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Original Communications.

THE MEDICAL TREATMENT OF EXOPHTHALMIC GOITRE.

By R. D. RUDOLF, M.D., (EDIN.), M.R.C.P.,
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Perhaps it would be better to call this communication "Notes on the Non-Surgical Treatment of Graves' Disease." The reason for this distinction is the fact, which dawns the brighter the more one sees and studies the course of these cases, that many (some say the majority) of them tend to improve and even recover completely under the most varied forms of treatment. It might even be correct to say that the disease tends to recovery in spite of some treatments!

An immense variety of treatments have been tried and advocated in this condition, each one in its turn to be followed by a list of cures, and then of others, which have not so improved. It is often said that whenever one finds a great number of treatments recommended for any disease, one may conclude that none of them are very satisfactory. This is very true, yet it by no means follows that that disease is therefore hopeless, or unlikely to be recovered from. What disease calls for a greater variety of treatments than a cold in the head? and yet the prognosis is good, and we all recover from it under the influence of, or in spite of, the treatment of almost every friend we meet.

The first point, then, that I would advance is that there exists in Graves' Disease a strong natural tendency towards recovery. Hence, in order to give full credit to that most

*Read at Meeting of Ontario Medical Association, Toronto, June, 1905.

powerful ally of ours, the *vis medicatrix naturae*, emphasis is here laid on this natural drift of the condition towards cure. Dr. Norris (Hare's "System of Practical Therapeutics," Vol. 2., p. 850) puts this idea in other words, when he says that "a placebo often gives good results, and many good results from various drugs, no doubt, are thus explained."

Bristowe states that the disease is not usually dangerous to life and that when death occurs it is usually due to some intercurrent affection. Fagge states also that most cases eventually recover, and that he knew of few deaths. G. R. Murray (*Lancet*, Dec. 13th, 1902) found that out of 40 consecutive cases of his own, 31 progressed favorably and 7 died. W. M. Ord and Hector Mackenzie (C. Allbutt's "System of Medicine," Vol. 4, p. 502) came to the conclusion that about 25 per cent. of all well-marked cases ended in death; that about 50 per cent. attain more or less complete recovery; and that the balance of 25 per cent. remain in *statu quo* or only slightly improve.

The general opinion, then, as judged from literature, is that few cases die directly from the disease, but that many do so from intercurrent affections, and that, while the cases are hard to keep track of, about 50 per cent., more or less, recover eventually.

The essential nature of the disease is uncertain, but the favorite theory is that most of the symptoms are due to an excess of thyroid secretion circulating in the blood; in other words, the patient is suffering from thyroid poisoning, and is, in fact, in a condition the very opposite of myxœdema. She is intensely nervous and emotional, and the least physical, mental or emotional excitement sends her already fast pulse up and produces flushing and perspiration. It is most essential that such a case should be put at rest; perhaps not in bed, although this is often the best at first. She should be kept mentally, physically and emotionally quiet.

The state of the general health should be raised as high as possible, and anæmia, constipation, and any other abnormal condition should be carefully attended to.

The diet should be plain and good, and all stimulants had better be omitted, including tea and coffee.

Beyond these general methods of raising the tone of the patients, our endeavors may be classed under two headings:

1. To prevent the excessive production of thyroid secretion; or to neutralize the poisonous amount of it that is circulating in the blood.

2. To treat the symptoms as they arise.

In the first class come operative measures on the thyroid gland, such as removal of part of the over-functioning organ. Less radical measures than operative ones have for long been in vogue, with the object of checking the over-activity of the gland, among which may be mentioned pressure over the organ and the application of cold, either in the form of ice or by means of Leiter's tubes. The employment of electricity, either as Galvanic or Faradic current, probably may be classed here.

There is no certain way of neutralizing the excessive thyroid secretion in the blood. Possibly the use of thymus gland extract might be mentioned as one, as this material has in many ways the opposite action to the thyroid secretion, but the results of its use have not been encouraging. The administration of thyroid gland was suggested some years ago by Professor Jones. Theoretically it seemed quite wrong to give more of what was already in excess in the blood—much like giving alcohol to cure drunkenness—and yet good results occasionally followed, although oftener the reverse. Later, Professor Jones found that what he had really been using was the thymus gland. It seems that the butchers had been asked to supply portions of the large gland in the neck of the calf, and, as under one year of age the thymus gland is as large as the thyroid, the mistake arose.

A treatment which has been tried in Germany, and occasionally elsewhere, is the administration of the blood, or blood serum, or even the milk of animals from which the thyroid gland has been removed some time before. The idea is that the use of the thyroid secretion in the blood of the normal individual is to neutralize certain toxins which have been produced elsewhere. In thyroidectomized animals these toxins have accumulated—being unneutralized—and, when the blood of such is administered to a person suffering from Graves' disease, the excess of toxins thus introduced neutralizes the superabundant thyroid secretion and thus relieves the thyroid poisoning. There seems to be a great margin for error here, and the results have not been encouraging, although, as usual, a certain number of cures are reported. G. R. Murray tried the treatment in two cases last year with negative results.

One theory of the nature of the disease (that of Gley) is that in it the parathyroid glands are not acting properly—not controlling the secretion of the thyroid—and that there-

fore this gland is overfunctionating. W. G. MacCallum, of Johns Hopkins University, agreed that Graves' disease might be due to such a cause, and thought that therefore the giving of an extract of parathyroids might be beneficial. He had tried it in one case with great benefit for a time, but the patient unfortunately died of an intercurrent tuberculosis.

Recently, Dr. J. J. Walsh, of New York (*American Medicine*, May 25th, 1905) reports some cases in which he used this treatment without any benefit. Since then Dr. MacCallum writes (*American Medicine*, June 10th, 1905) that he has examined the parathyroids in nine cases of Graves' disease and has found them to be practically normal in all. He concludes that "after all there is no sufficient basis for the idea that insufficiency of the parathyroids plays any important part in the production of the symptoms of exophthalmic goitre."

Seeing then that we are so powerless as yet to check the excessive secretion of the thyroid gland or to neutralize the abnormal amount of the secretion in the blood, it only remains for us in most cases to treat the symptoms as they arise. And by so doing we do not merely mark time until such time as the natural return to health is likely to occur. By placing the patient at rest, soothing the nervousness, etc., we undoubtedly hasten this return to health, and even may in some cases so alter the balance as to cause a return to health when otherwise it might not occur, and thus may make the difference between life and death.

An immense number of medicinal remedies have been used from time to time, and it would serve no useful purpose to enumerate them here.

Of those that I have personal experience of, the most generally useful have been belladonna and the bromides. Under moderate doses of these the patients usually quickly become less nervous. Ramsay (*Glasgow Med. Jour.*, 1891), after a very exhaustive study of the subject, came to the conclusion that belladonna is the most valuable drug that we can employ.

Theoretically, digitalis and ergot should do good, by toning up the blood vessels and slowing the rapid heart, but though some good results have been reported, on the whole they are disappointing, and digitalis often seems to do harm and is here peculiarly apt to disturb the stomach. Strophanthus is not so open to this objection.

The employment of preparations of iron has given rise to much divergence of opinion, some thinking that it is most

valuable, while others condemn its use. When anæmia exists, as is often the case, it seems only rational to employ the drug, not for the treatment of the symptoms of Graves' disease, but in order to get the blood into a better condition.

Arsenic and phosphorus are often used for their tonic effects, and it is interesting to note that an Italian worker, Dr. Luigi Macaggi, found by experiments on dogs that both of these drugs lessen the secretion of the thyroid gland through changes produced in the epithelium. Be this as it may, it is quite certain that they have no powerful action in this way when used in medicinal doses.

To recapitulate, the non-surgical treatment of exophthalmic goitre may be summarized as follows:

1. First, and *most important*, the patient should be placed in a state of physical, mental and emotional rest. If the case be at all acute, she had better be kept entirely recumbent, as the upright position will greatly hasten the heart's action.

As a rule these cases do better away from home, either in a hospital or sanitarium. In some cases the strict régime of the Weir Mitchell treatment is advisable.

2. By careful dieting, and in every way possible, the general health should be raised, and anæmia, constipation and every other deviation from normal must be attended to. As has already been mentioned, very few cases of Graves' disease die from the disease itself; death, when it occurs, being due to some intercurrent affection—hence the need of looking after the general health. The climate at a moderate elevation seems to be specially beneficial, and hence such a location should be chosen whenever possible. Nothnagel considers "a sojourn in a place of moderate elevation as most important."

3. Various local applications may be employed, such as pressure to the thyroid gland, or a mild Galvanic or Faradic current; but probably the most valuable local treatment is the application of cold to the thyroid gland, or to the precordium, either in the form of an ice-bag, or as Leiter's tubes. Such use of cold often greatly controls the rapid action of the heart.

4. As regards medicinal remedies, these will vary greatly with the practitioner. Nearly every man has some remedy which he specially relies on; which fact proves, as has been said, what a secondary place all drugs take in the treatment of this condition. Personally, I like to give a mixture of belladonna (10 to 15 minims of the tincture, thrice daily) combined with strontium bromide, and feel convinced that the

patients soon feel very much more comfortable as a result of such remedies.

5. Any special symptoms, such as threatened heart-failure, urgent diarrhea, etc., must be met with appropriate remedies.

Under such hygienic and medicinal treatment most patients will slowly improve, and some will completely recover. But the majority will retain some traces of the disease, such as cardiac irritability, general nervous instability, and some exophthalmos.

The disease is a prolonged one, and the patient requires much patience and all the encouragement that the attendant can give; the latter should resort to mental therapeutics as much as possible.

Lastly, a few cases will get worse, and in a few of them surgical aid seems to be indicated; but this must not be lightly undertaken, as the immediate danger is considerable, and the results are by no means always satisfactory. Kocher has reported many cases now, in which operation has produced very brilliant results; but Ehrlich is much less enthusiastic, and mentions eight cases in which partial extirpation of the thyroid had been done. Several of them were not relieved, or suffered a recurrence of the old symptoms after a temporary relief. Ord and Mackenzie (Clifford Allbutt's "System of Medicine," Vol. 4, p. 502), reviewing the cases operated upon up to a few years ago, conclude that "If we compare the results of operation with those of other methods of treatment, we find no striking difference, except in the death-rate of 12 per cent., due to the operation."

The several cases in which I have seen the most marked benefit from operation have been ones in which a tumor has been present in the thyroid—*e.g.*, a fibroid—and Graves' disease has resulted. Here the tumor seems to have acted as an irritant, causing an overactivity of the gland, much as a foreign body in the eye will produce an excessive secretion of tears, and the removal of this source of irritation by operation has been followed by complete relief of the symptoms.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.*

BY CHARLES B. SHUTTLEWORTH, M.D., C.M., F.R.C.S. (ENG.),

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The surgical treatment of Graves' disease has attracted considerable attention during the last quarter of a century, mainly because the results of medical treatment, whether hygienic, dietetic, medicinal or electrical, have never been entirely satisfactory. A host of remedies have been recommended, but they merely relieve the symptoms, or hold the disease in check, and only in exceptional instances bring about a cure. This may be explained by the fact that we are yet ignorant of the underlying causes of exophthalmic goitre. The theories which have from time to time been advanced will not satisfactorily account for the many and diverse manifestations of the disease.

Our medical authorities consider the prognosis serious and, when the disease is well established, hold out little hope of recovery. Osler is of the opinion that operative measures seem to offer the greatest relief. It is not my intention, however, to advocate surgical treatment for every case of Graves' disease, regardless of all conditions, both local and general, but only in well selected cases and especially where internal medication and other therapeutic measures have been given a fair trial but without success. All the various phases of each individual case must be given every consideration, and the general rules which govern the surgeon in operating upon any part of the body must be strictly applied. Until we have the desired pathological knowledge of Graves' disease, we cannot hope to treat all cases on a rational basis, but in the meantime, our past experience must, to a large extent, be our guide and the treatment must be more or less empirical.

The different surgical measures for the cure of exophthalmic goitre have all the same object in view, namely, to lessen the size of the thyroid gland. Whether the gland is responsible for all the symptoms is subject to much debate. There is one case on record (Hinckman) where, on autopsy, the thyroid was found absent, although a parathyroid may have been present. Kocher, of Berne, states that he has never seen a well-developed case of Graves' disease without a goitre,

* Read at Meeting of Ontario Medical Association, Toronto, June, 1905.

and Mayo, of Rochester, Minn., says that even in cases without apparent goitre, a careful examination usually discloses a small unilateral or bilateral tumor, which lies deeper, but is firmer than normal.

The exhibition of thyroid extract does not give rise to Graves' disease, although it certainly produces some of the prominent symptoms.

Dr. Crile, from his experiments on blood pressure, believes that the normal tone of the vessels is maintained, first, by a nervous mechanism through the vaso-motor system; and secondly, by the action of the internal secretions, an equilibrium being probably established by the opposing action of the secretions of the suprarenal capsules and the thyroid gland, the former bringing about constriction and the latter dilatation of the blood vessels. If this supposition be correct, two of the main operative procedures for the cure of Graves' disease rest upon a scientific basis, namely, partial thyroidectomy, to lessen the size of the over-secreting gland, and cervical sympathectomy to cut off the nerves which send to the thyroid its vaso-constrictor, dilator and secretory fibres.

Three main theories have been advanced as to the probable cause of exophthalmic goitre, namely, excessive thyroid secretion, changes in the central nervous system or primary alteration in the sympathetic system. Against the second theory it is held that no pathological lesions have been found in the cerebral centres. If the third theory be correct, operation on the sympathetic nerve in the neck should be curative. Excision of the cervical sympathetic, with its ganglia, does, undoubtedly, bring about changes in the vaso-motor control of the vessels which supply the thyroid gland, and also alters the nervous influences on the heart. It moreover relieves the exophthalmos, which MacCallum and Cornell, of Baltimore, have shown to be due to the contraction of a cone of smooth muscular fibres which surrounds each of the eyeballs, and not in any way due to vascular engorgement posterior to the globes. Thus sympathectomy probably relieves the three card-disturbances, symptoms which may also be noticed when exophthalmos.

