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A CONSIDERATION OF SOME POINTS IN THE MANAGEMENT OF PURULENT NASAL DISCHARGE—SUPPURATION IN THE ACCESSORY NASAL SINUSES.*

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MR. Chairman and Members of the Ontario Medical Association,—It is not my purpose, nor do I think it is your desire, that I should attempt to give an exhaustive address dealing with the entire question which forms the title of my paper. I propose to offer some remarks on the disease in general.

I am sure you will all agree with me that we are constantly overlooking suppurative disease of the nasal accessory cavities. I am convinced that this affliction is of very common occurrence, and if looked for will be found in many cases when the symptoms seem, in themselves, to suggest much simpler trouble.

I do not intend giving you cullings from the literature of recent years but will confine my remarks to my own private patients. I do not refer to the many cases that occur in association with acute head colds, and which are frequently not seen by the physician.

(1) One may have a patient who has a suppurating focus in any sinus, and who not only goes through life free from pain or discomfort, but may even enjoy life.

(2) The only sure sign of pus in a sinus is either to see it pour out of the ostium or force it out by air or solution.

(3) Finding pus in one cavity does not preclude the possibility of there being other foci of greater importance, for example a frontal sinus may drain into the maxillary antrum, or a sphenoidal sinusitis may be kept up and be dependent upon posterior ethmoidal disease. Therefore, in a case of sinus disease it is important to exclude all other sinuses.

(4) Nostrils that are blocked up by nasalpolypi and especially if they have recurred are in a great majority of cases associated with ethmoidal and antral suppuration. In fact I make it a rule to always wash out maxillary antra in polypus cases.

(5) The symptoms complained of need not be necessarily a nasal discharge, particularly is this so in chronic cases. Quite frequently the complaint is of nasal obstruction.

* Read at the Meeting of the Ontario Medical Association, Hamilton, 27th May, 1908.

(6) Frequent attacks of rhinitis, with almost nothing to be seen in the nose other than the evidence of inflamed membrane, are very often due to a quiescent sinusitis which undergoes attacks of acute infection.

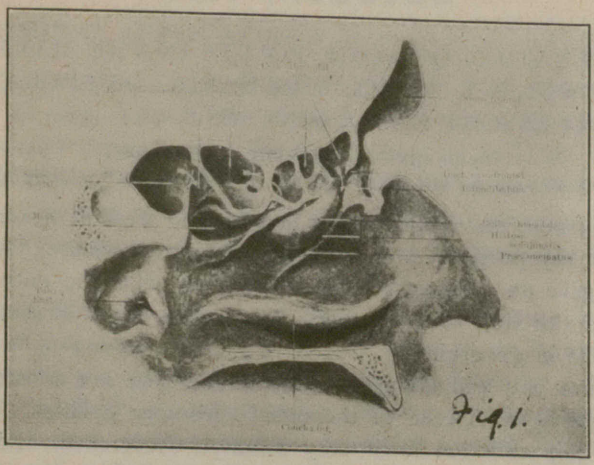

FIG. 1.—Outer wall of the left nasal chamber after the removal of the superior and middle turbinals, exposing the anterior and posterior ethmoidal cells. The bulla is very large and as a result narrows the hiatus, and shows the ease by which pus, especially when the anterior lip of the hiatus is hypertrophied, may be directed into the antrum. (Logan Turner.)

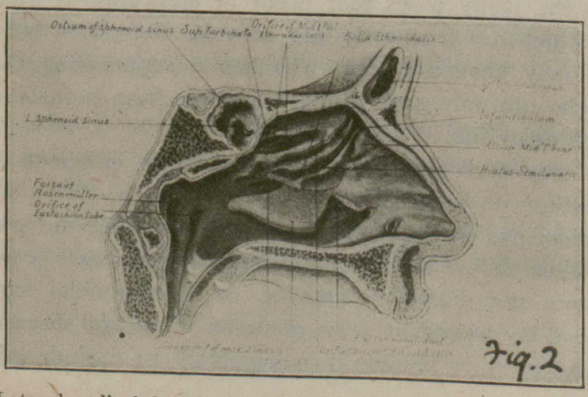

FIG. 2.—Lateral wall of the left nasal cavity, showing portion of the inferior turbinal removed to expose lacrymo-nasal duct, behind which the operation on the wall should take place. The middle turbinal has been removed to show the orifices of the sphenoidal and frontal sinuses. (Onidi.)

(7) The patient's desires, as far as is possible in conforming to good surgery, should guide one somewhat in his line of treatment. The age and general constitution also play a part. If, in a patient complaining of some nasal discharge, which is not of very great inconvenience, one

finds pus in the hiatus draining from the frontal sinus, he should not be in too great a hurry to do any radical intra-nasal or external operation. Not infrequently one finds in elderly people, who are on the downward path, evidences of chronic antral trouble which is only of real distress in the winter time. I think we are too eager to do some

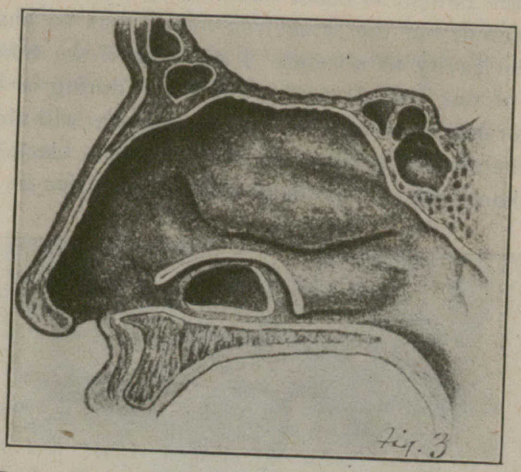

FIG. 3.—Perforation completed for radical antrum operation through inferior meatus.

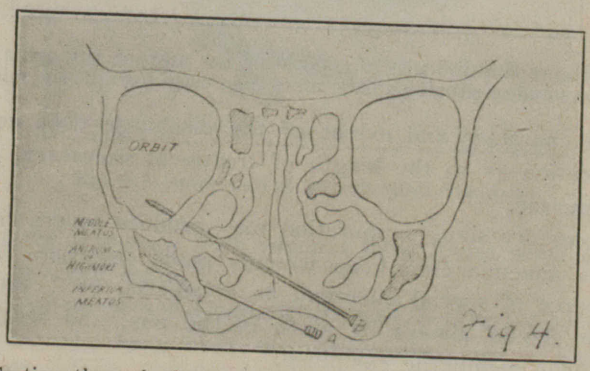

FIG. 4.—Section through the nose, showing trocar entering the orbital cavity through the middle meatus, when the lateral wall slopes outward. A second needle enters the antrum through the inferior meatus.

operation when we might better temporize and tide them over their bad season. In fact, they generally demand this course.

