis River, some sixty miles from Halifax, on a farm taken up by Dr. Bowlby's great-grandfather, John Bowlby, at the close of the Revolutionary War. Adam Bowlby came to Norfolk in the wake of an uncle, Thomas Bowlby, who had settled in Woodhouse, towards the close of the eighteenth century. John Bowlby, the founder of the family in America, lived to be within a few days of one hundred years; his son, Richard, was upwards of 80 at his death; the doctor's father, Adam Bawlby, son of Richard, lived to be almost 91.

Of his father's family there still survive Ward H. Bowlby, of Berlin, County Crown Attorney of Waterloo country; J. W. Bowlby, K.C., of Brantford, and Mrs. Powell, of Ottawa, widow of Col. Walker Powell, ex-Adjutant-General of Canada, whose death took place at Ottawa recently.

He is also survived by his widow and by two sons, Arthur, of Waterford, and Russell, of Toronto, and two daughters, Mrs. J. E. Reynolds and Miss Maggie Bowlby, of Waterford.

Dr. D. A. Bowlby, of Simcoe, is a nephew, his father, the late William Bowlby, having been the second of Adam Bowlby's five sons.

In a column of reminiscences furnished the *Waterford Star* on the occasion of his celebrating his 84th birthday, Dr. Bowlby said that as a lad he went to school in the county about Round Plains for two years. He then attended for two years the Simcoe Grammar School, kept by Rev. George Salmon. Afterwards he real medicine with Dr. Park, of Simcoe, for two years, then going first to New York, then to McGill College, Montreal, from both of which places he obtained degrees. He opened an office in his father's house in Waterford and began practice in 1846. He continued it down to 1915, a period of 69 years—truly a wodnerful record.

JOHN L. BRAY.

Dr. John L. Bray, for 42 years a physician at Chatham, Ont., and a former president of the Canadian Medical Association, died in St. Joseph's Hospital, London, on 25th November, in his 75th year. He was a member of the Medical Council of Ontario for the very long period of 35 years. He was born at Kingston and was a graduate of Queen's University, which institution in 1906 conferred upon him the degree of LL.D. In 1907 he was appointed registrar of the Ontario College of

Physicians and Surgeons, Toronto, which position he gave up in June, 1914, because of ill-health. The late Dr. Bray was for six months an army surgeon in the Southern Army during the American Civil War. He is survived by his widow and three sons, Dr. R. V. Bray, of Chatham; J. M. Bray, of the Bank of Montreal (London), and W. T. Bray, of New York.

JOSEPH WILLIAM ROWAN.

Dr. J. W. Rowan, a well-known Toronto physician, died on 26th December at his home in Toronto, at the age of 55 years. He had practised in Toronto for 25 years. He had a large practice and his health became impaired. For some months prior to his death he suffered greatly from a nervous break-down. He was an active member of Woodgreen Methodist church. Dr. Rowan was truly beloved by his patients. He studied in Trinity Medical College and graduated from the University of Toronto. He leaves a widow and two children.

BOOK REVIEWS

YOUR BABY.

A Guide for Young Mothers. By Edith B. Lowry, M.D., Author of "Herself," "The Home Nurse," etc. Chicago:Forbes & Company, 1915. Price, $1.00.

This is a book which every young mother and prospective mother in the land should read; for it makes motherhood easy and will remove the fears and troubles of many women. Everything which a mother wants to know and must know regarding the care of herself and her baby is clearly told in this helpful book. It shows how to avoid mistakes, what to do and what not to do.

This book contains the latest and best approved methods for the care of the baby—its feeding, clothing, exercise, sleep and training. It is full of common sense help and facts that many mothers might overlook. Like all Dr. Lowry's books it is permeated with an earnest spirit of helpfulness and wise, sane direction. If a prospective mother can have only one book on the subject of maternity and infancy it should be this safe and practical guide by Dr. Lowry, who is an authority of long experience in the health care of women and children.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., and Leighton F. Appleman, M.D. Vol. iv., December, 1915. Philadelphia and New York: Lea & Febiger. Price, paper covers, annually, $6.00.

The volume, a really excellent one, deals with Diseases of the Digestive Tract, Diseases of the Kidneys, Genito-urinary Diseases, and Surgery of the Extremities, Shock, etc. We can cordially recommend this series. No issue is ever disappointing. It gives a very able review of the quarter's progress.

BIRTHS, MARRIAGES AND DEATHS.

Report Relative to Registration of Births, Deaths and Marriages in the Province of Ontario for the year ending December 31st, 1914.

The volume gives the usual amount of carefully prepared tabular matter. The population of Ontario is estimated to be 2,749,840. The death rate was 11.8. The birth rate was 24 per 1,000 of the population. The number of marriages was at the rate of 8.8 per 1,000. The report should be carefully studied by all who wish to obtain a clear idea of the vital statistics of this Province.

THE TUBERCULOSIS ASSOCIATION.

The Fifteenth Report of the Canadian Association for the Prevention of Tuberculosis, 1915.