The theory of hyperthyroidization, or even altered thyroid secretion, is supposed to exert a toxic action on the heart, nervous system and general nutrition. Many cases of cystic goitre show tachycardia, slight exophthalmos, and vasomotor disturbances, symptoms which may also be noticed when excessive amounts of thyroid preparations are administered

internally. It is noteworthy that in myxedema, in which the thyroid gland is absent, that we have a train of symptoms opposed to those presented in exophthalmic goitre. This would indicate the thyroid gland as the main etiological factor in Graves' disease.

Mikulicz and Reinbach believe that the disease has its origin in the vaso-motor centres, but that the hypertrophy of the gland plays a prominent role by adding the phenomena of thyroidism to the other symptoms. This would explain the failure, in some cases, of thyroidectomy, which removes only one of the disturbing factors and still leaves untreated the nervous element, which, no doubt, is of considerable etiological importance.

If the disease is due to a combination of causes, partly nervous and partly thyroid in origin, then a combined thyroidectomy and sympathectomy would meet the indications.

The surgical procedures which have been proposed may be divided into two types: 1. Operations on the gland. 2. Operations on the cervical sympathetic nerve.

Belonging to the first type, many different methods have been adopted:

(a) Injection of iodine, iodized glycerine (Rehn), etc., into the gland. This method should be discarded on account of the danger of embolism, owing to the increased vascularity of the gland.

(b) Exothyropexy, recommended by Jaboulay, of Lyons. The operation consists of exposing the gland by free incisions over it, partly raising it from its bed, and leaving it exposed in the open wound, covered only by the dressings, to shrink and atrophy. This mode of treatment has never become popular, is slow and dangerous, and does not appeal to modern surgeons.

(c) Ligation of the thyroid arteries. This proceeding, which was recommended by Wolfler, for ordinary goitre, is advocated by Kocher for the exophthalmic variety. He usually ligates both superior and one of the inferior thyroid arteries, fearing post-operative myxedema, if all the nutrient vessels are tied. This operation may be combined with partial resection of the gland at the same time: or the gland may be dealt with at a subsequent period, especially in those cases where, after rest, the initial symptoms remain intense. The primary ligation of the arteries renders subsequent resection of the gland much easier, as the danger of hemorrhage is lessened. The superior thyroid arteries are easily reached,

not so the inferior pair, which, in many cases, require luxation of the gland upon the surface before they can be reached and tied without the danger of including the recurrent laryngeal nerves. Rehn, Mikulicz, Reinbach, Rydygier, and Kocher have reported cases successfully treated in this way.

(d) Thyroidectomy. The operation which gives the best results is, without doubt, the removal of the lobe of the thyroid gland which is most diseased. The incision may be either a straight one, four inches in length, along the inner edge of the sterno-mastoid, or else an angular one (Mikulicz) or U-shaped (the collar incision of Kocher), along the anterior border of the sterno-mastoid, around the lower part of the tumor, and then up on the anterior edge of the opposite sterno-mastoid. The two latter incisions give free access to the isthmus and do not involve division of any of the deeper muscles, and moreover, the resulting scar is low and not easily seen. This flap, formed of skin, subcutaneous tissue, platysma and deep cervical fascia, is dissected upwards, all vessels cut being immediately tied. The sterno-mastoid is now retracted outwards, and the sterno-thyroid and sterno-hyoid muscles drawn aside or cut, if necessary. The pretracheal fascia, which invests the gland (the capsule of some writers), is now opened by a vertical incision in the median line and the gland is freed from its bed with the finger. This often causes considerable hemorrhage, which can be considerably lessened by first ligating the superior thyroid artery, which enters at the top of the gland, often in several branches, all of which must be separately tied if the main trunk cannot be reached. The true capsule of the gland must, on no account, be opened, or the wound will be immediately flooded with blood and this hemorrhage is with difficulty controlled. The inferior thyroid artery is next dealt with by gradually luxating the gland toward the median line. Care must be taken not to include the recurrent laryngeal nerve with the artery. This nerve, according to Sifton, of Milwaukee, is situated one-quarter of an inch further back on the left side and not so liable to injury. The artery should be secured as far away from the gland as possible to avoid including the nerve. All large veins must be tied to guard against the possible subsequent formation of a large clot in the wound. All pressure forceps may now be removed, as the circulation is fully under control.

On account of the friability and vascularity of the gland, great difficulty is experienced in holding it with any instrument, without causing laceration and hemorrhage. Wither-

spoon (*Jour. A. M. A.*, July 25th, 1903) advises that after exposing the anterior surface of the gland, that heavy mattress sutures be passed from side to side through it, and when these are tied, the forceps catch better, and there is not the same risk of hemorrhage from any slight glandular laceration. The isthmus, which is usually broad and vascular, is next ligated with silk. After the wound is rendered dry, the deep fascia and any cut muscles are brought together with fine cat-gut, and finally the skin is stitched with a subcuticular horsehair suture. If there has been much manipulation of the tissues, causing subsequent oozing, or if deep planes have been extensively opened up, drainage must be provided for the first forty-eight hours, by passing a small tube from the lowest part of the wound through a puncture in the skin just above the suprasternal notch (Cheyne): otherwise experience has shown drainage to be unnecessary.

(c) Operations on the sympathetic nerves. In 1859, Alexander, of Edinburgh, resected the superior cervical ganglion for epilepsy. In 1896, Jaboulay, of Lyons, first divided the sympathetic for Graves' disease, and later in the same year, Jommesco, of Bucharest, excised both the superior and middle cervical ganglia for exophthalmic goitre, chronic glaucoma, and epilepsy. The results were, however, insufficient, and the operation was extended until complete bilateral resection of the entire sympathetic with its three ganglia was advocated. Kocher, in some cases, combined sympathectomy with partial removal of the thyroid or ligature of the arteries. Sympathectomy is highly spoken of by Curtis and Deaver (*Annals of Surg.*, Aug., 1903).

This operation is performed on the supposition that nervous influences are responsible for Graves' disease: the tachycardia to irritation of the sympathetic branches which supply the cardiac plexuses with accelerator fibres; the goitre, to stimulation of the vaso-motor nerves to the thyroid gland, supplying the arteries and the secreting epithelium; the nervous and digestive phenomena, to permanent cerebral anemia caused by continuous excitation of the vaso-constrictor fibres of the cervical sympathetic passing to the brain mainly with the vertebral arteries. Section of these fibres produces cerebral congestion.

The sympathetic is approached by a long incision, either along the anterior or posterior border of the sterno-mastoid muscle, which, with the great vessels of the neck, are displaced forward and the nerve dealt with.

All operations for exophthalmic goitre are not without danger, due mainly to three causes, first, hemorrhage; second, acute thyroidism; third, the anesthetic.

The hemorrhage is attributable to the friability of the organ, the fine structure and dilated condition of the vessels causing great vascularity. Extreme care must therefore be taken in handling the gland until the main arteries have been secured, and every vessel, when cut, immediately tied. Hemorrhage undoubtedly stimulates the absorption of thyroid secretion, and also increases the danger of shock. Should much blood be lost, the quantity may be made up by the injection of saline solution. The cautery should not be used, on account of the risk of secondary hemorrhage.

The occurrence of post-operative thyroidism, or thyroid poisoning, is a most dangerous complication. The symptoms come on within twenty-four hours. The temperature rises even to 107 deg. F.; the pulse runs up to 130, 160, or higher; the respirations increase and may be of the Cheyne-Stokes' type; the patient becomes extremely nervous, tremulous, and perspires freely; tetany is often observed and death frequently occurs suddenly.

No satisfactory explanation of acute thyroidism has yet been offered. It is attributed to increased absorption of thyroid secretion from the wound, or to rough handling of the gland, pressing the secretion into the circulation. This, however, is negatived by the fact that the symptoms do not immediately ensue, and also that thyroidism occurs after sympathectomy, where the gland is untouched; and after tying the supplying arteries; or even after operations on other parts of the body, as on the pelvic organs. It would seem that the nervous irritability, combined with the results of the increased absorption of thyroid secretion are responsible for the symptoms. The treatment consists in saline injections, suprarenal extract, with atropine and morphine.

It is an established fact that patients suffering from goitre, especially the exophthalmic variety, take a general anesthetic badly. Many fatal cases from this cause have occurred during operation. On this account, many operators, as Kocher, Curtis, Witherspoon, and Ballin, consider the administration of chloroform and ether dangerous in goitrous subjects and have recommended and used local anesthesia quite extensively in their work. Mayo gives preference to ether, and reserves cocaine for the worst type of nervous cases. It has not been proved that cocaine increases the symptoms of Graves' disease,

an opinion advanced by Riviere and Edmunds. The formula used by Barker, of London, in which cocaine is replaced by the safer beta-cucaine, combined with adrenalin chloride, is much to be preferred.

Fenger points out that degeneration of the heart muscle will account for some of the sudden deaths, while the absorption of thyroid secretion, shock, anemia and general nerve exhaustion will account for most of the fatal cases not attributable to the anesthetic.

The results of the surgical treatment of exophthalmic goitre have, on the whole, been very satisfactory. Chas. H. Mayo (*N. Y. Med. Rec.*, Nov. 5th, 1904) reports 40 cases with 0 deaths. All of these had received prolonged medical treatment previous to operation. He reports 50 per cent. of early cures; 25 per cent. after some months, and 25 per cent. improved. In aggravated cases, he advises preliminary treatment by belladonna, and X-ray exposures. Curtis' report of Kocher's 59 cases gives a mortality of 4. In 1896, Starr collected 190 cases with 12 per cent. mortality, and Kinnicut, in the same year, 187 cases, with a death rate of but 7 per cent. I have been able to collect 9 cases operated on in Toronto during the last three years, with a mortality of 2, one at the time of operation and the other, in an asylum, after four months.

A perfect cure may be expected in 60 per cent. of the cases of thyroidectomy. Although sufficient time has not yet elapsed for us to judge of the permanence of the cure in Graves' disease by the operation of sympathectomy, an immediate good result appears to be the rule.

45 Bloor Street, East.

THE DUTY OF THE PROFESSION AND STATE AS REGARDS THE MENTAL AND PHYSICAL CARE OF IMPROPERLY CARED FOR CHILDREN.*

BY CHARLES J. HASTINGS, M.D., TORONTO.

Mr. President, Ladies and Gentlemen of the Ontario Medical Association,—When many of us entered upon the study of medicine, nearly a quarter of a century ago, the highest ambition of the profession was to cure disease, but the advances in medical science in that quarter of a century has placed the goal in a higher and nobler position, namely, the prevention of disease. However, the enormous rate of infant mortality throughout the civilized world, suggests the existence of an unpardonable apathy, or casts an awful blot upon the intelligence of both the profession and the state.

Vital statistics show that not 50 per cent. of all babies born alive ever reach maturity. In England there is one death in every five births before the child is a year old. Out of over 60,000 births annually in Paris, 30,000 die before they reach four years of age. In New York City, out of nearly 75,000 births, 20,000 die the first year. In the Province of Ontario, in 1903, out of 48,642 births, 6,700 died within the first year, and 10,162 before they had reached their fifteenth year. Now, a large per cent. of these die from malnutrition or improper feeding, through ignorance on the part of the mothers and those in charge, and are, therefore, largely preventable.

Education along this line must come from the profession, and the means by which it can be accomplished, from the State.

If the government were to spend even a fraction of the money spent on stocks and agriculture on the care and feeding of these poor mothers when they are carrying the children, and subsequently the children, if it can be shown that they can not be properly cared for or provided for in their own homes, the death-rate for the first year, at least, should be very much decreased.

We have in this fair Dominion of ours, conditions suited to produce the very best physical development, and the highest degree of mentality that can be produced any place in the world.

It matters not whether he be an aspirant to the highest medical honor at the hands of the British Empire, or for a

*Read before Ontario Medical Association, Toronto, June, 1905.

professorship across the line, the man behind the gun at Wimbledon, the man at the oars on the Thames, or the men in the battlefields of South Africa. the high mental calibre and physical endurance of the Canadian always places him in the front ranks.

Why then should we permit this embryotic material for such productions to die or degenerate by the thousands annually for want of proper care? It costs our Government at Ottawa \$745,000, nearly three-quarters of a million, last year for immigration purposes alone. Thousands are being imported annually, of Russians, Finns, Italians, Hungarians, Belgians, Scandinavians, etc. The lives and environments of a large number of these has, no doubt, been such as is well calculated to breed degenerates. Who would think of comparing for a moment in the interests of our country, morally or commercially, a thousand of these foreigners with a thousand of Canadian birth? No medical inspection can recognize the seeds of degeneracy which may be well rooted in this foreign element. One of the greatest curses of our neighbors to the south of us is due to the enormous foreign element, which practically hold the balance of power. And yet practically no effort is being made, except in Ontario: no money expended to insure the best mental, moral and physical development of our boys and girls, and why is it so? Simply because, from the view-point of the average politician, merchant, financier or professional man, in the parlance of the street, "there is no money in it." But there is money in it. What other national question could compare in importance, with the establishing of a well-organized plan by which the highest development of the youth of that nation can be accomplished? Every nation must recognize the fact that what it will be twenty-five or fifty years hence depends largely on the boys and girls of to-day: therefore, a good physical development, with a high mentality, is the most valuable asset that any nation can have. But it is evident that the parents and the government require educating along this line, and it is for obvious reasons the medical profession that must educate them. The family physician, who has piloted his various families through many physical storms, notwithstanding that he has had shipwrecks and lost lives, yet he has the confidence of these families, and is their counsellor and judge in all that pertains to the physical and mental at least. If he advises them as regards the best means of developing their children mentally and physically, they will, in the vast majority of

cases, accept his advice. When I speak of improperly cared for children, I do not by any means limit myself to the children of the destitute. The knowledge of food values and the proper method of cooking food of the average housewife is very limited indeed.