(8) What do we mean by cure of sinus disease? Strictly speaking, a cure would mean a return of the mucous membrane to the normal. In acute cases one can expect such to take place, and frequently it does without any help to nature. In chronic cases, however, when there has

been extensive degeneration of the mucous membrane, or where radical measures have been undertaken, we cannot expect this. Operation measures, as scraping the cavity, etc., mean that granulation tissue grows, which ultimately is replaced by scar-tissue. The secreting area is altered and at certain seasons, one finds a mucoid discharge for a time.

So far as the patient is concerned who has a continuous nasal discharge, he is cured, but one must remember that he has not restored the lining of the cavity to normal. I am sure if we take the pains to irrigate many of our antral cases, especially during a head cold, we will find more or less mucous discharge, especially will this be found to be the case if the trouble is taken to irrigate into a black basin. A fair amount of discharge can escape detection if looked for in a white basin.

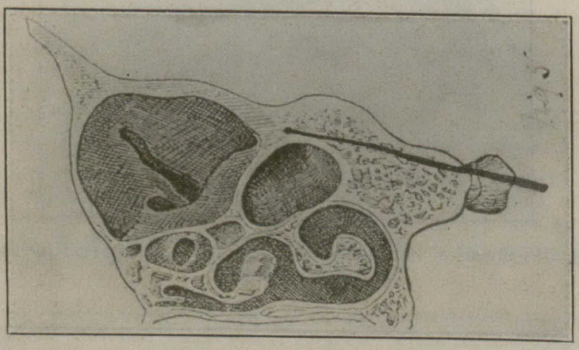

FIG. 5.—Shows the difficulty of perforating the antrum, through a tooth socket, if the cavity be small or situated a little more than usual towards the middle line.

(9) The character and extent of the discharge does not offer any certain indication as to the length of treatment necessary, or the best method to pursue.

(10) Accessory sinus suppuration may produce severe constitutional mischief, as anaemia etc., keep wounds made elsewhere from healing or be a source of special infection, as erysipelas, etc. Bacteriological examination should always be made of the pus, and scraping of the diseased mucus membrane examined.

(11) The specific solution used to irrigate the cavity is of less importance than the volume. One should not forget that he will conduce greatly to the patient's comfort if he uses real warm solutions. For myself I like either hot normal saline, or in cases that smell badly, Chinosol; solutions may with advantage be changed frequently.

(12) The neuralgic pain that not infrequently follows acutely inflamed antra which have ceased to suppurate, responds to nothing so well as a few irrigations of a hot lotion. I have had patients ask for this as it relieves their neuralgia so much.

(13) Transillumination is of but little value in frontal sinus disease, and only when associated with other definite symptoms can it be relied upon in the auxillary sinus. In fact, I have lately seen so many cases of suppuration in the antrum where no shadow was seen, that I find myself puncturing the cavity without bothering about the lamp. If one is careful to go far enough back in inferior meatus and have a long narrow sharp trocar, it is almost painless and the information gained is unquestionable. Graduated light may be helpful, but in thin bones it will be easy for a powerful lamp to show through.

(14) Structural irregularities within the nose may make the diagnosis very difficult, and the treatment more so. I refer to septal deviations and synechia from former operative interference. I have been

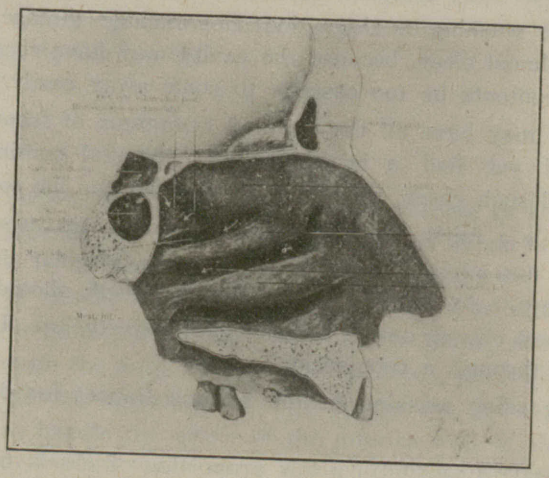

FIG. 6.—Outer wall of the left nasal chamber.

surprised at the frequency with which I have found sinus disease associated with deviated septa.

(15) I have no personal experience with X-rays for diagnostic purposes. Those who have used them extensively speak highly regarding their help. It is especially valuable as showing the extent of the cavity, the presence of septa, and in some cases the relationship of the fronto-ethmoidal group of cells.

(16) I have not been able to find in my own cases of atrophic rhinitis the proportion of sinus diseases that is found by some authorities. However, I must say that in the last few years I have been looking more carefully into these cases and I have found sinus suppuration in a far larger proportion of cases, ethmoidal disease and sphenoidal being the most common.

(17) The relationship that exists between diseased nasal sinuses and the orbit has probably not had the attention it has deserved. I am convinced that a more thorough examination of the nose and a complete investigation of the accessory cavities will go a long way to show the actual cause of obscure cases of periostitis, abscess, caries and necrosis in and around the orbit. Orbital cellulitis and cavernous sinus thrombosis may (and Sinclair Thompson confirms this) be caused by sinus disease. Cases of optic neuritis and atrophy should have sphenoid suppuration excluded. Cases of persistent frontal headache should have a careful examination of the frontal sinus and have empyema with acute exacerbations excluded, even if no pus is seen by intra-nasal means. Frontal headaches are probably mostly refractive, but the sinus ones are far from infrequent.

(18) Once washing a sinus does not exclude disease even if the washing be almost clear, because the cavity may have recently emptied itself or its contents be too caseous to come away easily.

(19) One may have all the cardinal symptoms of frontal sinus suppuration and yet find a healthy sinus. Several continental writers have reported such cases, which makes it easier for me to confess one.

(20) While a fairly large number of antral cases arise from dental origin, I do not advise, except in acute cases, alveolar drainage or so called drainage. As a general rule diseased teeth should be attended to in acute and chronic antral suppuration, nevertheless, I never treat a chronic case through a root socket.

(21) Regarding washing of the various sinuses for diagnostic purpose:

(1) Frontal: Feasible in a fair proportion of cases, 60-70 per cent. depending a great deal on one's perseverance. It may be made more difficult or impossible by:

(1) Deviation of septum.
(2) Ethmoidal cell in the floor
(3) Irregularity of the fronto-nasal duct.
(4) Enlarged bulla.
(5) Enlargement of the middle turbinal.
(6) Hypertrophy of the anterior lip of the hiatus.
(7) Absence of sinus.
(8) Synechia from former operations.
(9) Fronto-nasal canal terminating in an ethmoidal cell.

(2) Sphenoidal sinus. As a rule not difficult, but may have to remove part of the middle turbinal.

(3) Ethmoidal cells. Sometimes with Killian's long speculum one may see pus coming from various ethmoidal cells.

(4) Antrum of Highmore. Through the natural opening is quite possible, but often fails. It is not a scientific method of treating chronic discharge but may be of value in acute disease. I never use it at all.

Puncture through middle meatus is easy but as will be shown on the screen may be dangerous.

Puncture through the alveolus, I never now use at all.