This report contains much information on the prevention of tuberculosis and sets forth the excellent work that the association has done and is doing. No doubt much of the merit of this report is due to Dr. George D. Porter, the energetic secretary. We hope that many will read this report, as the spread of the information it contains would prove very valuable.

MISCELLANEOUS

PRIVATE SANATORIUM FOR TUBERCULAR PATIENTS.

Dr. C. D. Parfitt, of Gravenhurst, Ont., who for fourteen years has been engaged in tuberculosis work, is about to have much improved facilities for taking care of patients.

A number of interested friends have recognized the need of first-class accommodation for patients and of enlarging his opportunities for work and have combined to form a company to build a private sanitarium in order to satisfy these needs. The building is now nearing completion and will be ready to receive patients in the early spring.

Calydor Sanatorium, pleasantly located on Lake Muskoka, promises to be all that could be desired for the purpose, as convenience and comfort have been most carefully studied. Present accommodation is for twenty-one patients. The rooms are large and well lighted. Each room has a private, protected balcony. Beds may be wheeled from room to balcony through French doors so that in winter the patient may go to bed in a warm room and be wheeled out of doors for the night by the orderly. Several pairs of rooms, with private bathroom, may be thrown *en suite*, thus facilitating the association of patient with relatives. An elevator will increase the liberty of patients who can undergo but slight exertion. The building will have abundant heat for the coldest weather, and this fact, along with the conveniently arranged rooms and verandahs will make it a pleasant place for taking the "cure" in winter. The kitchen and diet room are equipped with all conveniences for providing a good table, getting hot meals to bed-patients, and for sterilizing dishes. A modern signal system will ensure prompt attendance of nurses.

The medical equipment includes a thoroughly modern laboratory, X-ray room and throat room, and will afford all facilities for the study and treatment of tuberculosis.

LETTER FROM SURGEON-GENERAL J. A. ROBERTS.

Surgeon-General J. A. Roberts, director of the No. 4 Canadian General Hospital (University of Toronto), now at Salonica, writes to a friend in Toronto under date of November 16th, as follows:

"We disembarked on Wednesday last about 2 p.m., and after going to the cable office and sending a message, I came out to our hospital site. It is situated on the Monastir road, about 4½ or 5 miles from the city. Behind us to the north there is a range of big mountains. In front, 4 miles away, there is the sea. To the east lies the city, and to the west lies Serbia and Bulgaria.

"Our camp site is a very good one. From the back of the site the land slopes gently down towards the sea, so that the drainage can be easily arranged. Being the first general hospital to land we have been given the choice site, and are to have hospital huts erected as fast as

they can be supplied. For the present we will work under our canvas. The weather is in great contrast to that of Malta and Egypt, and is decidedly cold at night, but we manage to keep quite comfortable, as we have plenty of blankets along. At first of necessity we had to rough it a bit, and live on bully beef and biscuits, but in a couple of days had the mess running and now we are getting good plain food, well prepared.

"There has been an endless amount of work to be done, and we have been on the go practically night and day. The transport people moved all our equipment at night, and we had to have a party at the wharf and have another here. During the day we are busy pitching our tents, laying out the camp, arranging and unpacking our stores, getting our kitchens established and trying to arrange some order out of the awful chaos that exists.

"You may scarcely believe it, but within 30 hours of the time we landed from the boat, we admitted several patients, and within thirty-six hours had fifty of them. They have been arriving steadily ever since, and we now have about 125. We are placing our hospital canvas as fast as we can, and placing beds and bedding almost as soon as the tents are standing. In this way we have already 220 beds ready for occupation.

"There are plenty of troops in the area for us to draw from, and each night we get a consignment from the front, so I fancy when we are established it will not be long before we are running at capacity. We are certainly a really lucky unit to have this opportunity.

"It looks like real action in this area, and we are in the midst of it, as we could never be in France.

"All our officers are delighted at the prospects of being able to do so much valuable work, and they are so keen to see the hospital in running order that one and all are pitching into the work and getting up the tents and furnishing the various departments.

"Besides all the above, we have pitched the officers' encampment, and to-morrow hope to get up that for our nurses, who are now in Malta and Alexandria, but I have sent for them, and they are to arrive about next Friday. I will have everything comfortably fixed up for them long before that time, so they will be called upon to do as little roughing-it as can be avoided under the circumstances.

"It is my intention to have the huts for the nurses erected as early as possible, and then they should be fairly happy.

"Major Hendry has been the greatest comfort imaginable to me. He and Middleton have looked after the erection of the canvas and have certainly made it grow at a great rate."

WILKINSON v. HAYES. JUDGMENT BY MR. JUSTICE R. C. CLUTE.

SARNIA AUTUMN ASSIZES, 1915.