The Dominion Government spent last year over one-half million for the advancement and improvement of agriculture and stock. Literature was distributed gratuitously advising stock raisers how to properly care for and protect their stock. Surely, then, the child has some right to consideration.

We as a nation have passed through our infancy, and are now in a rapidly developing childhood, with boundless resources in active process of development and a rapidly increasing population, and must soon become a great and wealthy nation, but we must profit by the experience of the Mother Country, and, in fact, all older countries, that "as wealth accumulates, men decay."

The inroads of degeneracy is being felt already in most of our larger cities. On the continent of Europe, France was the first to recognize the fact that her people were rapidly degenerating, and she probably more than any other country, is putting forth every effort to overcome the evil, and by a well-organized system is carefully looking after the proper feeding and education of their youth.

I presume that the United States is suffering more than any other nation from the neglect and indifference of the care of its youth. Dr. G. Frank Lydston, in "Vice and Crime," states that, even fifteen years ago, the degenerates in the U. S., according to the census, numbered about 215,000, and that about one in every 320 is a criminal, insane, or a pauper. Dr. Lydston goes on to say that the question of degeneracy is no longer one of sentiment, but one of the greatest national interest, as a glance at the cost to society of the criminal will readily demonstrate. Every nation finds that most of its disbursements, in times of peace, is for the suppression or punishment of crime and vice. The cost to every honest man in the U. S. is from \$3.00 to \$5.00 per annum to protect the good from the evil, the just from the unjust. For this purpose alone the Government expends \$200,000,000 annually; adding to this the non-productiveness of the criminals, you bring it up to about \$500,000,000, or about \$25.00 per family.

Think of the recent appalling revelation from New York,

by Mr. Robert Hunter, that in New York City alone from 60,000 to 70,000 school children were suffering from under-feeding, thousands being sent to school without any breakfast. As a consequence of this revelation, Mr. John Spargo made a very careful investigation by visiting the schools, and interviewing the teachers, had the homes visited by trained investigators, also obtained the testimony of physicians of large experience among the poor, also the heads of large hospitals, dispensaries and those engaged in mission work, all of whom, from their experience and personal observations, were of the opinion that Mr. Hunter had, if anything, underrated the extent of the evil. Mr. Spargo's investigations revealed the fact that there are in the United States nearly 3,000,000 children underfed, and therefore under-developed, mentally and physically. A very large per cent. of those admitted into the hospitals and seen at the dispensary were there as the result of either from underfeeding or improper feeding.

In a recent letter in the *B. M. J.*, from Leeds, where the matter of underfed children has been investigated by the Educational Committee, they discovered that almost 7,000 underfed children were in attendance at the elementary schools. Dr. Wm. Hall, a retired physician, made some careful experiments with these children by procuring for each child one good adequate meal a day. In two weeks' time some of the half-starved little mites of seven and eight years of age gained in weight at a rate that would have averaged nearly thirty pounds a year for each.

That this condition exists to a greater or less degree in our own cities is a lamentable fact. I have learned from those engaged in mission work in the poorer parts of Toronto that hundreds of children go to school with nothing but a piece of bread and jam or bread and butter, and there are numbers of homes in which no table is set from morning till night, the little tots simply go to the cupboard and get what they can. What has been found in many places is: new bread, butter, and an open can of salmon, or lobsters, or jam, and in many cases bread alone; and in many others the children are sent with baskets to the hotels for the scraps, and these scraps constitute their *menu* for the day. So that it is evident that our children are suffering more from improper feeding than insufficient. We are practically in our infancy yet, but we must profit by the experience of older nations and prepare to avert the disaster.

I regret that time will not permit of my making but a brief

reference to the very admirable work that is being done in Ontario by Mr. Kelso and his staff of workers. They have established between thirty and forty Children's Aid Societies in various parts of the Province. The duty of these Societies is to receive complaints in regard to neglected or destitute children, cases of alleged cruelty to children, incorrigible children, and persistent cases of truancy; to take charge of them, and with firmness and kindness and proper nourishment, hope to reform them, and, where necessary, to secure proper foster homes for them. Representatives from the shelter in Toronto are in daily attendance at the children's court to look after the little offenders, that they may not become mingled with the hardened criminals, realizing, as they no doubt do, that they are there as a consequence of having been sinned against rather than sinning.

In support of this work the Ontario Government contributes the nominal sum of ten thousand dollars. With this and bequests, the Society in Toronto has dealt with over 14,000 cases since its inception, and in the last nine years the inspectors of the Society have dealt with 6,388 police court cases affecting the interests of children.

We have, therefore, a very good nucleus in this Province for the establishing of the more comprehensive system which I am endeavoring to set forth in this paper, for the accomplishment of which the government and the profession must cooperate.

Psychologists assure us that mental, moral and physical degeneracy go hand in hand. This is well attested by observations made in the children's courts in the various cities. Insufficient and improper feeding, badly ventilated homes, environments of filth and dirt, constitute the very hot-beds in which criminals are bred, and from which the criminal ranks are filled, and our streets, lanes, and alleyways, after nightfall, are the schools in which they receive their training, the younger from the older. Here their bad habits are acquired, their plans laid, and from which they graduate, and yet those in authority are doing nothing to keep our children off the streets at night and out of the schools of vice. The highest and noblest aim in the treatment of degeneracy, crime and vice, as in treatment of physical disease, is prevention.

In Chicago, in 1902, there were arrested for breaches of the law, 13,090, under twenty years of age. Of these, 3,785 were under sixteen. In New York City, in 1903, there were 7,647 children under sixteen had judgment passed on them in the

children's court, and in the city of Toronto, in 1904, there were 499 little offenders summonsed to the children's court. Is not the necessity for a children's court a disgrace to civilization?

Man's inhumanity to man has stood out in blazon letters through all the ages. Apparently only a calamity, or an impending calamity will arouse mankind, individually or collectively, to a sense of their duty toward their fellowmen.

It is only within the past two years that Great Britain has been aroused from her national somnolence by what seems to be a threatened national calamity—the mental and physical degeneracy of her people. This matter was brought up in the House of Lords, in July, 1903. In discussing the subject, Lord Meath and the Bishop of Ripon drew the attention of the Lords to the lamentable condition of the poor. The Duke of Devonshire admitted that Great Britain's military and industrial outlook was being seriously threatened. The outcome of this debate was the appointment of a Royal Commission to ascertain the cause of the rapid inroads of degeneracy. Sir William Anson, Parliamentary Secretary of the Board of Education, in bringing the matter before the Commons, stated that there were 60,000 children then in attendance in the London schools who were physically unfit for instruction. The statement was made by Sir Frederick Morris that 60 per cent. of the men who applied for admission to the army were physically unfit. The cause of this degeneracy, as found by the Royal Commission was, for the most part, improper care in childhood, malnutrition, improperly cooked foods, inferior in quality and insufficient in quantity, unsanitary homes, over-crowded and badly-ventilated rooms.

It was found that 50 per cent. of the children in London were improperly cared for, underfed, irregular hours, insufficient sleep, on the streets at all hours of the night, when they should be in their beds. Referring to the schools, they felt that while compulsory education had been of benefit mentally and morally, it was not physically. Children, half-nourished, poorly clad, long hours of confinement in over-crowded, badly-ventilated rooms, closely confined to work for hours at a time, much of which would be of no future use to them.

Let us now pass on to the improper care of the child mentally. Many of you are no doubt familiar with the inscription on one of the most famous public monuments in Paris, which reads as follows: "After bread, education is the great necessity." The "ideal education must aim at the develop-

ment of the best mental, moral and physical life of which the child is capable." While there is no work in the State more important for its well-being than the mental development of the child, yet this must never be obtained at the expense of the physical. As Herbert Spencer says, "People are beginning to see that the first requisite to success in life is to be a good animal."

Was it not a lamentable oversight of our Legislature when they made education compulsory that they forgot to provide for the proper nutrition of the body, without which it is practically impossible to develop the mind, and the State has no right to attempt to do so. When it compels a child to attend school, it is the duty of the State to see that that child is properly protected, physically and morally. This is the individual right of the child and the right of the community.

Is it not incumbent then upon the municipality or the State, to see that the rooms in which these children are confined are in a perfectly sanitary condition, and from a hygienic standpoint, properly equipped.

Medical inspection for schools was organized early in the nineteenth century in Austria, Sweden, France and Germany, but was not introduced or adopted in England until 1889, and in Scotland in 1892, and in the U. S. early in the nineties, in Boston, Philadelphia, New York and Chicago, and is now adopted in all the leading cities in the States. When we consider what hot-beds public schools are for all infectious diseases, the necessity of medical inspection, even for this alone, is self-evident. Where systematic inspection has been adopted there has been a very marked decrease in contagious diseases among children, and in many cases epidemics have been averted by early removal from the schools of mild forms of the various diseases. The neglect of this safeguard to the pupils and to the community would, therefore, seem to be inexcusable in any Board of Education or Board of Health. Of no less importance, however, is the health of the mind than that of the body. The ill effects of overwork, over-mental strain from too prolonged concentration on any one subject, routine examinations, etc., has resulted in nervous breakdowns and nervous reactions. Much has been done in recent years, and much is being done to overcome this by the writings of such men as Pestolozzi, Froebel, Oppenheim, Spencer, Bain, Pauli, Stanley Hall, and many others, all of whom disapprove of test examinations in the schools. All authorities on the nervous diseases of children are agreed as to the ill effects,

especially on children of nervous temperaments, of this intense strain, coming on, as they usually do, at the end of the sessions, when the children are already nearly exhausted.

How many young men and boys have paid for their scholarships and gold medals with a large slice of their constitution, if, indeed, not with their life? An intimate friend of mine not long since secured his first-class A certificate when he was seventeen, and spent the two subsequent years under Dr. Clark in the Queen Street Asylum. As Dr. Clark expressed it, the result of running a twenty horse-power engine at a forty horse-power pressure.

The fond parents of the precocious child, delighted with its unusual activity of mind, encourages it on, as does oftentimes the educator, not dreaming that to the psychologist this very precociousness is evidence of a mild form of degeneracy. You rarely find with this premature mental condition a well-developed physical. Galton, in his study of distinguished men of science in England, found that nineteen out of every twenty were men of unusual physical energy. While we can't hope to develop a nation of Bismarcks and Gladstones, yet we are serving the best future interests of the nation when we see that the physical is kept well in advance of the mental.

Dr. Weir Mitchell, in an address delivered to the teachers of Philadelphia last summer, drew special attention to the dangers of examinations and eye-strain, stating that he had made a careful study years ago in his clinic in regard to chorea (St. Vitus' dance) alone, and always noticed an abrupt upward curve at the period of examinations and their approach, and also other marked nervous symptoms at these periods. The children will cry easily, are irritable, restless at nights, starting up in their sleep, oftentimes dreaming about their examinations.

This has been recognized by most progressive Boards of Education abroad, and the examinations have been done away with and other plans suggested and adopted. I regret to say that, notwithstanding Mr. Hughes' (Public School Inspector) efforts along this line, we are still much behind.

A very common cause of apparent mental dullness or deficiency in school children has been discovered to be due to defective sight or hearing, or both. Referring to this, Dr. Weir Mitchell says that, having drawn the attention of the profession thirty years ago to the fact that a large percentage of cases of headache were due to bad eyes, and having thereby successfully wrestled with so common an evil as headache, he counts

as one of the happiest memories of a lifelong contest with disease. Dr. Mitchell goes on to say that in school children imperfect eyes cause headache, vertigo or even a confusion of mind that makes study impossible. The child gets credit for being stupid or idle, but a pair of glasses makes the differential diagnosis between lazy vice and studious virtue.

In Switzerland, Germany, and other European countries, and in some of the leading American cities, where systematic medical inspection has been made, it is surprising the number of children that have been found to have defective sight. In some instances as high as from 20 to 50 per cent., and the majority of these were found to require glasses. From 10 to 20 per cent. of the children examined were found to have defective hearing. When we consider that the eyes and the ears are the chief avenues through which all knowledge must come to the child, we can readily see the necessity for, and the importance of, such an inspection.

Now, in conclusion, there are three important points I wish to emphasize:

(1) That in view of the fact that the lamentable mortality in infancy and early childhood is due to improper feeding and hygiene, the result of ignorance on the part of mothers and those entrusted with the care and feeding of infants and children, that in the best interest of the state the government should supply in pamphlet form full information for the proper care and feeding of infants and children, the same to be supplied through their family physician.

(2) That according to statistics, next to malnutrition, infectious and nervous diseases is the most important factor in causing this large mortality; therefore a systematic medical inspection of schools is absolutely necessary to ensure safety to the child and to the community, and that this Association co-operate with the various Boards of Health and Boards of Education to secure this further safeguard to human life.

(3) That it is the duty of the State towards its improperly cared-for children to give them a good physical, mental and moral start till they are sixteen years of age, and the majority of them will develop noble men and women.

These seem to be the rocks upon which the medical profession may be the beacon light to keep the rising generation from a mental, moral and a physical shipwreck.

ON WARDS IN GENERAL HOSPITALS FOR ACUTE, NERVOUS AND MENTAL DISEASES.*

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Having, in a recent paper on "Neurology and the Prevention of Insanity in the Poor," advocated the establishment of wards or pavilions in connection with general hospitals, I hope a few remarks on how this plan is succeeding in other countries, especially in Great Britain, Germany and the United States, may be of some interest to the members of this Association. In Great Britain the only wards in operation are at Glasgow, where most satisfactory and encouraging results have been obtained. The beginning here was in a few wards, which were unsuitable, from a hospital point of view, for the reception of so-called "nervous cases." In spite of this objection the results were so encouraging that in June last a pavilion, properly equipped for the purpose, was erected in connection with one of the general hospitals. The statistics of the work in Glasgow thus far published show that about 65 per cent. were discharged, recovered or relieved; a very gratifying result.