Puncture through inferior meatus of the nose under inferior turbinal is at once easy and practically painless. It has the advantage of irrigating the cavity at one point, and having the fluid gain exit at another distant point.

In conclusion, I wish to say that I have merely touched the fringe of the subject. The various operations, indications and complications have not been mentioned. I have tried to speak more of the difficulties one finds in managing chronic nasal suppuration.

(Form 3.) 84 Carlton St.

Discussion.

J. Price Brown, M.D., Toronto. In the absence of Dr. Royce, Dr. Price Brown opened the discussion, limiting his remarks to maxillary sinus disease. In all acute cases, in which irrigation was called for, he believed that it should be practised, by passing a suitable trocar and canala through the inferior mental wall into the sinus, and washing the cavity out through the nose. But in chronic cases, particularly in young people, he preferred operating through the canine fossa as it enabled the operator to handle the whole of the interior wall of the sinus, and remove all antral polpi much more readily than by any other method. The sinus could then be irrigated as long and as freely as required; after which the opening would gradually and permanently close, leaving a cured case. On the other hand, if the anterior end of the inferior turbinal were removed, and a wide opening made through the inferior mental wall into the sinus, as was now strangely recommended by some rhinologists, although you might cure the disease, you would deform your patient by leaving an abnormal and permanent opening between the nasal cavity and the antrum.

In old people, however, the lower part of the nose-antral wall has a constant lending to become thinner. It is readily perforated, and as a permanent opening can do little harm in such cases, it is the better side for operation. Hence the method might readily be: "Canine fossa operation for young people; intranasal operation for old people."

John Hunter, M.D., Toronto. What I am going to say has not been said by any other speaker, and perhaps will not be accepted by

anyone present, but I am going to say it just the same. Thousands of people are going through life handicapped on account of a delusion held by general practitioners that it was such a difficult matter to make an intelligent examination of the nose and throat, whereas the fact is that it is far easier to make an examination of the nose and throat than it is to examine the lungs. If every young practitioner would take the trouble to carefully examine the nose and throat of all the children in the homes where he is family physician, the discovery and removal of adenoids and enlarged tonsils, and the children taught how to breathe properly, how to blow the nose without forcing foreign material into the eustachian tube, to attend to all discharges in the nasal passage there would be no hypertrophy to obstruct the openings leading into the sinuses. Sinus disease would be exceeding rare if every general practitioner would always carry a reflector and use it. Another stupid mistake we as general practitioners are continually making; we hand our nose, throat, eye and ear patients over to the specialist. The specialist may know a good deal more about the special trouble, but if we do not know a great deal more about our patient than he does we should leave our profession. Call on the specialist to treat the eye, ear, etc., but keep absolute control of the patient. The care of the general health of the patient is often of far greater importance than the treatment of the special trouble.

And as no such report has been made in regard to chloroform anaesthesia in similar cases, it is natural to believe that the latter drug is the preferable one to use in operating upon cases of lateral sinus thrombosis and cerebellae abscess.

H. S. Birkett, M.D., Montreal. I wish to congratulate the reader of this paper upon the very tolerant views expressed regarding the treatment of accessory sinus disease. It is really refreshing to find one taking such broad views, especially in these days of extreme ideas.

As regards the use of X-rays as a means of diagnosing accessory sinus disease, it has been my practise since a very instructive visit to Killian of Freiburg, to X-ray all cases of accessory sinus disease, and its application to diseases of the frontal sinus may be said to be of a special value, for not only does it give one the knowledge of the existence or non-existence of a frontal sinus, but if present, the exact limitation and size of the cavity. Moreover, it shows the disposition of the dividing septum, which is also of great importance, as it proved to be so in one of my cases in which it was found that the septum deviated extremely to the right, the result being that the left frontal sinus was found by an inadvertence in opening, to have passed well beyond the middle line to the right. In this particular case, it was a suppurative affection of the right frontal sinus, but the X-ray plate enabled one to

proceed without any further trouble. Such is the valuable information obtained from an antero-porterior view. Equally valuable is the view taken laterally, when it enables one to form a definite opinion regarding the thickness of the anterior wall and the depth of the cavity, thus helping us to form an idea as to how much deformity may result after the radical operation. Naturally, the greater the depth, the greater the deformity.

One point regarding the seat of puncture in antral disease. The reader of the paper selects a point underneath the inferior turbinated body. Now, Mosher of Boston, has recently shown that the floor of the antrum is often below the level of the inferior meatus, and in such cases, the inner wall is apt to be of considerable density at this point. I think therefore, that the method adopted by Killian of Freiburg is preferable. He punctures immediately over the attachment of the middle third of the inferior turbinated body, and it is shown that the inner wall is thinnest at this point. There is little danger, in my experience of a puncture made as thus described, of the orbit being entered.

NOTES UPON TWO UNUSUAL FRONTAL SINUS CASES.*

By J. PRICE-BROWN, M.D., Toronto.

FIRST. Case of chronic purulent frontal sinusitis with external fistula for nearly two years—operation—recovery.

Feb. 28th, 1907, Miss M. F., age 19, was referred by Dr. Black, of Paisley, for treatment.

History.—In September, 1904, two and a half years previously, while attending college in Toronto, she had an attack of fever, resulting in frontal abscess on the left side. This was lanced by the attending physician in consultation. There was a free discharge of very foul pus. Under treatment healing took place in a month and she went home to Paisley. Toward Christmas swelling of the forehead returned, and Dr. Black re-opened it. From that time until the following March discharge was almost constant, and she was brought to the city again for further advice. The consultants decided that it was a case of frontal sinus disease requiring immediate operation. Consequently, under general anesthesia it was opened through the floor, the excision extending up into the superciliary ridge. An opening was also made downwards through the region of the fronto-nasal passage into the nose, and an attempt was made to secure nasal drainage. The result was not satisfactory. The fronto-nasal pass-

* Read at the Annual Meeting of the American Laryngological Association, Montreal, June, 1908.

age closed and the external opening refused to heal. The discharge would sometimes almost cease and again for days come away more freely. Four months later the sinus was still open. Then, to secure more efficient drainage and lavage, the doctor inserted into the opening a short rubber tube, through which the cavity was washed out regularly. It was worn for nearly a year and then discarded. Subsequent to this the patient would sometimes probe the cavity to obtain a better outlet to the pus or the doctor would make the passage freer with the lance. Finally, after having almost continuous discharge for two years, a sudden aggravation of all the symptoms occurred, and the patient was referred to me.

Examination.—Left eye almost closed, the eye-lid swollen and inflamed, the swelling extending upwards over the superciliary ridge and including the inner canthus. The surface beneath the ridge was irregular, pultaceous, and darkly suffused in color, with pus exuding from a point immediately over the site of the sinus operation. There was a good deal of pain over the region, accompanied by headache. An x-ray picture, the one shown to-day, did not reveal much save a darkened shadow on the affected side, and the opening in the bony wall from the previous operation upon the sinus. There was no shadow in the maxiliary region.