Judgment.—I feel no reasonable doubt about this case. The onus was upon the plaintiff to establish her case. This, I think she has failed to do. There is no reason that I can see why I should not receive the evidence of Dr. Brandon. It is in conformity with that of the plaintiff herself. He says that she authorized it to be done, and that he told Dr. Hayes to perform the operation on both breasts. Dr. Hayes had not understood that before; he said he would not do it. I do not believe that would have occurred if the fact had not been as it actually was, namely, that he was authorized. So that as to that point I accept the evidence of Dr. Brandon as consistent with the facts, and I think that Dr. Hayes did precisely what he was told to do; and, if it were necessary, I should find that he was authorized by Dr. Brandon to do what he did; and, being authorized, that he was justified in doing what he did. having regard to the professional relationship that existed between Dr. Brandon and the plaintiff. Then there is the evidence given by Dr. Ferguson—their own witness—that the injuries complained of could not be attributed to the operation. And there is no other evidence to support the plaintiff's evidence that this is false. So that I think on all points the plaintiff has failed. She did not realize that a wrong was being done. It is impossible for me to think that she would have remained in the hospital, the doctor visiting her from day to day and not a word of complaint if the wrong complained of had been done her. If I had to hold on that point I should have no hesitation in saying that I should think what Dr. Hayes did was good practice, whether he was authorized or not, having regard to the malady and the danger which would be incurred if he did not do it The action must be dismissed.

LOSES VACCINATION CASE.

The Judicial Committee of the Privy Council, London, has dismissed the petition of Mrs. Roilard for special leave to appeal against the judgment of the King's Bench, Quebec, in favor of the city of Montreal. Mr. Hafleur, K.C., who appeared for the widow, said the case raised for the first time before the courts of the Province the question of the responsibility of municipal corporations arising out of the enforcement of compulsory vaccination by-laws. The petitioner brought

action against the city of Montreal, claiming $10,000 damages on the grounds that she was obliged to cause her son to be vaccinated, that he was vaccinated by medical men employed by the city of Montreal with vaccine supplied by the city, and that owing to alleged negligence and bad quality of the vaccine used her son's health was so seriously and permanently impaired as to prevent him from earning his livelihood. The city denied negligence, and pleaded that the boy was vaccinated with care and skill, and that the vaccine was the best in existence.

VITAL STATISTICS OF TORONTO.

Deaths show an increase of 61 for the month of November, while marriages dropped by 16 and births by 124. The figures are as follows:

	Nov., '15.	Oct., '15.	Nov., '14
Marriages	408	495	424
Deaths	518	455	457
Births	1,039	1,015	1,163
Deaths from contagious diseases:			
Smallpox	0	0	0
Scarlet fever	0	0	1
Diphtheria	3	5	20
Measles	6	4	0
Whooping cough	3	1	0
Typhoid	2	7	2
Tuberculosis	20	22	31
Infantile paralysis	0	0	0
Cerebro spinal meningitis	1	1	0

METHODS OF DEALING WITH DEFECTIVE PUPILS.

Dr. A. MacKay, chief medical officer of the Toronto Board of Education, recently visited New York, Philadelphia, Buffalo, Cleveland and Rochester, and has reported as follows, as the result of his observations:

1. A careful survey of all classes to find out who are two or three years retarded.

2. Place these pupils in ungraded classes in charge of competent teachers, work taught to be adapted to the pupil.

3. A thoroughly competent psychologist should be appointed to take charge of the work.

4. Every pupil should undergo a thorough physical and mental test. (a) Binet test for children three years behind above nine. (b) Binet test for children three years behind below nine.

5. Measures should be taken to remedy any physical defects.

6. Pupils in these classes should be under observation long enough to determine mental ability and trend of mind.

7. These observations should be made by the teacher, principal, medical inspector, nurse and psychologist.

8. When the child's mental ability is determined he should be assigned to either (a) regular grade work, (b) to an institution, or (c) to a vocational class or some other special class for sub-normals.

9. I saw three types of these classes, (a) Special industrial classes for boys, (b) special industrial classes for girls, (c) special mixed classes for younger children.

10. When these children in the special classes for sub-normals are beyond school age two alternatives are before us: (a) Institution, (b) work at home or at some vocation where careful supervision is possible.

If these conditions cannot be fulfilled he thinks the only alternative is a special institution to take care of the defective children.

SAUNDERS' CATALOGUE.

W. B. Saunders Company, publishers, of Philadelphia and London, have just issued their 1916 eighty-four page illustrated catalogue. As great care has evidently been taken in its production as in the manufacture of their books. It is a descriptive catalogue in the truest sense, telling you just what you will find in their books and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 300 titles, including 45 new books and new editions not in former issues. A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

MEDICAL PREPARATIONS

CARYZA—ACUTE NASAL CATARRH.

This condition is manifested by a local congestion of the nasal mucous membrane, with an infiltration of serum into the tissues and later an exudation on the part of the musous membrane.

The local treatment calls for a remedy capable of relieving the engorgement of exosmosis, which can never be relieved by the use of acid or astringent preparations.

The use of Glyco-Thymoline in these cases purges the musous membrane, relieving the congestion, and then by stimulating the local capillary circulation to renewed activity prevents a re-engrogement.