It is to Germany, however, that we must turn for a longer experience of this method of treatment, as the first wards for the purpose were here put in operation, a fact which I believe accounts for the high standing in the teaching of mental diseases in that country, which is generally acknowledged to be the most advanced in the world to-day. To Griesinger belongs the credit of having framed the first coherent plan for the establishment of these wards in Germany, although they had been advocated since 1860. Scholtz established isolation rooms and observation wards in connection with the Bremen general hospitals in 1870, and Reijers at about the same date organized a similar provision at Wurtzburg for fifty or sixty patients. The first clinic for these cases was opened by Furstner at Heidelberg in 1878, and it was here that Kraepelin did such excellent work. A few months after the opening of this clinic at Heidelberg, Fleischsig opened the second clinic at Leipsic. The number of these has since steadily increased, so that there is now such a clinic in each of the twenty universities, conducted either in wards specially

devoted to the purpose in general hospitals or in buildings independent in their neighborhood.

In the United States several cities have already put this plan into operation, among which may be mentioned New York, Philadelphia, Pittsburg and Albany.

In Bellevue Hospital there is a separate pavilion for these cases which contains two wards, one for men and one for women. It is in charge of three resident salaried physicians, and has four consulting alienists and neurologists on its staff; the medical and surgical visiting staff may also be called in consultation. The men's ward is in the care of a woman supervisor with long experience among the insane, and the orderlies are assigned from the State hospitals for the insane for specified terms. The women's ward is in care of a head nurse and the nursing is done by pupil nurses of the Bellevue Hospital Training School for Nurses. Patients are brought as emergencies by the police or by friends who claim they are insane; or they are committed for five days on a charge of insanity by a magistrate upon application of friends; or are committed by the Superintendent of the Out-Door Poor for five days for observation; or they may be transferred from the general wards of the hospital. Patients stay rarely as long as ten days; five days is the usual outside limit. If found, on sufficient observation, to be insane they are committed at once to a State hospital, or they are discharged or given in charge of their friends, or transferred on account of medical or surgical ailments to the appropriate wards in the general hospital. Instruction to students is contemplated, but not begun. The cases passing through this pavilion are numbered by thousands. This pavilion is merely a distributing station from which patients are sent to the appropriate place of relief as soon as this can be determined.

At Blockley Hospital, in Philadelphia, the municipal almshouse and the general and insane hospitals are grouped under one management. Here four wards, two for men and two for women, in the building of the general hospital department are used for reception or detention wards. The building is old, and, as it was not intended for the purpose, it is not satisfactory. These wards are in charge of a salaried resident physician and the nursing is done by the nurses of the general hospital. The patients are brought by friends or by the police as emergencies, or on certificate of insanity. Those patients who are likely to require hospital residence for a month or

more are transferred to the insane hospital department. Others are kept in the detention ward for two or three weeks, and are discharged from there or sent to the appropriate wards of the general hospitals.

At Pittsburg, the general hospital of St. Francis has four well-equipped wards which have been in operation a number of years, with highly satisfactory results. The nursing is done by sisters, and the wards are in charge of a neurologist. This latter fact accounts, I believe, for the classification of the patients received, viz., those who exhibit departures from normal mental health.

The best existing pavilion, however, in the United States is at Albany. Pavilion F of the Albany General Hospital has been in operation for the last three years. The physicians of that city, and the neighboring cities and towns of the county, warmly advocated the construction of this pavilion, their feelings having been sharply stimulated by the deaths of two of their number in the county jail, in which they had been placed from mental disorder. Applications for admission were received before the building was completed. The pavilion is connected by corridors with the main building, and contains two locked wards of seventeen beds each, all but four of which are single rooms. The plan of the building is such as to provide accommodation for restless patients, so that any disorder might not disturb other wards, or even other parts of the same ward. Hence, there is little need to interfere with the activity of a patient on other ground than his own safety, and consequently the motor restlessness characteristic of active mental disturbance may be permitted. The whole ward is capable of being subdivided into smaller sections, which allow segregation into small groups of three or four patients. Hence quiet patients need not be disturbed by noisy or turbulent ones. This architectural feature is most important, as it permits the treatment of all classes of patients in close proximity to one another. The pavilion is in charge of a physician with experience in hospitals for the insane, who visits the patients twice daily. The medical and surgical staff of the hospital may be called into consultation. The nursing staff is in charge of a supervisor trained in both insane and general hospital work. The nurses are assigned from the hospital training school for a specified time. There is but one male nurse in the pavilion. Almost no restraint or sedatives are used. Delirious patients from the general wards, and any suitable patients, are admitted without commitment or

other formality. Patients are kept from a day or two to six months; clinical instruction is given to the students of Albany Medical College. The third annual report of this pavilion, showing the forms of disease and the results of treatment for the past three years, has been recently published and is most interesting. The forms of disease admitted include nearly all the acute, nervous and mental diseases, from neurasthenia and hysteria of the former, to acute delirium and mania of the latter. Of the total number admitted, viz., 570 to date, 170 were discharged recovered, and 160 improved, or a total of over 60 per cent. of admissions, a most satisfactory and creditable result to the physician in charge. I will not detain you with further details, but I hope the above remarks have shown that from actual experience, both nervous and mental disease may be successfully treated in properly equipped wards of a general hospital.

Are such wards required in this country to-day? To this question there can be but one reply, were it only to prevent committing the insane poor to jail, a disgrace to our twentieth century civilization. There are, however, many important reasons why these wards should be established without delay. One is on account of the clinical instruction to students in functional nervous diseases and acute mental disorders as they occur in every-day practice. The lack of this instruction in the past has led to a chasm of greater or less dimensions between insanity and the other diseases which the general practitioner meets daily owing to the fact that insanity in its various forms is regarded as a separate entity, to be treated only by an alienist in an asylum, and not, as is really the case, simply a more developed stage of an acute disease of the nervous system, due to disturbance of the functions of the brain. It is a lack of realization of the physical basis of mental troubles which maintains this separation, and if the student were shown the actual changes which take place from the earliest symptoms of cerebraesthesia to the fully developed case of insanity, which could only be demonstrated in such wards as these, a bridge would rapidly be formed over this chasm. This bridge must be formed by the general practitioner for the simple reason that it is under his care that these cases first come, and, consequently, on him must rest the responsibility of their early treatment, the period when the best results are obtained and when delays are most dangerous. There can be no doubt that clinical instruction in the pre-insane stage of these functional diseases of the brain will offer

better results to the human race, than that in any other department of internal medicine. Too little stress has been laid on the importance of clinical teaching, especially in the early stages of these troubles, by those who have written on the subject, and I firmly believe that had these diseases been taught in the past with as much care and attention as has been given to diseases of the heart or lungs, for example, neurology, as well as psychology, would have been greatly benefited, and the changes now being brought about would long ago have been accomplished. Better clinical instruction would have led to the active treatment of these cases in the early stages, instead of waiting until the boundary line of insanity was crossed, a most important consideration, since it would have demonstrated that in a large proportion of cases an attack of insanity would have been prevented.

It is especially towards this latter aspect of the question that I would like to direct your attention. Having for many years devoted my entire attention to neurology, to which these functional nervous troubles yield an important quota, I am convinced, from actual experience, that early treatment has resulted in the restoration to health of a very large percentage of these cases and prevented an attack of insanity.

As the benefit to be derived from such wards was discussed in the recent paper referred to, may I be pardoned for reproducing the summary there given.

“With one or more of such wards in operation, the first object aimed at, *viz.*, the alleviation of suffering in the poor, by proper hospital treatment for their disease, would be attained. In addition to this, there would result, at least, the following:—

(1) Better facilities for clinical instruction to the medical student. Here the student could be shown these cases in his daily round of work, and be able to study these diseases of the brain, just as he studies in a neighboring ward diseases of the heart or of the lungs. He would learn to give the same attention to disease in this one organ, as he now gives to diseases in all the other organs, and the importance of the study would be brought home to him in a way, which is at present impossible. He would realize the importance of active treatment in these cases, and his responsibility in allowing them to pass over the boundary line of insanity without adequate treatment. The study of these cases in their early stages would also enable him to recognize such conditions in private practice, and to take such steps, as may save a mind

from destruction, a result more desirable, even than saving the body.

(2) A better knowledge of these diseases would result in the whole profession recognizing the necessity, for example, of hospitalization of asylums, and instead of the scanty number of specialists who are now endeavoring to bring about this good work, there would be a solid phalanx formed by the whole profession, to the requests of which the Government would be obliged to accede without delay.

(3) To the nursing staff of a general hospital such wards would be a great boon, since frequent as these cases are in private practice, but little opportunity to learn the art of nursing them is afforded in a general hospital.

(4) By admitting such patients into the wards of a general hospital, any acute case of alleged insanity would at once be admitted without a certificate, on precisely the same conditions as though the patient were suffering from other disease than that of the brain, and by this means the cruelty and injustice of taking these patients to a jail would be abolished. Under these conditions, recourse to early treatment would be sought; since the prejudice against asylum treatment would be removed and much better results would necessarily follow. The stigma in the minds of the laity, of having been treated in an asylum, would also be obviated. Further, the treatment of these patients in a general hospital, by the same methods as all other patients are treated (due allowance being made for the form of their disease) would gradually lead to a more rational view of insanity in the minds of the masses, and thus gradually overcome the prejudice against asylums.

(5) A large portion of suicides would be prevented, since there is no doubt that many a sufferer from cerebriasthenia has ultimately given up in despair, and some additional grief which, in health, would only have caused temporary depression, has, under the circumstances, turned the scale, and another suicide is added to the long list of these disasters published daily in the newspapers.

(6) And probably, most important of all, insanity would be prevented in a very large portion of cases.

From an economic point of view the prevention of insanity in the poor merits the careful attention of the state. If insanity were prevented in only 50 per cent. of the patients admitted into such wards as I have suggested in a general hospital, who, without this treatment would have become insane, what an excellent investment such wards would be to

the government. The cost of maintenance for even a single insane patient to the government, extending, as it sometimes does, over fifty years, if added to the value of his services as a wage-earner during this long period, would alone furnish sufficient money to build and properly equip a pavilion in connection with one general hospital. I will not detain you further, but I hope sufficient has been said to direct the attention of this Association to the urgent need of wards in general hospitals for acute nervous and mental diseases.

In conclusion, I would like to acknowledge my indebtedness for the information contained in the earlier part of this paper to Dr. Montgomery Mosher, of Pav. F. at Albany, and to Dr. Theodore Diller, of St. Francis Hospital, Pittsburg. The papers on these wards by Dr. E. Stanley Abbott and Dr. L. Pierce Clark and Mr. H. P. Alan Montgomery, Ph.B., architect, of New York, are also most valuable contributions to the subject.

SURGERY OF THE STOMACH FROM THE STANDPOINT OF THE CLINICIAN.*

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There are many reasons why surgery of the stomach should be more and more interesting to the clinician. Chief among these is the fact that with the increasing clinical experience in this field, it has become possible to perfect the diagnosis of conditions far beyond the degree to which this could be done only a few years ago, when it was possible to actually confirm diagnoses anatomically only in those patients who could be subjected to an autopsy. In the vast majority of cases the diagnosis was made upon theoretical grounds. The patient was treated and improved temporarily; during a subsequent attack some other physician made the same or a different diagnosis, which again could not be proven anatomically, the difficulty arising from the fact that no one could prove or disprove the diagnosis in either case. The moment a case becomes surgical, however, this difficulty is abolished, because the diagnosis can and must be proven to be right or wrong.

There is much ante-mortem pathology in diseases of the stomach, as well as in diseases of all the other intra-abdominal organs, which can be studied properly neither post-mortem nor ante-mortem, unless the organ is exposed to view; and no sooner has this been done in a large series of cases than the diagnosis of the condition becomes much simpler and easier and gains greatly in certainty.

Gastric Ulcer.—The condition which primarily or secondarily leads to the greatest amount of stomach surgery is the ulcer. The operation may be indicated: 1. Because of the painfulness of the ulcer. 2. In order to control (a) acute or (b) chronic hemorrhage. 3. In order to prevent secondary conditions such as (a) perforation; (b) peritoneal adhesions; (c) pyloric obstruction due to cicatricial contraction; (d) hour-glass stomach; (e) gastric dilation due to obstruction; (f) starvation; and last, but not least, (g) implantation of carcinoma in the ulcer.

Diagnosis of Ulcer.—Since the presence of gastric ulcer

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primarily is the beginning of so many of the surgical conditions, it is important to recognize this lesion early in its development.

The most constant symptom in the presence of this lesion is pain. This is usually located below the tip of the sternum, is increased upon pressure, and upon taking food. The patient can usually tell which food will cause the pain to become severe. If the ulcer is on the posterior surface of the stomach the pain radiates into the back; usually to the left of the median line and up as high as the lower end of the scapula.

Very commonly the pain accompanying the presence of gall-stones is mistaken for the pain due to gastric ulcer, but it is usually not difficult to differentiate between these two, because the former is increased upon pressure at the point between the end of the ninth rib and the umbilicus, a point first located by Mayo Robson, while the latter is increased upon pressure in the median line.

Again, in case of gall-stones the pain in the back extends to the right at about the level of the ninth rib, while in gastric ulcer it is greatest in the median line or to the left of this and higher up.

The stomach contents are usually exceedingly acid in the presence of gastric ulcer, and there is an abundance of free hydrochloric acid present unless the ulcer has become carcinomatous. It should, however, be stated here that the chemical examination of stomach contents must always be looked upon only as of value in corroborating diagnosis, made as a result of a study of the history and physical examination. Robson and Graham have demonstrated this fact conclusively in a large series of carefully studied cases.