Intranasally there was little if any pus visible, but the middle and inferior turbinals on that side closed up the passage. The patient was placed in the Western Hospital.

As preparatory operation, the anterior end of the middle turbinal and a portion of the inferior turbinal were removed. This had to be done under general anesthesia, as the young lady was too nervous to submit to any operative work under local anesthesia.

How to operate upon the sinus was the next question. I was unwilling to attempt a radical operation after Coakley's plan for cosmetic reasons. Killian had not yet visited the country and at that time I knew little of his operation. At the same time I was strongly impressed with Fletcher Ingals intranasal treatment and use of gold tubes. As in his cases, the desideratum of nasal drainage was secured, something which Killian now insists upon as essential; the thought struck me that a gold tube inserted from the frontal sinus downward through an enlarged fronto-nasal passage might be equally effectual. The external wound could then be closed, irrigation would be practised through the tube and the latter eventually removed through the nose. So an operation was done under general anesthesia. The eye-brow was not shaved. The incision was made through the centre of the eye-brow from the middle inwards to the median line. The periosteum was then raised directly upwards over the inner end of the sinus, and a rectangular piece of the outer table

chiselled out above the superciliary ridge, the long direction being upwards. The object was, while leaving a minimum of deformity to permit a straight drill to be passed downwards and backwards to destroy the anterior ethmoid cells. The incision and the removal of the bony wall being entirely above the site of the former surgeon's operation.

A quantity of pus and blood welled out on opening the sinus, the cavity was curetted and freely irrigated. Then the infundibular point being found, successive hand drills were used, until this larger one could be inserted and a free entrance made into the nose, external to the septum and in the region of the anterior end of the middle turbinal. A curved forceps was then passed downwards through the passage, and after repeated irrigations the gold tube was inserted from above.

The wound was at once closed. It healed in a very few days by first intention, but to my chagrin I found it impossible to irrigate the sinus through the tube as intended. The girl had passed through so many operations that she became hysterical the moment an attempt was made to pass any instrument, even the end of a syringe, into the nasal passage. Another point, while the discharge from the old fistula, which I had not disturbed at all, materially lessened, it did not cease; and still continued to be inflamed and tender.

Hence, twenty-three days after the insertion of the gold tube, I operated again. This time I made a similar incision to the former one, parallel to it, but below the eye-brow, and directly through the central point of discharge. From the opening two or three bits of dead bone were taken. The outer tissues were then raised over the entire extent of the original operation, the gold tube was removed from above and a large rubber tube inserted in its place; the upper end being curved on itself, to lie on the floor of the sinus, and the lower end extending beyond the nostril. The outer incision was then closed as before.

This time the result was all that could be desired. Although the tissues through which the incision had been made were inflamed, darkly suffused and spongy, the healing was again by first intention.

The sinus was for a time irrigated regularly twice a day with warm, sterilized water. The discharge gradually diminished, and in a few weeks it practically ceased, when the tube was removed.

From then until now there has been no return of the disease and the patient is quite well. This I think is due to the fact that the wearing of the gold tube for twenty-three days secured permanent and effectual drainage from the affected cavity.

This photograph, Fig. 1, taken last month, one year after the operation, indicates how small a deformity has resulted from the operation.

Second. Case of traumatic frontal sinus disease—operation—recovery.

History.—In April, 1907, Mr. J. F., age 35 years, married, received a severe blow from the head of a horse, the region struck was that of the right temple at the outer end of the frontal sinus. After some weeks this was followed by a swelling beneath the right eye-brow and tenderness on

FIG. 1.

pressure. Later on both these symptoms subsided. In the following August, also, he had the misfortune to strike his forehead against a stone wall, resulting in an abscess which was lanced. In due time this healed, leaving a surface depression.

Early in January, however, his head began to be sore, followed by pains in the region of the frontal sinus, shooting backward toward the occiput. This was accompanied by the sensation of fullness and pressure in the forehead on that side, the condition being always aggravated at

night time. Toward the end of January swelling beneath the right eyebrow also returned, with marked tenderness on pressure over the central portion of the sinus, while sleep at night became almost impossible. During this period the patient was under Dr. Wilson's care; but medical treatment failing to afford relief, on February 22nd he referred him to me and he was placed in the Western Hospital for operation.

Examination.—Head feels hot continually, temperature ranges between 99 and 100, soils two or three handkerchiefs a day from right nasal hemorrhage, complains of intolerable bursting head pains and entire absence of sleep. There is also drooping of tissues beneath the floor of the sinus and much tenderness on pressure. The right side of the septum was much thickened and spongy, the anterior end of the middle turbinal also was enlarged. Both were hemorrhagic, but there was very little pus visible.

My first effort was to give relief by intranasal treatment; so under cocaine and adrenalin I reduced by operation the hypertrophied tissues, but failed either to penetrate the infundibulum or give relief to the frontal sinus. So, five days later, under chloroform anesthesia, assisted by Dr. Wilson, I did a modified Ogston-Luc operation; that is, after chiselling the usual opening into the frontal sinus above the superciliary ridge, instead of merely dilating the fronto-nasal passage and putting in a small drainage tube, I drilled a larger opening, destroying the anterior ethmoid cells; and placed a rubber drainage tube from the floor of the frontal sinus down through the nasal passage and out through the nostril.

On opening the sinus there was very free hemorrhage, accompanied by purulent matter. The blood vessels were enlarged. The mucus membrane, particularly on the anterior wall, was swollen and spongy, that on the cerebral side of the cavity being little affected. After curetting away freely all adventitious tissue, the sinus was washed out with hot boracic acid solution, then swabbed with per-oxide of hydrogen, and the operation completed. The drainage tube was next inserted and lavage repeated, both from above and below. Finally, the wound was closed by silk sutures and padded and bound.

A swab was taken from the sinus at the time of the operation. Examination revealed pus cells mixed with blood. Another swab taken ten days later from the sinus, quite free from blood, proved the disease to be one of pure pneumococcus infection.

Points with regard to temperature. Immediately before the operation the temperature was 99 1-5, three hours later it was 101 1-5, and still two hours later at eight o'clock in the evening it had risen to 104 1-2 and was accompanied by delirium. Throughout the night the patient could with difficulty be kept in bed. In the morning the temperature dropped to 101 1-5, the delirium was over and did not again appear. Still the

second night the temperature rose to 103 4-5, subsequent to which time it was almost invariably normal.

The respiration throughout was above normal, always between 20 and 25 per minute. At the time of operation it was 24 per minute. The pulse also from the first was rapid running from 100 to 120 per minute.

Possibly the rapid pulse and respiration might be due to a general

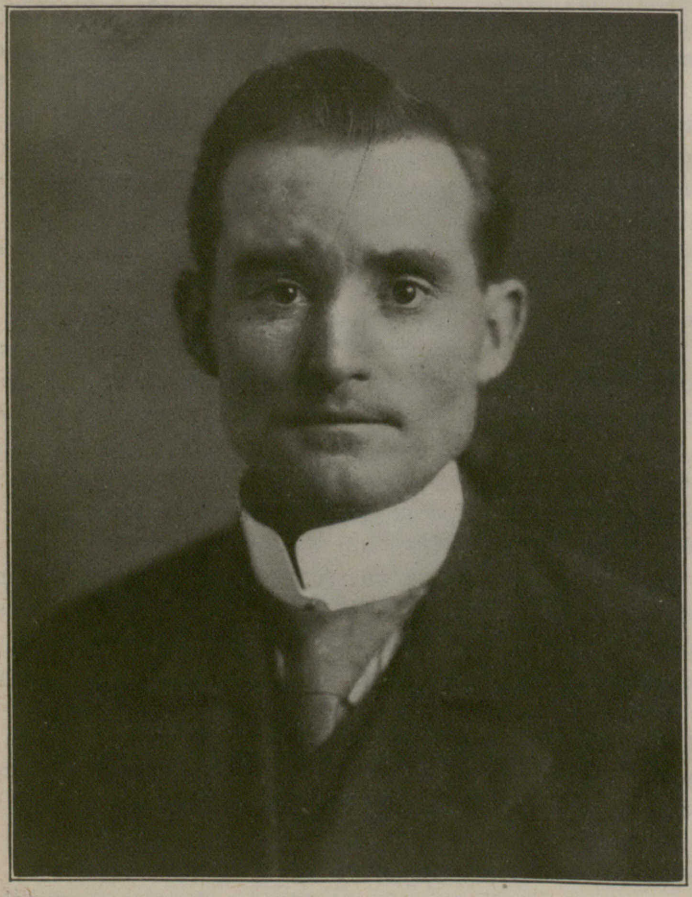

FIG. 2.

pneumococcic infection with local focus within the frontal sinus. With regard to after treatment, the intention was to wash out the sinus, regularly, through the wide drainage tube, by means of a small tipped instrument. This was carried on effectually for some days; but possibly due to the high temperature of the first forty hours, the wound did not heal by first intention. The stitches loosened and were removed and the whole wound opened.

Granulation commenced and the lavage was then done from above, sixteen days after the operation the tube was removed through the nose; and as the sinus wound was closing, a small rubber tube was placed at its inner end and the lavage continued. Latterly no other treatment was followed, save to cover over the small opening of the wound and tube with adhesive plaster, to be replaced after each irrigation. The boracic solution came through the nostril freely and was soon free from pus. By April 16th, the discharge from the sinus had ceased, so the little tube was removed, irrigation dispensed with, and the wound allowed to close--the patient being warned against all nose blowing until entire healing had taken place.

One point is worthy of note as brought out in this case, that is the advantage of a reversed Valsalva in cleansing the fronto-nasal passage during the process of healing. While the little tube was in situ in the forehead, although there was no external discharge whatever, the air would whistle through the passage into the nose with each forcible effort to draw backwards; and with the effort, any mucus lodged within the passage would be removed. When the little tube was finally taken out, the Valsalva drawing backward was forbidden, in order to favor surface healing. The present condition of the patient with a healed sinus is well marked. Fig. 2.

In closing, I might make one other remark, which applies to each of these cases. Although the anterior ethmoid cells were engorged when removed and the middle turbinal pressed tightly against the septum, yet in neither case was there any indication whatever of the antrum of Highmore being affected.

NOTE.—Sept. 20. Patient following his usual occupation without any return of the disease.

THE LARGER RESPONSIBILITY OF THE PHYSICIAN.*

By ERNEST A. HALL, M.D., Vancouver, B.C.

"DR. Joseph Price, Philadelphia, made a plea for the wider dissemination of medical knowledge among the laity, especially among women and young children. Our women, he said, should be improved mentally and physically; to have big men we must have big mothers. The number of specialists should be multiplied and they should abound in every-day life. Arkansas has 75 counties; she should have 75 polyclinics and 75 postgraduate schools. She has 75 poor-houses and 75 jails full of good material which should be self-supporting. Untold good is done by teaching others."—Journal of A. M. A.

* Written for British Columbia Medical Association.

At a recent meeting of the Arkansas State Medical Society, my honored teacher, Dr. Joseph Price, expressed himself in no uncertain language with reference to the necessity of greater activity upon the part of the medical profession in regard to public enlightenment in matters of vital interest to the community. In this he but expressed the sentiments of the true physician who realizes his responsibility and appreciates the opportunity. We have too long played the priestly role, the medicine man's mysticisms and the conservatives tactics—so long that the product of our inactivity in public education has created a reaction among the laity which has become a somewhat potent factor prejudicial not only to ourselves, but the well being of the community. What means this wave of so called religious quackery, this rushing after peri-ambulating psychists, the clientele of the mental healer and the immense patent medicine trade? True, it does not affect personally those of us who are established in the confidence of our constituencies, on the contrary it frequently carries grist to our mills, but in its wider application what does it indicate?

1. A dissatisfaction with the present status of medicine as comprehended by the masses.

2. A desire for greater information and a more general enlightenment upon medical matters.

3. A vague, yet ever growing conviction that materialism enters too largely into both our ideals and therapeutics.

While those of us here assembled may never see the complete socialization of medicine, we must, nevertheless, keep in view the fact that our duty to society in the larger sense is not to be underestimated, and that we, as a profession, maintain an exalted position in public favor by virtue of social and altruistic activities as well as by our scientific attainments. I do not underestimate the charitable work, which frequently the most obscure of our profession contribute, nor do I ignore the saviours of mankind who daily risk their lives in the dark places of the earth that pestilence may be conquered, nor forget to lay a wreath upon the tomb of that noble American hero who deliberately gave up his life that yellow fever might be better understood and ultimately eradicated. Earth has had no greater heroes than those found within our own profession, and our blood tingles as we recount their gallant deeds, yet let us not rely upon the past nor rest content with its conquests.

We must remember that

"New occasions teach new duties
Time makes ancient tood uncouth.
We must upward then and onward
If we'd keep abreast of truth."

It is a well recognized biological law that to continue its highest efficiency an organism must so alter its activities as to accommodate itself to changes in its environment. The clergy are now being compelled to do this, and medical men are no exception to this law. Our constituency is becoming intelligently active, the man from Missouri is with us, the people are wondering why so much attention is being given to results and so little to causes. They are turning to us for food, let us not give them stones. If we refuse their demands they will forage in the by paths of sectarianism and quackery. Can we longer afford to ignore our larger responsibility as the possessors of medical truth, and withhold from the public what is just and reasonable? Is it because we are not interested as citizens in the welfare of our people that we keep discreet silence when we all know that ignorance upon the part of our young people is responsible for a large part of the disease and insanity among us, and that the physician is the only one who can satisfactorily dispel that ignorance. Is it a factor of no importance to us to know that sixty per cent. of the deaths in one year of males in our provincial asylum was from general paresis? As men and women engaged in a noble calling and intrusted with life's secrets, is it not time that we considered this social obligation, this higher professional conception?