The history usually states that the patient has felt distress upon eating for a considerable period of time; that there has been eructation of acid stomach contents; that this is much more severe when certain articles of food have been taken; that the patient is much less uncomfortable when carefully following some diet which experience has taught him to select.

Quite frequently the feces are observed to be black from the presence of partly digested blood from slight gastric hemorrhages.

So many of the patients have, however, received subnitrate of bismuth as a remedy, or some form of iron, that care must be taken not to confound the effect of these remedies upon the color of the stools with that of hemorrhage from a gastric ulcer.

Frequently these hemorrhages have not been observed, but still the loss of blood has been sufficient to cause a marked anemia, hence this condition must be considered in connection with the other symptoms and the history. In patients who are severely anemic and who are suffering from some form of gastric disturbance, one can usually demonstrate the loss of blood from chronic ulcer by a careful study of the case. Fuetter has demonstrated that by overcoming this anemia by careful dieting, many chronic ulcers will heal, which without especial attention to this feature seemed quite incurable under non-surgical treatment.

With careful internal and especially dietetic treatment, a vast majority of all cases of ulcer of the stomach which have been recognized early, can undoubtedly be healed permanently, if not only the immediate treatment, but also the after treatment, is carried out carefully and conscientiously. That this can be actually expected in these cases has been shown in a large number of patients suffering from this condition.

But there are many of these cases which apparently recover only to relapse again and again. Many of these go from one physician to another, each time temporarily improving or recovering.

Robson has found that most cases which ultimately come to operation have been apparently cured a number of times and our observations fully confirm his report.

It is well to bear in mind this element of the history of any given case, because it should have a distinct bearing upon the choice of treatment in the future. Any case in which there has been a number of apparent cures with subsequent recurrence of the ulcer should properly receive surgical instead of medical treatment in the future.

Differential Diagnosis.—The most common condition which is mistaken for gastric ulcer is disease of the gall-bladder, especially gall-stones or sand. Next in order comes chronic appendicitis with acute exacerbation, during which the pain is usually referred to the region of the umbilicus. In this case the pain is lower down than in gastric ulcer, and it is increased upon pressure in the region of the appendix near McBurney's point.

Renal Calculus.—Has been mistaken for gastric ulcer. In this case the urinalysis will usually clear up the diagnosis; moreover, the pain is increased upon pressure over the kidney, and radiates downward and inward along the course of the ureter.

Duodenal Ulcer.—It is only the fact that ulcer of the duodenum is not very common which makes the occurrence of mistaking this condition for gastric ulcer somewhat infrequent. This condition has almost exactly the same symptoms as gastric ulcer, but the point of tenderness upon pressure is over the middle of the right rectus abdominus muscle above a transverse line drawn through the umbilicus.

Volvulus.—In rare cases, volvulus of the jejunum may be mistaken for gastric ulcer; but the violent vomiting containing bile soon after intestinal contents, but no blood, makes the differential diagnosis relatively easy.

Neurasthenia.—It is often very difficult to make a differential diagnosis between gastric disturbance due to neurasthenia and those due to chronic ulcer. This is especially true, because anemia, and inanition which is caused by the presence of a chronic ulcer.

It is quite likely that for several years to come, quite a number of patients suffering from neurasthenia due to other causes will be subjected to stomach operations as a result of erroneous diagnosis.

Any other severe intra-abdominal condition like intussusception, ruptured ectopic gestation, ovarian cyst with twisted pedicle, peritoneal adhesions, either septic or tuberculous, may be mistaken for gastric ulcer. In a few cases, I have seen an interesting condition which gave rise to a mistaken diagnosis of gastric ulcer. In these cases the great omentum had become attached by its free margin to some point in the lower portion of the abdominal cavity, the tubes, ovaries, uterus, bladder, the cecum, or the abdominal wall. The tension of the omentum upon the stomach gave rise to symptoms which could not be distinguished from gastric ulcer.

In a number of patients in whom we had made a diagnosis and the duodenum dilated to from 2 to 4 times its normal diameter down to a point below the entrance of the common duct. Upon exposing the jejunum this was found strongly contracted in these cases.

The lymph nodes near the duodenum in these cases were usually enlarged, indicating lesions of the mucous membranes lining the duodenum. In these the pancreas is usually also enlarged, and the gall-bladder is distended with bile together with mucus, sand or gall-stones, and frequently all of these substances are found in the same gall-bladder.

It seems reasonable to suppose that the obstruction at the point of entrance of the common duct into the duodenum or

below the point must be primarily physiological in character, due to the irritation caused by the mucus, sand or small stones in the gall-bladder and duct.

The observations of Cannon and Blake which show that there is a physiological mixing process which takes place in the duodenum is extremely interesting in connection with this particular class of cases. Continued attention to these cases is likely to develop facts which will have great interest for the clinician.

Another condition of clinical interest has been observed in a considerable number of cases. It has been found that many cases of gastric ulcer have previously suffered from chronic, recurrent, or catarrhal appendicitis, usually with peritoneal adhesions to the appendix, or the cecum, or both, or with fecal concretions in the appendix; but always with some form of obstruction to the passage of gas. This pathological obstruction has resulted in a physiological obstruction to the passage of gastro-intestinal contents through the pylorus, and this in turn had been the exciting cause of the gastric ulcer.

Clinically one can usually follow a very interesting sequence in cases of gastric ulcer which do not end abruptly by perforation or fatal hemorrhage, or by what is probably less frequent in cases in which the ulcer is at all advanced, by permanent healing.

At this point, however, I believe that it is proper to express the opinion that it seems most likely that a very large number of small ulcers heal so perfectly that it is quite impossible to demonstrate their existence either ante-mortem or post-mortem, and that there are few cases which go beyond this initial stage without healing which will later heal permanently.

Vicious Circle in the Development of Gastric Ulcer.—It is not uncommon to observe the following history in the development of gastric ulcer:

1st. There is severe pain two to four cm. below the ensiform cartilage in the median line. This may be more severe directly after eating, or only after eating certain things, or it may be most severe when the stomach is empty, and may be relieved by taking food, but its location is quite constant and the pain is increased upon pressure at this point. There is at this point no dilatation present.

2nd. In attempting to protect the ulcerated surface against traumatism there is a physiological obstruction of the pyloric sphincter. This obstruction may be increased in two ways: (a) There may be developed an indurated edematous area

due to the extension of the ulcer, or (*b*) as a result of the healing of the ulcer there may be formed a certain degree of cicatricial contraction which in itself will constitute an obstruction.

3rd. In order to overcome this obstruction the remaining portion of the stomach musculature will become hypertrophied.

4th. This is certain to be followed by muscular exhaustion and relaxation, and this will result in gastric dilatation.

5th. No sooner had this occurred, than the pyloric obstruction is still further increased by the fact that the lower margin of the greater curvature is depressed far below the level of the pylorus, and all of the food must not only be forced through the already obstructed pylorus, but it must also be elevated to the level of the latter aperture.

The fact that in the normal stomach every portion is drawn to a higher level than the pylorus, as the organ is forcing its contents into the intestine, has been shown very beautifully by Bettman, and more recently by Cannon.

6th. In the meantime, another condition has arisen which will prevent healing. The obstruction, together with the sacculation, gives rise to the accumulation of residual food in the dilated stomach, which undergoes decomposition in place of digestion. In this manner, all of the fresh food is vitiated by being mixed with the decomposed residual food remnants in the stomach. In this manner, each successive condition makes the previous state of things more grave. In the meantime, two other conditions have arisen which will serve to prevent the tendency of healing in the ulcer.

7th. Almost immediately after the beginning of a gastric ulcer, a great amount of mucus is secreted, apparently to protect the diseased surface. This, however, causes the food to become coated, and this in turn interferes with gastric digestion. This condition is followed gradually by the secretion of an increased amount of hydrochloric acid, which is undoubtedly the physiological remedy for facilitating the digestion of food covered with mucus. With the increasing acidity of the stomach contents, the chances of healing of the ulcer is greatly reduced, and its extension is practically certain, hence each one of the conditions in turn becomes more and more exaggerated, and conditions go from bad to worse, unless a radical change is established whether by internal treatment, or if this prove ineffective, by surgical operation. I have had an opportunity to verify these clinical observations in a very large number of patients suffering from gastric ulcer,

and they are in keeping with observations of most clinicians, who have studied such cases extensively. These facts would indicate the importance of careful treatment at the very beginning of gastric ulcer in order to secure complete healing before any of the secondary conditions have arisen, and also the necessity of eliminating all of the primary causes of the lesion in every individual case after healing has taken place, in order to prevent a possible recurrence.

This is especially important, because each successive attack is more difficult to relieve permanently. The chances for permanent relief are more and more reduced, because each time some lesion will remain, which must lessen the resistance of the tissues, or increase, at least, to a slight extent, the difficulty of emptying the stomach.

It is likely, that with proper after-treatment, especially as regards diet and general hygiene, it would be possible to reduce the number of cases of recurrence to a great extent. This would reduce the number of cases, which now properly fall into the domain of the surgeon.

Fuetterer has written most effectively upon this phase of the subject, and I am confident it is worthy of our most serious attention. This is true, primarily, because it would permanently eliminate all of the many serious sequelae, which are now so common.

All of this would indicate that surgery of the stomach begins where internal and dietetic treatment of disease of this organ fails to give permanent relief. It also indicates that surgery, in order to be of value, must result in local rest and in the drainage of irritating contents of the stomach, in all non-malignant cases, and in the early removal of the growth in malignant cases. It seems reasonable to suppose that the most careful attention to diagnosis of non-malignant cases, and the surgical treatment of that portion of those which cannot be relieved permanently by internal treatment, must result in a vast reduction of the number of malignant cases.

At the present time some form of gastro-enterostomy seems to have given the most satisfactory results. Robson pointed out the fact, most emphatically, that the anastomosis must be located actually, and not only theoretically, at the lowest point in the stomach, in order to be safe and effective, and leave the patient free from regurgitant vomiting "Vicious circle."

Theoretically, there seem to be many arguments in favor of a posterior gastro-enterostomy, but practically the results

seem equally satisfactory, provided the opening is sufficiently large, and is in fact at the lowest point of the stomach.

A method has not yet been found which completely satisfies all reasonable demands for perforating gastro-enterostomy. I have had the time to look up only those of my cases of stomach surgery, which I have treated in the Augustant Hospital, hence I will speak only of these in this paper. But the methods and the results have been the same in the cases I have treated in other hospitals, hence this is of no material importance. The following table will give a convenient idea of these operations:

	Total.	Recovery.	Died.
1. Incomplete Gastrectomy.....	5	4	1
2. Pylorectomy.....	9	8	1
3. Gastro-enterostomy, Murphy Button—			
Malignant Cases.....	24	16	8
Non-malignant.....	10	9	1
4. Gastro-enterostomy, McGraw Ligature—			
Malignant Cases.....	22	16	6
Non-malignant.....	65	59	6
5. Gastro-enterostomy, other methods.....	12	10	2
6. Perforated Gastric Ulcer.....	10	2	8
7. Gastrostomy.....	4	2	2
8. Exploratory Laparotomy for Carcinoma of Stomach.....	32	24	8
Total.....	193		
9. Ulcer of Stomach, not operated.....	66	60	6
10. Carcinoma of Stomach, not operated.....	49	..	15
Patients returned to their homes unimproved.....	34		

It will be seen from this that most of the operations were performed for the purpose of securing rest for the pyloric end of the stomach, and drainage for its cavity; also that gastro-enterostomy was performed oftener by means of the McGraw ligature than any other means. This method has been more satisfactory in my hands than any other up to the present time. I still follow the original direction of the author of the method, which I published in the *Journal of the American Medical Association*, June 6th, 1903. It seems likely that all of the methods now in use will be displaced by some new method which will be more nearly ideal than any now in use.

So far nothing has been said concerning the treatment of any of the sequelæ, or the complications of gastric ulcer, because it is to be hoped that these will be eliminated to a great extent in the future by the cure of the ulcer itself.

Complications.—The most common complications are perforation and hemorrhage.

Sequelæ.—The sequelæ are: (1) Chronic ulcer. (2) stric-

ture of the pylorus, (3) gastric dilatation, (4) hour-glass stomach, (5) peritoneal adhesions, (6) inanition, (7) anemia, (8) neurasthenia resulting from the constant suffering, the malnutrition and the anemia, (9) carcinoma, and (10) jejunal ulcer following gastro-enterostomy.

Perforation.—The diagnosis of perforation is relatively simple. There is a history corresponding to that given for gastric ulcer above. During some exertion, the patient suddenly experiences severe pain in the region of the stomach. This is frequently attributed to the eating of a large meal, and may consequently be mistaken for acute gastritis. The pain becomes diffuse very suddenly. The patient is nauseated, and sometimes vomits blood or bile. The abdominal muscles become rigid, the patient is in a severely shocked condition.

The greatest point of tenderness is in the region in which tenderness existed previously. In many cases the liver dulness is obliterated to a greater or less extent, but it is not safe to place too much weight upon this symptom, because it frequently is present only after the perforation has existed for several hours, and if operation is postponed until this diagnosis can be confirmed by this symptom, the extent of the infection is usually so great that the operation cannot save the patient.

With two exceptions, all of my cases in this class were in this hopeless condition when they were admitted. The important point in connection with these cases is an early diagnosis and an immediate operation. The latter should consist in a free abdominal incision, careful sponging out of stomach contents wound in the stomach with Lembert sutures, preferable of silk or Pagenstecher thread. Drainage should always be used.

In cases in which the diagnosis is not made for twenty-four hours or longer after the perforation has taken place, it is difficult to state which course is the worst to pursue. In my own experience, all of the cases which came under my care in this advanced stage, which were operated, died within a few days, while a few which were not operated, recovered, the opening in the stomach being closed by a plug of omentum. In some of these cases a subphrenic abscess developed, later requiring an operation.