All honor to Dr. Fagan and his unselfish co-workers in the development of the Tranquille Sanitorium and in their distribution of information regarding the white plague. British Columbia will treasure the memory of his work. But why stop there? The ravages of the black plague —venereal disease—is infinitely more disastrous than that of tuberculosis, and if we are to accept the statement of a well known authority who has made these diseases a life's study, is equal to tuberculosis, typhoid fever and pneumonia combined. In view of this fact can we longer remain in apathy, and continue our course of murderous silence while our hospitals and asylums pile up their victims? In the old Book, it is stated "To him that knoweth to do good and doeth it not, to him it is a sin." Let us therefore take some action to remove from ourselves any just cause of censure either from our own consciences or from the general public, and take some steps towards emphazing in a more public and direct manner the different departments of preventive medicine.

In the ideally organized state the educational measures here outlined would fall within the province of the city or district medical officer who would be remunerated commensurately with the additional task imposed. Under present conditions all that we could expect from this officer would be co-operation with the local society.

Again, it may be asked is it wise to offer instruction to the public before the public have expressed that request in a tangible offer of remuneration for services to be rendered. The answer to this is simply to look

back upon the history of the campaign against tuberculosis. It was the voice of the profession first, and the activity of the state afterwards. So must it be with other reforms. Who understands the necessities of the public more; they, in their ignorance or we in our knowledge? As to the question of remuneration I believe fully in the state assuming the responsibility for public services, but for the present, until the state can fully appreciate the necessity of such educative work as herein outlined, we must look upon this matter as a part of the debt we owe society—a part of the physician's burden.

Dr. Stanley Hall makes a strong plea for public education upon matters formerly relegated to secrecy. He says:—

"The old reticence and prudery has been flung to the winds, and churches, women's clubs, magazines, and educational institutions and parents are all seeking the plain truth and feeling the need for themselves and younger people of knowledge concerning topics once veiled, if not entirely tabooed.

"The 1,500,000,000 people, more or less, alive on the earth to-day are but a mere handful compared with the countless generations who are to proceed from their loins in the future. All posterity now slumbers in our bodies, as we did in those of our ancestors." And speaking of the necessity of education in sexual matters, he says:—"They demand of us the supreme right and blessing not only of being born, but of being well born and they will have only curses for us if they awaken into life handicapped by our errors. Their interests should dominate all our lives and we should live for our children, for our duty of all duties is not only to keep the life torch burning, but to brighten it a little if possible as it is passed along to our children.

"Indeed, from the point of view of the new biological ethics, this is the chief end of man and woman, the highest test of their virtue. Every human institution, home, school, state, church, and all the rest, exists primarily in order to bring children and youth on and up to their highest possible maturity of body and soul. The value, not only of all institutions, but of art, science, literature, culture and civilization itself, is ultimately measured and graded by how much they contribute to this end.

"Man alone is prone to mortgage posterity by consuming in his own self-gratification energies that belong to the future. Our life is thus like a richly-laden ship of which we were intended to be simply the steersman, with the sole duty of navigating our bark from the last generation safely on to the next, which selfish indulgence, which is the only sin, has broken into the hold and looted the cargo to the loss of the consignees, our children. Like fire, this instinct is a good servant, but a dreadful master. And how few are they to-day entirely unscathed."

The Bishop of London, who recently paid a visit to this country, has expressed himself with no uncertain sound relative to the necessity of education along lines hitherto neglected. Speaking in London his Lordship said, "I am now convinced that the uplifting of the people lies, above all and everything else, in educating the children rationally and morally. I believe that more evil has been done by the squeamishness of parents who are afraid to instruct their children in the vital facts of life than by all the other agencies of vice put together. I am determined to overcome this obstacle to our national morality. I have not the slightest hesitation in saying that the right way has been found at last. Thousands of men have asked me why they were not taught the dangers of vice in their youth, and I have had no reply to make them, I intend now, with God's help, to remove this reproach from our land. There shall be plain talking, the time has gone for whispers and paraphrases. Boys and girls must be told what these great vital facts of life mean, and they must be given the proper knowledge of their bodies and of the proper care of them. No abstractions, the only way now is to be frank, man to man."

In an article upon preventive medicine, our own Osler in speaking of the group of venereal diseases says, "These are in one respect the worst of all we have to mention for they are the only ones transmitted in full virulence to innocent children to fill their lives with suffering, and which involve equally innocent wives in misery and shame. Physicians and the public have each solemn duties in this matter."

It may not be known to all of those present that during the last few years the International Congress for the prophylaxis of syphilis and venereal disease, in which every civilized country in the world was represented, has held sessions in Brussels. The unanimous verdict of this body was that the present methods of regulation of these diseases was far from giving a satisfactory result, and that this matter must be studied anew from a broader standpoint. It was recommended that societies be formed in each country for the study of he best means to be employed in the prophylaxis of these diseases. The American society, of which I have been a member for some time, recommended a campaign of education, a crusade against ignorance, and ask that the facts be placed before the public. Dr. Prince A. Morrow stated in his presidential address, "As the education feature is of the greatest importance, I may be pardoned for indicating methods. Our educational institutions should be utilized. The teaching of sexual physiology should form an integral part of the course of instruction for boys in the highest grade of our public schools. To the young men of our colleges and universities a chapter on venereal pathology should be added to that of physiology. This information should also be made available to the great body of young men of the working class and the larger general public.

"In the further evolution of hygiene, its office will not be restricted to the care of the health of the existing population, but embrace in its objects the health of its descendants. The final service of preventive medicine to humanity will be the prevention of the hereditary spread of disease by the sanitation of marriage. It is only by enlightening and hygienically advising the people, and by excluding from marriage diseases which unfit men and women for marriage and parentage, that we can prevent the mass of disease and misery thus engendered in the descendants."

At a recent meeting of the American Academy of Medicine, Dr. Edward Jackson recommended that the Academy provide for the placing before the public of such papers and reports read before its meetings as would be of value in the work of popular education in medical subjects.

Dr. Casey A. Wood, Chicago, cited Helmholtz as the first noted man to proclaim it an essential function of the medical profession to teach the public on matters medical. Dr. Wood believes it the duty of the profession to teach the laity, all opinions to the contrary notwithstanding.

Dr. Philip Zenner, Cincinnati, remarked that the teaching of sexual hygiene carried out in the public school of one of the poor districts of Cincinnati had resulted in an altogether different moral tone among the pupils, and thought that unsigned, but authoritative medical articles in the daily press would eventually be read as eagerly as the baseball news now is.

The public are in urgent need of such enlightenment as we only can give. They are recognizing more and more the necessity, and are seeking light. It we do not give it in its purity they will obtain its impurity, and the voice of the quack will wax loud in the land while the people seek other gods. Is it not within our scope as a Provincial Association to recommend, first to the Minister of Public Education that provision be made upon the curriculum of our provincial system for instruction in sexual hygiene, and second, to recommend to the city and district medical societies that they take action in this matter. I would suggest that a course of lectures on medical matters of public interest be delivered by members of the local societies. By this means would be dispelled the stigma which is even yet made to attach to any physician who under present conditions is sufficiently self-sacrificing to engage in this work of public education. Such a course should include Tuberculosis, its methods of propagation and prevention, and the advantages of sanitorial treatment.