I am confident, however, that these cases were all somewhat less serious from the beginning than those which were operated and died; and it would consequently not be proper to attribute the recovery of the former to non-operative treatment, and the death of the latter to the operation.

It seems proper to advise an immediate operation in all cases of perforated gastric ulcer, in which an early diagnosis is made, and to use one's judgment in each individual case of perforation, in which the diagnosis is not made early.

Gastric Hemorrhage.—A few years ago there was quite a marked tendency toward the immediate operation for gastric hemorrhage. Mayo Robson's experience in this direction was so encouraging, that quite a number of surgeons favored operative treatment for this condition. It seems, however, that this is quite unnecessary, because in almost every case the hemorrhage will cease, and if the patient is carefully treated, her general condition can be greatly improved, so that the risk of the operation itself will be much less than when performed during a hemorrhage.

The treatment should consist in exclusive rectal feeding. It may be well to administer from two to four ounces of castor oil early in the treatment, and then to place nothing whatever in the stomach, until there has been no blood in the evacuations for several days. Feeding by mouth should be begun with great caution, and as soon as the patient's general condition is good, the operation should be performed.

Sequelae.—In the treatment of the first three in the above list. (1) chronic ulcer, (2) stricture of pylorus, and (3) gastric dilatation, the method must be the same. It must consist of drainage of the stomach cavity by gastro-enterostomy, or in rare cases by Finney's pyloroplasty. The one point of greatest importance which must not be overlooked, is the choice of location for the opening in the stomach at its very lowest point.

Rodman's suggestion, advising the excision of the ulcer-bearing area in these cases, is undoubtedly worthy of consideration. In my own experience the results have been more satisfactory in cases in which I have excised the pylorus in connection with making a gastro-enterostomy, but as this adds another element of danger to the operation, it may be well to continue our observations before making this a routine treatment in these cases.

In cases in which a pylorotomy is not made at the same time, the gastro-enterostomy opening is likely to become partly or completely obstructed by contraction, and this may be followed by a recurrence of the ulcer. In cases in which a pylorotomy has been made, this has never occurred in my experience.

At the present time the choice of operation must lie between

the methods introduced by McGraw, that employed by Mikulicz, Moynihan's method, or the method developed by Robson-Murphy's oblong button; or Connel's suture method can be employed in connection with the methods of Mikulicz or Robson, but it seems likely that the button will continue to lose more and more of its old advocates while it is not likely to gain many new ones. This is true, especially, because with it the size of the opening is virtually limited, and there is a distinct objection in the minds of most surgeons against a non-absorbable foreign body.

The one great point in favor of the button is its ability to punch out an opening, and to leave the union between the stomach and the intestine with the slightest possible amount of connective tissue.

In order to be of any practical value this paper must point out some of the dangers to be avoided in surgery of the stomach.

Unnecessary Traumatism Should be Avoided.—There is great danger in unnecessary manipulation, because this increases the shock and the tendency to infection.

In all of these cases much can be done to prevent this by making an ample abdominal incision. Much time is frequently occupied in finding the jejunum, resulting in useless handling of viscera. By simply lifting out the transverse colon, and following its mesentery to a point a little to the left of the median line, one can always find the beginning of the jejunum in a few moments.

In gastrectomy and pylorotomy it is possible to reduce the manipulations to a minimum by simply grasping the four main arteries, and also the greater and lesser omenta between these four points, and then excising the intervening portion, which has been grasped by long-jawed forceps, in order to prevent leakage.

There is danger of necrosis of the stomach, if the gastric artery is injured, and of the transverse colon, if the middle colic artery is grasped in clamping the greater omentum.

In making a posterior gastro-enterostomy, there is danger of contraction of the opening in the mesocolon, unless the edges of this are sutured to the stomach.

There is always danger of angulation of the jejunum at its point of attachment to the stomach.

In all stomach operations it is well to have the patient placed in the sitting or semi-sitting posture, within a few hours after

the operation, in order to prevent hypostatic pneumonia, and to facilitate drainage of the stomach by gravitation.

The greatest danger after operation comes from acute gastric dilatation, but this can be remedied readily by introducing the stomach tube. If gastric lavage is employed, it is, however, important not to introduce a sufficient amount of solution to do harm by pressure. Half a pint at a time is quite enough water to introduce. It is a rule with us to make use of gastric lavage, whenever any patient is distressed after an operation upon the stomach.

In three cases in which gastro-enterostomy had been performed for the relief of pyloric obstruction in my series of cases the progress was perfectly normal for 3, 5 and 8 days, when the patient suddenly began to suffer from dyspnea. This continued for 6 to 12 hours, when the patients died. In the first two, an autopsy was not permitted. In the third it demonstrated the fact that the patient had died as the result of acute gastric dilatation.

We had previously had a number of similar experiences less severe in character, in which the dyspnea had subsided at once upon the use of gastric lavage, but it had not occurred to us that the distress was really due to acute gastric dilatation.

One would think it almost impossible for this condition to escape recognition, but the presence of the dressing over the abdomen, and the fact that the distress is referred to the chest, is almost certain to lead one astray, unless one's attention has been directed especially to the possibility of the occurrence of this condition. We have since observed this acute gastric dilatation to a greater or less degree in a number of cases, and have always been able to obtain prompt relief by the use of the stomach tube. Aside from the gas one always finds decomposing mucus and usually some old blood.

It is well to bear this possible condition constantly in mind in the after-treatment of these cases.

Feeding.—These patients should be given one ounce of one of the various predigested foods in three ounces of normal salt solution as a nutritive enema every four hours.

After the third day some of these predigested foods may be diluted in water and given by mouth, but the rectal feeding should be continued.

Later, broths and thin gruels may be given, but milk should not be given until quite late, as it is rather more likely to decompose than these predigested foods.

The patients may be permitted to chew steak, and to swallow the juice within a week after the operation.

Editorials.

TORONTO FREE HOSPITAL FOR CONSUMPTIVE POOR.

Dr. Charles Sheard, Medical Health Officer of Toronto, at the request of the Mayor and Board of Control, made an inspection of the Toronto Free Hospital for Consumptive Poor. He says that it is at present the only available institution which affords extensive accommodation for the consumptive poor of the City of Toronto. The Association in charge of the Hospital purchased forty acres of land near Weston upon which some new buildings have been erected, and others are in contemplation. There are in this Hospital at present thirty patients who have been sent in on city orders issued by Dr. Sheard. Most of these are bed-ridden consumptives, who have been refused admittance to other hospitals. Dr. Sheard goes on to state, that prior to the opening of this Hospital in September last, the situation regarding the care of consumptives in Toronto was somewhat acute, but such condition has been in great part removed by the accommodation afforded by the Weston Sanatorium. The expenses in connection with the maintenance of this institution are heavy, but the Hospital is being excellently worked and deserves liberal encouragement.

Mr. H. C. Hammond, the treasurer, has issued a circular in which he explains to some extent the position of matters. The City of Toronto contributes the usual 50 cents per diem for all patients sent in by the Medical Health Officer, and the Controllers have also made a grant of \$2,000. The moneys thus acquired, however, pay only in a small part the full cost of maintenance. For a few of the patients their friends pay small amounts, but none are paying sufficient for full maintenance. The authorities have to depend chiefly upon the good-will and generosity of the people of Toronto to keep the doors of the Hospital open, and make it possible for them to further increase the accommodation. This work has been undertaken by the trustees with confidence that their fellow-citizens will co-operate with them in their endeavor to care for the consumptive poor of Toronto.

THE CANADIAN MEDICAL ASSOCIATION.

We learn from the President and Secretary that arrangements have been completed for the next meeting of the Canadian Medical Association, which will be held in Halifax, August 22nd to 24th, inclusive. Dr. John Stewart tells us that they have decided to work *hard* for three days, and on the fourth day to have an excursion to "the Land of Evangeline." we are pleased to learn that a goodly number from Ontario and the far West expect to attend the meeting.

Some of us derived much pleasure from attending a meeting in the same city twenty-four years ago. Halifax is a beautiful old city, and from a historical point of view one of the most interesting in Canada. It is situated, we understand, exactly 1,191 miles from Toronto. A variety of routes are open to intending visitors. One may travel all the way by rail, but the journey becomes tedious if one travels continuously. It is better to stop twice or thrice on the way and enjoy the scenery. After passing Montreal one may select Quebec, Cacouna, Rimouski, Metapedia, Moncton or many other points as stopping places on the way. The Valley of Metapedia and along the Restigouche, and the Bai de Chaleur presents to the eye some of the most beautiful displays of nature's grandeur.

To those who prefer more variety in travelling, other routes, of which there are many, will be preferable. Among these we may mention one which the writer enjoyed exceedingly twenty-four years ago: Boat from Toronto to Montreal, boat from Montreal to Pictou, rail from Pictou to Halifax, rail and boat from Halifax to St. John, boat from St. John to Boston, rail from Boston to Toronto.

Those who attended the meeting in 1881 will never forget the hospitality exhibited by the profession of Halifax. This was shown not only in the more public entertainments, but also in a pleasant and social way, by which the visitors were made very comfortable and to feel at home. As Dr. Canniff, the president of that year, expressed it: "Whether it was being carried to a secluded spot along the shore of the magnificent harbor—were one could take a delicious 'header' into the blue invit-

ing salt water—or out in the offing in the broad Atlantic swells, or behind a fast horse traversing the numerous and delightful roads through the splendid park, or in the club, or in the family circle, the Haligonians displayed the soul of friendship and good cheer.”

ONTARIO MEDICAL ASSOCIATION.

The twenty-fifth annual meeting of the Ontario Medical Association was held in the Medical Building of the University of Toronto, Tuesday, Wednesday and Thursday, June 6, 7 and 8, under the Presidency of Dr. William Burt, of Paris. The meeting was a good one, being above the average as to the number present, and also the character of the papers presented. It unfortunately happened that many excellent papers were not followed by full and free discussions. It happened, however, that three of the discussions, one of which is mentioned on another page in this issue, were exceedingly interesting and instructive.

The presence of two distinguished visitors from the United States added much to the success and pleasure of the meeting. Dr. Oshsner's paper, of Chicago, was very interesting, and brought forth an excellent discussion, and exactly the same comments will apply to the address of Dr. W. B. Pritchard, of New York. Both of these doctors were well and favorably known to many practitioners of Ontario. It is perhaps needless to say that their reputation in this part of Canada has been greatly increased by the work they did in such a kind and courteous way at this meeting. In accordance with the custom of the last two years there was no division into sections. It seems rather a pity that a Medical Association so ambitious as that of Ontario should have to take such a retrograde step. We know of no large and prosperous society in any civilized country where division into sections is not considered an absolute necessity. No important changes of a business character were made. The most important of the suggestions, perhaps, last year was that the Ontario Medical Association should be-

come a branch of the British Medical Association. There is a general feeling that such a consummation would be very pleasant in many respects, but at the same time there is grave fear in the minds of the majority that it might interfere with the prosperity of the Association, especially in regard to the numbers in attendance at the meetings. The committee to whom the matter was referred reported adversely, and the amendment was not carried.

WE SHALL BE RESPONSIBLE.

The venerable Dr. Bredin, who has been in practice since the year 1845, came all the way from his home in Eastern Ontario, near Millbrook, to attend the Ontario Medical Association. He occupied a seat as usual in the front row of the audience, and raised his voice but once during the meeting. It was to some purpose that he spoke. Dr. C. J. O. Hastings had concluded his valuable paper on "The Condition of Ontario Children," which will be found elsewhere in this issue. Sir James Grant, of Ottawa, in a speech of great vigor had supported Dr. Hastings' position, and evinced a wide and thorough acquaintance with every phase of school hygiene and with the necessity for arousing ourselves to action in regard to it.

At this moment Dr. Bredin rose, and, leaning on his staff, said in a clear voice: "Mr. President, I am an old man. I have been in practice since the year 1845. I know the truth of what these gentlemen say, and if we do not act upon it, we shall be responsible."

These few words produced a deep impression on the audience, and it is probable that the success of the discussion which immediately followed was at least partly due to Dr. Bredin's effort. It was worth a good deal to all present to hear a voice from the farthest verge of professional life speak so well and wisely, and to know that one of the oldest members of the Association was as much alive as the youngest could be to a question of such importance in modern medicine.

BANQUET TO DR. O'REILLY.

Dr. Charles O'Reilly, former Superintendent of the Toronto General Hospital, was made the recipient of a testimonial, June 10th, when a hundred or more of his professional companions, and other friends, tendered him a banquet at the Albany Club. Dr. Adam Wright presided, and beside him were seated the guest of the evening and the Hon. J. J. Foy, Attorney-General of the Province. Others present were Dr. L. H. Barker, successor to Dr. Wm. Osler in the Chair of Medicine in the Johns Hopkins Hospital, Baltimore; Dr. Thomas Cullen, Professor of Obstetrics in the same University, both graduates of the University of Toronto; Drs. W. H. B. Aikins, Duncan Anderson, H. B. Anderson, Allen Baines, William Barnhardt, Mr. S. T. Bastedo, Drs. N. H. Beemer (Mimico), G. A. Bingham, C. Bird (Gananoque), E. J. Barrick, Wm. Britton, G. G. Boyd, H. A. Bruce, G. H. Burnham, W. P. Caven, Graham Chambers, G. S. Clelland, E. K. Cullen, J. M. Cotton, W. G. Collison (Lindsay), Mr. C. Cockshutt, Drs. J. L. Davison, C. R. Dickson, P. E. Doolittle, G. Elliott, J. E. Elliott, F. Fenton, J. Ferguson, G. H. Field (Cobourg), J. T. Fotheringham, J. S. A. Graham, F. L. M. Grasett, J. B. Gullen, H. J. Hamilton, A. J. Harrington, A. O. Hastings, C. J. G. Hastings, W. B. Hendry, Mr. J. H. Horsey, Drs. R. M. Hillary (Aurora), H. S. Hutchison, C. Hodgetts, Samuel Johnston, A. J. Johnston, John S. King, Mr. Cecil King, Drs. A. A. Macdonald, T. B. Macdonald, G. R. McDonagh, H. A. McCullough, W. J. McCollum, D. N. Maclennan, D. McGillivray, Murray McFarlane, K. C. McIlwraith, Mr. John Massey, Drs. C. F. Murray, T. H. Middleborough (Owen Sound), R. T. Noble, Brefney O'Reilly, Gerald O'Reilly, H. C. Parsons, W. T. Parke (Woodstock), S. G. Parker, W. H. Pepler, A. Primrose, R. A. Reeve, J. F. W. Ross, B. L. Riordan, J. W. Rowntree, R. L. Stewart, S. Singer, E. W. Sprague, R. W. Bruce Smith, G. Silverthorn, G. B. Smith, J. A. Temple, Chas. Trow, T. S. Webster, T. Wylie, D. J. G. Wishart and Messrs. D. R. Wilkie and W. A. Wilson.

After the toast of the King, the Chairman proposed the toast of Dr. O'Reilly's only son, Dr. Brefney O'Reilly, who, in replying, expressed himself as being deeply sensitive of the kindness and good-feeling shown to his father. Dr. J. F. W. Ross, in proposing the health of Dr. Gerald O'Reilly, brother of Dr. Charles, said no man had done more to promote

good feeling among the members of the profession than their guest.

Speaking to the guest of the evening, Dr. John S. King said:

“I am indeed happy at this eventful period in the life of Dr. Chas. O'Reilly, to be permitted to give expression to a few of the many thoughts evolving regarding him; and to call up some of the reminiscences of him who has been my earliest preceptor—my Æsculapius—my friend.

“The birth of this fair Dominion on the 1st day of July, 1867, was marked by much rejoicing, and the inauguration of Dr. O'Reilly as Medical Superintendent of the Hamilton Hospital. At the time I entered the Hospital, a couple of years later, the Medical Superintendent organized a clinical class, and a junior medical and surgical house staff. Both class and staff were composed that summer of myself. Dr. O'Reilly at once became my preceptor, and few, indeed, there be among preceptors as painstaking in imparting practical knowledge, not only in his clinical work, but in the detailed instruction as to the wound dressing, bandaging, making fracture splints, compounding medicines, and everything connected with hospital work. He was himself a genius at making new and original devices for all manner of purposes.

“His exemplification of treatment of obstinate cases was most original and effective, as may be illustrated by one case, if I may be permitted by the Doctor to speak of it. It was a case of persistent hysteria, which had for nearly two years baffled the skill of the older physicians. The woman remained constantly in bed, and vowed she was unable to use her limbs. One day he was seen running into her ward with a pail of water, crying, ‘Fire! fire!’ and, stripping down the sheets, told the woman the place was on fire and to escape for her life, at the same moment emptying the water over her prostrate form. The application was sudden; so was her exit from the bed, and she made good speed into the corridor. She was cured.

“Another circumstance, which was somewhat exceptional even at that early period of the Doctor's experience. I may mention as characteristic of the man, was that of the amputation of the foot and lower third of the leg without the use of an anæsthetic. The patient was himself a doctor, who objected to chloroform for personal reasons. This long antedated the Oslerized chloroform age limit. Preparations for the operation were effected by first filling a box with stone, to the lid of

which box the limb was securely strapped. The patient, meanwhile, was seated in a chair adjacent to the box, and braced his courage with a goblet of what was known in those days as 'Old 40 Rod,' and smoked a pipe of tobacco. The O'Reilly bandage—now called Esmarch's bandage—was employed to empty the limb of blood. The bandage was previously saturated with oxide of hydrogen. It will thus appear that the antiseptic treatment was unique, and besides being cheap, was always on tap. Result a bloodless amputation, satisfactory and complete. The amputated portion was preserved in a cool place until the recovery of the patient, when, with the help of my preceptor, the doctor dissected his own foot to decide what were the remote and proximate causes of the trouble.

"Another matter that differed then from now was the absence of fear from contagion. It was the custom of the preceptor and his pupil to go the rounds daily of the medical, surgical and small-pox wards, the latter patients occupying the old frame building on the grounds at the rear of the brick building. One diagnostic feature of the small-pox cases, as pointed out by my preceptor in his clinic to me, and which was verified in repeated cases, and which permanently impressed me with its value, was that this most disgusting contagious disease gave rise to a most fragrant and agreeable odor when the nose was brought near the pustules, which odor most nearly resembled that of the contents of a freshly-broken bumble-bees' honey-comb in the meadow in the summer time.

"Hours might easily be occupied in outlining interesting events of our friend's career, but time forbids, though I cannot refrain from citing one which might have prevented the possibility of this social gathering. Be it remembered that at the times alluded to our friend was a blushing bachelor; and being the disciple of this Æsculapius, and as such his friend, I occasionally accompanied him in his voyage to the northern shore of the most beautiful bay called Burlington, where resided a worthy lady destined to become, as she since became and continues, a partner in his joys and sorrows. On the particular occasion to which I refer his call was prolonged well into the evening—and so was mine at the Beach—which evening proved to be one of the darkest I ever remember. After my long wait I saw my preceptor's near approach, and found him equally anxious with myself, owing to the rapid approach of a threatening storm. By the aid of the electric flashlights we started our row-boat in the direction of the hospital on the opposite shore of the bay. Æsculapius sat at

the helm and his disciple plied the oars. When well on our way the storm broke into violence and fury. Heaven's artillery roared and electric pyrotechnics at swift following intervals enabled the helmsman to guide the tiny boat over the vast billows, which were rolling higher and higher every minute. We two mortals felt our time had come, and expected every moment to sink to a watery grave. Had it not been for his good judgment and discernment and correct work at the helm I would not have been able to tell you anything of the Doctor's early career; and if I had not made the most strenuous efforts at the oars till the shore was reached, you would not have had our mutual friend as guest here to-night; and free I am to confess before you all, and in which confession I doubt not he will join—that the joint toiling of each for both, and both for each, proved a bond of friendship never yet broken; and Heaven forbid that it should ever be. We landed safely, as you see, though fear turned my hairs to gray, and drove crimson blood into his, thus giving me the appearance of age, and him of youth, which, as you all must know, is a reverse of the true condition. This condition of his will be in his favor in seeking to avoid the chloroform age. But of reminiscence and of humor enough.

“Environment contributes greatly to education, and is a most important factor in the formation of character; and the aggregate of the diversified environment to which our friend was related during a period of over one-third of a century as Medical Superintendent, first of the Hamilton Hospital, where his natural qualifications, scholastic attainment, practical experience and professional lore had marked him a most suitable man to assume the responsibilities of a similar but more onerous position to which he was called, namely, that of Medical Superintendent of the largest hospital in the Province, in the Queen City of Toronto. The varied environments in the latter position during a period of thirty years must have occasioned a crucial test of strength of will, power of self-possession, of self-abnegation, resolution of purpose, and other attributes of a strong, well-balanced mind so necessary in one having to consider the varied interests of the trustees, the profession, the patients, the staff and the public. That he met their expectations, and merited their fullest confidence and appreciation, has been or is being proved in a marked degree.

“As the composite picture or aggregate of impressions of the several artists produces the true physiognomy and cranial

form of the individual, marking well each characteristic, so the constantly occurring, extensive, yet varied impressions received from the wise, experienced, skilled, cultured and fraternal in the medical and surgical world of the Province, continuous over more than one generation of time, must have created the ideal, composite, representative Doctor.

"And such ideal, permit me to say, in my humble judgment, is personified in the mentality, individuality, and professional lore of him whom we to-night in a social way seek to honor as our friend.

"As he now withdraws from the activities of a long-filled official position to enjoy a season of rest and enjoyment, he will carry with him our friendship and our best wishes that the afternoon of his life may, like the later, leafy days of June, be long, bright and cheerful."

Hon. Mr. Foy, in a brief address, said he had known Dr. O'Reilly very intimately for many years, of which he had none but pleasant memories.

Mr. D. R. Wilkie expressed himself as being glad of the opportunity of being present, and paid a high tribute to Dr. O'Reilly's personal worth and administrative abilities.

Dr. Thomas Cullen appreciated very much the privilege of responding for the house staff. He looked upon Dr. O'Reilly as his medical father, and referred to his lovable personal qualities and his distinguished abilities.

Dr. J. Algernon Temple proposed the health of the guest of the evening. He thought the honor was conferred upon him because he was perhaps the oldest friend Dr. O'Reilly had present in the room, their intimacy having extended over forty years. He compared the hospital of that period with the well-equipped hospital of to-day, and spoke of what Dr. O'Reilly had done to advance the interest of the profession and of the young men who had had the good fortune to serve under him.

Dr. Allen Baines then read an address expressing regret at the resignation of Dr. O'Reilly and asking the acceptance of some pieces of plate as a very slight token of good-will. On behalf of the subscribers, the address was signed by J. Algernon Temple, Allen Baines, H. J. Hamilton, J. O. Orr, A. H. Wright, W. H. B. Aikins, Bruce L. Riordan, James F. W. Ross and Samuel Johnston.

Dr. Barker, of Baltimore, was then called upon. He looked back with pleasure to his year on the house staff of the Toronto General Hospital, and remembered with much appreciation the great kindness which Dr. O'Reilly had shown to himself

and the other members of the house staff. He was sure every man who had ever served in the Toronto General Hospital felt a deep sense of gratitude to Dr. O'Reilly for his unvarying kindness.

Dr. Adam Wright presented the solid silver gift, and read a telegram of regret for absence from the Hon. Senator Sullivan, of Kingston. "Toronto Hospital," he wired, "was a monument of Dr. O'Reilly's reforming genius and love of humanity."

Dr. O'Reilly received a perfect ovation on rising to respond. He thanked all present for the magnificent banquet, and the absentees for their cables, wires, letters and messages, and was glad to see so many of his ex-house staff present. He had come to Toronto on January 1st, 1876, at the request of the Board, all of whom—C. S. Ross (Chairman), W. T. O'Reilly, Thomas McCrosson, Wm. Elliott and W. H. Howland—had since slipped away. Judge Patterson and Walter S. Lee had also joined the great majority. The medical staff then consisted of Drs. W. T. Aikins, H. H. Wright, Bethune, Hodder, Graham, Thorburn, Geikie, Richardson, Cartwright, Cassidy, Reeve and Temple. The last five were all alive, and some of them present.

"I was at Dr. Hodder's last operation and at Dr. Grasett's first operation, he being the youngest surgeon on the staff at that time, and glad I am to see him here to-night as senior surgeon of the hospital. My first two house surgeons were Drs. Fisher and McArton, then fourth-year students, and my two first graduates were Dr. Langstaff and Dr. Stark, both alive to-day. I cannot be accused of being a 'rolling stone,' as I have only lived, in all my life, in my father's house and in the hospitals of Hamilton and Toronto.

"I am not saying good-bye, but only good-day, and may we all have many happy years. Let us keep young by associating with each other oftener than we do, and with the younger members of the profession like ourselves, for the vitality of youth is very contagious, and will carry us over the chloroform period. The very idea of knowing that I am surrounded by over a hundred friends to-night makes it hard indeed for me to put into words the feelings which I should like to express. I shall conclude by saying how sincerely Mrs. O'Reilly, my son and myself appreciate this magnificent ovation, your expressions of kindly feeling and your handsome present, and by thanking you for all you have done and said for 'me and mine.'"

MEDICAL ITEMS.

Medical men who will attend the annual meeting of the Canadian Medical Association at Halifax, N.S., August 22nd to 25th, are requested to communicate, as soon as possible, with C. Dickie Murray, M.B., Chairman of the Information and Lodgings Bureau, 66 Queen St., Halifax, with a view to securing hotel accommodation in advance. The hotel rates vary from \$1.50 to \$3.00 per day.

We learn from the *New York Medical Journal* that Dr. Thomas Addis Emmett was honored on his 67th birthday on May 29th at a dinner given at Delmonico's by his medical friends. About one hundred and twenty-five guests were present. Dr. Emmett was escorted to the dinner by Archbishop Farley, who in a brief speech said: "I never felt more of a layman than I do at this dinner given to the eminent physician, Dr. Emmett; honor is due to him who stands at the head of the medical profession; what he has achieved in literature, medicine and surgery is more than sufficient for any one man; he has lifted up for himself a monument of work that will stand long when he is in his grave."

Dr. E. C. Dudley, of Chicago, made an address of introduction. Among others who spoke were Drs. W. M. Polk, Geo. T. Harrison and F. J. Quinlin, of New York, Dr. W. H. Baker, of Boston, and Dr. S. C. Gordon, of Portland, Maine. In the different speeches the various phases of Dr. Emmett's activities were specified, especially his career as a surgeon, his contribution as to history and his achievements in art.

Obituary.

EDGAR MACKLIN, M.D.

Dr. Macklin, of London, Ont., died at his home in that city, May 30th. He graduated M.D. from the Western University, London, and for a time acted as surgeon on an Allan Line steamship. After giving up that position he practised for a number of years in London.

Personals.

Dr. Chas. O'Reilly sailed from Montreal for London, England, June 30th.

Dr. Jos. W. Lesslie, of Toronto, returned from a visit to England, June 20th.

Dr. C. W. Freeman has resigned from the position of Superintendent of Hamilton City Hospital.

Professor Ramsay Wright, of the University of Toronto, is spending the summer in Greece, Europe.

Dr. A. Primrose, of Toronto, left on his second trip to Edmonton, N.W.T., to attend the King murder trial.

Dr. Jos. W. Rountree has been temporarily appointed to act as Medical Superintendent of the Toronto General Hospital.