Adenoids, their relation to deafness and impaired mental development; what can be done for deficient sight in the correction of refractive errors; the dangers of chronic ear disease; Plague, with the results of modern investigation; Appendicitis, its nature and the necessity of early treatment; Rabies, the work of Pasteur; Vaccination, its history, theory and statistics; Diphtheria, results of the antitoxine treatment; Alcohol and

alcoholic disease; Criminology; Mind influence in health and disease; Insanity, conditions which tend towards it, with a glimpse of the benefits of modern asylum treatment; Antisepsis in daily life; Physical culture; Bathing; and as much further as may be found desirable. These subjects could all be dealt with in mixed audiences. In dealing with such matters as the development of the boy and the girl, maternity, venereal diseases and their consequences, segregation of the sexes would be necessary.

With a concerted effort on our part to act as the custodian of the public health, evincing a practical interest in the welfare of our people, quackery would receive a death blow and with the gradual dissemination of the truth in medicine, we would rise in public service—finding favor with both God and man—to a pinnacle of usefulness and appreciation otherwise unapproachable.

A RARE COMPLICATION OF PREGNANCY WITH REPORT OF CASE.*

By A. DALTON SMITH, M.D., Mitchell, Ont.

I SHALL occupy your valuable time for only a few minutes to-day and chiefly for the purpose of reporting a case of disease complicating the pregnant condition, which is, I believe, somewhat unusual and probably worthy of being placed on record.

However, before referring to this case in detail I desire to refer in a purely general, and I hope suggestive way to the toxaemic conditions which we believe are causative in producing some of the very gravest complications of the pregnant condition.

Pregnancy, a condition quite surely as old as the race of men and of very vital interest to every living person, seems in these days of rapid development along pathological lines to have been rather neglected by the workers in pathology and in physiological and pathological chemistry, for it is to the workers in these lines that we must look for light on many obscure and still unsettled questions.

However, something is being done and some progress in the right direction is being made.

A few years ago we heard nothing or next to nothing of the autotoxaemias of pregnancy, the one recognized fact being the probability that eclampsia was caused by the functional failure of the kidneys and the consequent poisoning of the system by retained urea.

Of late, however, the conviction has become general that some of the most grave complications of the pregnant state, such as eclampsia, pernicious vomiting, neuritic, mental disturbances, etc., have as under-

* Read at meeting of Ontario Medical Association, May 26th.

lying causes, certain in many cases, obscure toxaemic or rather autotoxaemic states, which are essentially identified with the pregnant condition.

The French observers were the first to insist upon the frequency with which autotoxaemia occurred in pregnancy. *Bouchard* going so far as to assert that every pregnant woman was the subject of autotoxaemia to a greater or less extent—a statement so extravagant as to carry with it, its own denial because it practically classes pregnancy as a pathologic condition, while under ideal conditions it certainly is a purely physiological condition.

Whetridge Williams, of Johns Hopkins, in a review of this question in the Medical Annual for last year, and which may be regarded as a resume of our knowledge of the toxaemias of pregnancy up to that time, makes the following classifications, which he considers as complete as our present pathological knowledge of the subject will admit of:

1. Toxaemia vomiting with acute yellow atrophy.
2. Nephritis toxaemia (uraemia).
3. Preeclamptic toxaemia and eclampsia.
4. Presumable toxaemias.

In discussing the last named division he makes the following remarks and as they refer particularly to such cases as the one which I wish to report, I shall quote his words, *verbatim*:

"Every one who practises obstetrics meets with conditions during pregnancy which are more readily accounted for by autotoxaemia than by any other hypothesis, although their origin is still uncertain. For example, it is most satisfactory with our present knowledge to regard the psychic changes in the pregnant woman as dependent upon alterations in her metabolism, and similarly the rare cases of neuritis find the most plausible explanation in a disturbed nutrition. This view is given color by the occasional association of these conditions with definite toxaemias. Thus in a case of vomiting where a profound metabolic disturbance was demonstrated, there were observed typical signs of neuritis, and in not a few instances mental abnormalities have been apparent."

The above quotation apparently sums up our present uncertain and unsatisfactory knowledge on this imporant question.

The whole question of metabolism and nutrition in the human organism is admittedly one of enormous difficulty—and the difficulty becomes much greater during pregnancy, when we have to deal with double question of the maternal and foetal organisms and of the intimate relations which exist between the two as regards the question of nutrition and also of excretion.

As the investigation of this whole question from the standpoint of exact pathology is beset with such difficulties, it becomes increasingly

imporant to gather up the purely clinical facts which have to do with this important question; and it is to this end that I have thought it best to report in very brief detail the following case:

Mrs. R., age 24 years, the only child of healthy parents, had been a healthy girl all her life. She was married in early spring and went with her husband, who was a C. P. R. employee, to a station between Fort William and Winnipeg. Her life here was pleasant enough, but very much isolated and lonely. She became pregnant about the middle of the month of August. Up to this time her health had been good. About the end of the first week in September she began to be seriously nauseated. Vomiting was so severe and continuous that she quickly became very much exhausted and was unable to leave her bed. On October 20th, she was carried on board a sleeper and taken to the hospital at Fort William.

I have not been able to get a very satisfactory description of her condition on arrival at that hospital, nor of the progress of the case while there. Her physician while at Fort William in answer to my inquiries stating "that she was simply weak and emaciated on coming to the hospital. The mental symptoms appeared shortly afterwards and we thought at one time that she was fast drifting into idiocy," no particulars were given of the condition of the peripheral nervous system. While in the hospital, however, the vomiting was gradually relieved, and she was sent back to her home late in November.

At the end of December she was brought to the home of her parents in Perth county, Ontario, and on January 3rd came under my observation.

At this time the condition of her stomach allowed of fair nutrition, though she was very weak. Her condition in other respects was a very perfect clinical picture of severe and widespread polyneuritis. Dull pain in all the limbs—numbness—reflexes practically all absent, no patellar tendon response could be elicited; loss of muscular power in all the limbs, with muscular atrophy and a complete paralysis of the extensors in both feet.

Her mental condition was extremely poor. Great apathy and indifference, almost complete loss of memory, was unable to answer the simplest question regarding herself, and also a symptom which is characteristic in these cases, viz., complete loss of initiative, unable to think of or do the smallest thing for herself.

A slow improvement was noted up to the time of her confinement on May 28th. Her child was born alive, lived for four days and died, probably from a rapid effusion into the brain, death being due to paralysis of respiration. The mother's convalescence was satisfactory and from this time on the case showed a slow improvement, the improvement in the mental condition being much slower than in other respects.