Dr. Duncan Neil Maclellan, of 126 Bloor Street west, Toronto, was married to Miss Marion Clemesha, daughter of Mr. Clemesha, of Port Hope, June 14th.

Dr. Edmund E. King, of Toronto, who has been travelling for the last two months in England and on the Continent, returned home, June 27th, and has resumed practice.

Dr. Arthur B. Wright, who for the last two months has been attending the Clinics of Cocher in Berne and Roux of Lausanne, Switzerland, expects to return to London, England, early in July.

Dr. Graham Chambers wishes to inform the members of the medical profession that he has given up general practice, and will devote himself to consultation work in internal medicine and diseases of the skin.

Dr. J. Orlando Orr spent the last week of May in New York where he procured several special attractions for the Toronto Industrial Exhibition. After his return to Toronto he received a letter from Lord Stratheona who stated that he had received a letter from Mr. F. R. Fawcok, director of the South Kensington Museum, who said that in reply to an application from the managers of the Industrial Exhibition the following oil paintings will, be loaned for next fall, Battle of Waterloo and Battle of Fontenay, by Phillappteaux; and also reproductions of plate belonging to the Royal collections.

Correspondence.

THE APPOINTMENT OF A MINISTER OF HEALTH.

To the Editor of THE CANADIAN PRACTITIONER AND REVIEW.

DEAR SIR:

Dr. Hodgetts, at the recent meeting of the Ontario Medical Association, read a paper entitled, "A Plea for a Provincial Minister of Health." I was unable to be present when the paper was read, but when the committee which had been appointed to consider this suggestion brought in its report asking the Association for an endorsement of it, I moved that the report be not received, giving very briefly some objections to it. These objections were endorsed by several speakers and by a vote of the Association.

The question raised by Dr. Hodgetts' paper is a very important one from at least two standpoints. These can be briefly summarized under two heads:

1. Is there any necessity for a Provincial Minister of Health?

2. Is it wise for the Ontario Medical Association to even introduce any question that might divide its members into rival political factions?

In answer to the first question, it can be asserted as an indisputable fact that the present Provincial Secretary is, as all his predecessors have been, quite capable of fully understanding and efficiently dealing with any matters pertaining to the public health. He is, under present conditions, absolutely free to select a Board of Health, or a commission, from the very best men in the whole Province, whereas a Minister of Health would, of necessity, be chosen from one party; and party exigencies would narrow the selection to one of its leaders.

The work of a non-partisan commission or Board would be considered by the Legislature on its merits, whereas the work of a Minister would always incite fierce party criticism. The work of the former would be continuous; the work of a Minister, in so far as he was concerned, would abruptly end with the defeat of the party. No Minister could do more or better work than is being done by Dr. Bryce, Dr. Hodgetts, and the Provincial Board of Health. The cost to the country

would be enormously increased by this change, without any corresponding benefit. In fact, there would be, in all probability, demoralization, instead of improvement, in all matters pertaining to public health.

Again, the character of the work does not demand a Minister and a special policy. The Legislature, which by the way, contains a fair proportion of able medical men, enacts certain regulations pertaining to the management of all such institutions as would come under a Minister of Health. If the Government appoint the right kind of officials, there is no reason why these institutions should not be run efficiently. If they are not, it is the fault of these officials, who should be promptly changed, if found negligent, and not the system changed for one far more expensive, inefficient and meddlesome. Dr. Hodgetts has not given us a single department in this whole field where competent officials could not do the work satisfactorily. Enough has been said to prove that there is absolutely no need for the Ontario Medical Association to take any such step as Dr. Hodgetts suggests in his paper.

II.

Is it wise for the Ontario Medical Association to even introduce any question that might divide its members into rival political factions?

I am not one of those who take the narrow view that the medical society, medical press and medical practitioner should consider scientific work alone, the very "Ultima Thule" of its, or his, existence. It is quite true that scientific or strictly professional work should, and does, imperiously exact a very large share of a doctor's time and energy, yet the demands of his life and his citizenship pre-empt the first claim, not only on his time and energy, but on all that he hath, for knowledge and skill alone can only make a good type of machine, never a high type of man. It is, therefore, quite within the province of the Ontario Medical Association to discuss a variety of subjects, and this brings up for consideration the character of Dr. Hodgetts' proposition. Is it such, that all our members, irrespective of their party leanings, could see "eye to eye," as being one of universal beneficence, or is it not, rather, one that simulates so very palpably a "plank" in a party platform as to at once arouse party suspicions? How are we to distinguish the appointment of a Minister of Health from, say the straight party announce-

ment of a Minister of Mines, or how could the medical electorate differentiate between these two Ministers at election times, when both are equally clamorous for the same party vote? The members of the Ontario Medical Association are probably pretty evenly divided as to party politics, and no other body, outside of the Legislature itself, contains a larger proportion of active, strong party men. To assure myself of what effect Dr. Hodgetts' proposition would have, I discussed it with three or four men on each side of politics. These approved or disapproved of it on strictly party lines. This evidence is quite sufficient to forbid the Doctor's proposition from being ever brought up in the Association. The Doctor's lack of any experience in party warfare can be generously accepted as a sufficient excuse for the mistake he made in introducing any such question, and the Presidents—past and elect—as well as every member of the Association, must feel very thankful that this bone of contention has been so very quietly and deeply buried out of sight.

Yours truly,

JOHN HUNTER.

Book Reviews.

Harrington's Practical Hygiene. A Treatise on Hygiene and Sanitation. For Students, Practitioners, Health Officers, etc. By CHARLES HARRINGTON, M.D., Assistant Professor of Hygiene in Harvard University Medical School, Boston. New (3rd) edition, thoroughly revised. In one octavo volume of 793 pages, with 118 engravings and 12 plates. Cloth, \$4.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

No department in the realm of medicine approaches in importance hygiene and sanitation—the science and art of conserving the health, energy, wealth and welfare of the individual and of the community. An authoritative book, covering the entire subject clearly and comprehensively, is therefore an essential to the full execution of professional responsibilities. Dr. Harrington's work was accepted as the authority upon the appearance of its first edition. He treats his subject broadly and with careful attention to details, his purpose being to furnish a clear, complete, well-illustrated volume, equally adapted to the needs of the student, practitioner and health officer. The success of the work is well shown in the demand which has exhausted two large editions in less than four years. As the succeeding editions are called for, the author, by careful revision, elision of obsolete matter and addition of new, keeps his work well abreast of the advances in a subject by no means stagnant. The new section on infection, susceptibility and immunity will prove a valuable and interesting feature of the present edition. Evidences of searching revision will be found throughout the book, the alterations and additions necessitating a considerable increase in both text and illustrations, although the price remains at its previous very moderate figure.

A Text-Book of Obstetrics, By ADAM H. WRIGHT, M.D., M.R.C.S., Eng. Professor of Obstetrics, University of Toronto; Obstetrician and Gynecologist to the General Hospital, Toronto, Canada. With two hundred and twenty-four illustrations in the text. New York and London: D. Appleton & Company, Publishers. Toronto: N. Morang & Co. Price, \$4.50.

To the medical practitioners of this country, Dr. Adam H. Wright needs no introduction, as few members of the profession are better or more favorably known. The reviewer's acquaintanceship with him extends over a period of thirty years as teacher, colleague and friend; and these many years have given abundant proof of the thorough manner in which Dr. Wright performs all his work. But this is not the occasion for personal reminiscences. Our duty is that of examining his work on obstetrics.

On many occasions, and for many years, Dr. Wright has

been a contributor to obstetric literature, and has frequently read papers upon his chosen field of work before medical gatherings. It is needless to say that on no occasion did he fall below, but rather rose above, the high expectations formed in advance regarding what he might have to say. The work before us is the outcome of long years of close study and extensive experience, the best uses of both having been made by his sound judgment and honest purpose.

The subject matter of the book has been divided into physiological obstetrics and pathological obstetrics. In the first section the author deals with anatomy, physiology, the embryo and fetus, pregnancy, physiology of labor, the management of normal labor, the puerperal state and abnormal presentations. The second part of the book discusses diseases of pregnancy, intercurrent diseases of pregnancy, diseases of pregnancy and the puerperium, ectopic pregnancy, hemorrhage, miscarriage, prolonged and precipitate labors, abnormal conditions of the uterus and mammary glands, insanity, antiseptics and infection, deformities of the pelvis, and obstetric operations both minor and major.

This is a full catalogue of diseases and conditions, and furnishes plenty of text matter for a most exhaustive study of the subject of obstetrics. Chapter by chapter we have reviewed this book, with a steadily growing appreciation of its contents. We have here in moderate space—the book does not quite run to six hundred pages—the very best to be found in the whole range of the science and art of obstetrics. But, in addition to the excellence of the subject matter, a generous word of praise can be said as to the form in which it is given to the reader: Dr. Wright commands a fine style. On these counts of matter and form this book complies fully with Kant's tests for the merit of all books.

Naturally enough the reader will instinctively turn to the more difficult portions of the subject of obstetrics. It is in the handling of such topics as tuberculosis and cardiac diseases in connection with pregnancy, ectopic gestation, eclampsia, albuminuria, septicemia, troublesome miscarriages, etc., that the real strength of the author appears. We do not hesitate to state that the advice contained in this book upon these subjects will be found to be the very best available anywhere.

The publishers have done their part well, and have produced a very handsome volume. We bespeak for this work on obstetrics a very extensive sale, and will venture the opinion that, of the various books on the possessors' shelves, none will be taken down more frequently nor more profitably for perusal

than this "Text-book of Obstetrics," by Professor Adam Wright.

The words of the famous Samuel Johnson about Oliver Goldsmith may fittingly be applied to Dr. Wright and his book: *Nihil est quod non tetigit; nihil quod tetigit non arnavit*—he has touched upon everything, and all he has touched he has adorned.

JOHN FERGUSON.

Mucous Membranes, Normal and Abnormal, including mucin and malignancy.
WM. STUART-LOW, F.R.C.S., London. Bailliere, Tindal & Cox.

This small volume embodies the author's opinions on the importance of mucin in the animal economy, and his practical application of his theories to the treatment of diseases in which the mucous membrane is impaired. His views are well known in America from articles he has written from time to time in the various journals.

Lea's Series of Medical Epitomes. Edited by VICTOR C. PEDERSEN, M.D.

Arneill's Epitome of Clinical Diagnosis and Uranalysis. A Manual for Students and Practitioners. By JAMES R. ARNEILL, A.B., M.D., Professor of Medicine and Clinical Medicine in the University of Colorado, Physician to the County Hospital and to St. Joseph's Hospital, Denver. In one 12mo volume of 244 pages, with 79 engravings and a colored plate. Cloth, \$1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

Lea's Series of Medical Epitomes will comprise twenty-two volumes, of which this is the seventeenth. The volumes are so uniformly excellent, modern and trustworthy, and so well adapted to the needs of students and to preparation for college and State Board examinations that they have practically monopolized the entire "compend" market.

Dr. Arneill has furnished a work that is a fit companion to the others of this series.

It contains an enormous amount of up-to-date information on laboratory investigations and clinical diagnosis, skilfully condensed, simply and clearly stated. As might be expected, the sections on the blood and urine are very full, but sufficient consideration is also given to the examination of stomach contents, feces, sputum, many bacilli, cerebro-spinal fluid, milk, etc.

In every line the book is practical, the author never losing sight of the fact that it is intended for the student of medicine and for the practitioner who may not have acquired the ability to put into practice the laboratory methods which so surely lead to precise and correct diagnosis.

An attempt is successfully made to explain fully the most important tests and procedures, and the author very happily anticipates the mistakes and difficulties of the inexperienced worker. Illustrations are freely used wherever they can help to a better understanding of the text.

Miscellaneous.

Beer-Drinkers' Heart.

Georg Keferstein (*Zeit. für Diät. und Phys. Therap.*) discusses the effect upon the heart of drinking large quantities of fluids, and especially deals with the question of how far the so-called "beer-drinkers' heart" is caused by the alcohol in the beer and how far it is a mere mechanical effect of the quantity of fluid taken in. His view that the toxic effect of the alcohol is the main cause, to which other causes are only secondary, has been combated by Hueppe, who cites the occurrence of an exactly similar heart condition in excessive tea drinkers in Russia in support of the theory that the amount of fluid rather than the nature of the fluid is the harmful factor. Tea, however, may itself exert a toxic influence, and in favor of Keferstein's view is an observation of Aufrecht, who found that spirit drinkers also suffered from similar heart lesions. Certain authors have held that a plethora vera or increase in the total amount of blood in the body without change in its composition may result in part from drinking large quantities of fluid, and that such a plethora must throw more work upon the heart. Keferstein does not admit that the existence of plethora vera has been demonstrated, for we have no direct method of estimating the total quantity of blood in the body. Of the writers who describe the condition most appear to consider it the result of over-feeding, in addition to over-drinking. When occurring in combination with over-feeding, if we suppose that the need of the body for nutrition is increased and that all metabolic processes are more active than normal, the work of the heart will undoubtedly be increased, but not now by any mere mechanical process. Apart from such a supposition, it seems impossible that plethora vera can mechanically increase the work of the heart. The need of the tissues for nutrition being unaltered, the flow of blood through the capillaries will not be increased, and the only effect of the condition will be an accumulation of blood in the most distensible part of the vascular system, that is, in the veins. The condition of plethora serosa or of increase in the fluid constituents of the blood is radically different. Since the number of cells in any given mass of blood is diminished, a greater mass of blood than before must pass through the capillaries in a given time in order to sustain the nutrition of the tissues, and if other conditions are supposed constant, the heart must work harder to bring this about. On the other hand, the viscosity and cohesion of the blood being diminished, the friction with the vessel wall will be diminished and the work of the heart to this extent lessened. Both these factors act together, and we have no method of estimating the total result on the work done by the heart.