I had the opportunity of examining this patient a few weeks ago. She is now in very good physical health. The patellar reflexes are still small, and while she has completely recovered her memory and initiative, and is able to care for herself and do her work as actively as ever, she still exhibits a well marked mental instability, does and says foolish things, and needs a certain amount of constant oversight.

The foregoing case is unique in its association of a grave form of vomiting with a widespread and severe form of polyneuritis, accompanied by equally grave psychic disturbances, which persist in modified form to the present date, nearly four years after.

With regard to the association of polyneuritis with mental disturbance—the complex which is commonly referred to as *Korsakow's Syndrome* is well known, especially in the alcoholic form of neuritis. Recent writers on this subject, notably *Cassirer, of Berlin,* state that such mental disturbances may complicate any of the forms of polyneuritis.

The same writer also states that polyneuritis in pregnancy occurs with great ferquency, accompanying or following a grave form of hyperemesis, and he also makes a statement which I believe is extremely important, viz., that the latest observations on this subject go to show that the neuritis is not due to the exhaustion or cachexia induced by the severe vomiting, but is caused by an autotoxaemia.

The whole question of the autotoxaemia of pregnancy is one of great interest and importance and I have been induced to make these general references in connection with the report of my case, in the hope that by opening this question something may be added to our all too scanty knowledge by the members of this association.

CANCER OF THE CAECUM—NO RETURN AFTER MORE THAN SIX YEARS FROM DATE OF OPERATION.*

By A. B. ATHERTON, M.D., Fredericton, N.B.

CANCER of the intestine in generally for some considerable time unaccompanied by pain, but this is apt to show itself when some obstruction to the passage of the contents of the bowels begins to take place. Then, too, a tumor can pretty often be felt, especially in those cases where the part of the intestine attacked lies close to the anterior abdominal wall.

With the exception of cancer of the rectum, the disease when occurring in the large intestine does not early invade the surrounding parts or affect the lymphatics. For these reasons cancer of the caecum seems

* Read before New Brunswick Medical Association.

especially favorable for a radical cure by resection. If the disease has progressed too far for this an anastomosis between the ileum and descending colon may be made as a palliative measure. When resection is done the ileum is gradually united to the transverse colon, as was done in the case reported.

Different methods of union are employed according to the fancy or experience of the operator. Where the size of the cut end of the ileum is not very much less than that of the colon, one may very well sew them together, as was done by me. When the difference of size is great, Maunsell's method of drawing the small intestine and the cut end of the large out through an incision in the side of the latter and after suturing them firmly together withdrawing them back and closing the side opening is a very suitable procedure. Some prefer closing the cut ends of bowel and uniting them side to side. When haste is especially necessary, Murphy's button or Mayo-Robson's bone bobbin may be used to facilitate either the end to end anastomosis or the side to side or an end to side union.

Case Report.

May 14, 1902, J. F. S., aet. 30, male. For nearly a year has been troubled with crampy pains in abdomen, which have gradually grown worse. At times there is some looseness of the bowels, and occasionally mucus is seen. Gas is felt and heard every now and again. Of late he has felt a movable lump to the right of the navel. He has lost considerable flesh.

The man looks pale and somewhat emaciated. The family history does not reveal any malignant growths in near relatives. On examination a tumor of the size of a small fist is felt in the right side of the abdomen, which moves freely. The percussion note is dull over it.

11.30 a. m.—Operation. Chloroform followed by ether, administered by Dr. Weaver, assistance rendered by Dr. Fisher. A five inch incision made to the outer side of right rectus. A hard tumor found in upper half of the caecum. About eighteen inches of bowel, including an inch or so of ileum, the whole of caecum and the first part of transverse colon, separated from the mesentery, the bleeding points being secured with fine silk ligatures; then the ileum and colon ligatured with fillets of iodoform gauze at a convenient distance from the proposed section, the intervening portion of intestine being emptied before tying the strips of gauze. A clamp now applied at either end of the portion of bowel to be resected about two inches from the gauze ligatures, and the gut divided close to the clamps and removed. After cleansing the ends of the cut bowel a silk suture was passed at the mesenteric line and another directly opposite so as to steady the parts and serve as guides for the mattress sutures,

which were now introduced through all the coats, the knots being tied on the inside. Then a Lembert suture used to cover the line of mattress sutures, and a piece of adjoining omentum stitched over all.

In joining the ends of the ileum and colon I was obliged to take larger loops of suture in the case of the colon so as to fit into the lesser circumference of the ileum. Then the fillets of gauze were united and removed.

After sponging the neighboring parts, I placed a strip of iodoform gauze down close to the line of union to serve as a drain and closed the abdominal wound around it.

The operation lasted about two hours. At its conclusion the pulse was 96. A hypodermic of 1-20 gr. strychnine and a saline enema were administered during its progress.

On examination of the resected intestine the tumor was found to be four inches in diameter, of firm consistence, occupying one side of bowel, deeply ulcerated over most of its inner surface and of a faecal smell. There were two or three enlarged glands in the mesentery close to the tumor.

May 15.—Had 1-6 gr. morphine hypodermically in the night, slept six hours; dressings changed, considerable bloody serous discharge. P. 96, T. 99.4.

May 16.—Slept five and a half hours; has had hiccough occasionally since operation and has vomited a few times. P. 84, T. normal. Iododoform gauze drain removed. Some sero-purulent fluid escaped after its withdrawal. As he does not take milk well I ordered a nutrient enema of eight ounces of peptonized milk with two ounces of alcohol in it.

May 17.—Had a second nutrient enema. Both retained. P. 85, T. 99°. A turpentine enema brought away some gas with relief. Wound dressed twice every day. Discharge has a somewhat faecal odor, though there was not very much of it. Some distension, ordered one grain of calomel every hour till six are taken, to be folowed by a seidlitz powder.

May 18.—Bowels moved several times. Less distension. Hiccough has ceased. P. 92, T. normal.

May 20.—A somewhat sloughy appearance of a part of the subcutaneous fasica in the neighborhood of the opening left by the removal of the gauze drain. All the sutures are out.

June 1.—Some purulent discharge still. A piece of sloughy tissue came away to-day.

June 9.—Doing well. Wound closing. Temperature is normal. A tonic of iron and quinine is being taken.

June 20.—Left for home by train. Wound all healed.

July 15.—Weighs 141 pounds, being four pounds more than ever before. Looks rather pale still. Ordered an iron and arsenic pill.

March 1, 1903.— Received letter from patient saying he had worked in the woods all winter and weighed 151 pounds.

Have heard from him at intervals up to the present. He has had no trouble with his abdomen since he was in the hospital. It is of interest to state that his mother died about a year ago from a malignant growth in the neck.

A CASE OF ACUTE COMBINED SCLEROSIS.

GOLDWIN HOWLAND, M.B., M.R.C.P. (London).
Physician to Out-patient Dept., Toronto General Hospital, Demonstrator in Medicine, University of Toronto.

THE following case illustrates the gradual onset and rapid advance of a toxic affection of the nervous system.

The patient was a spinster, aged fifty-one, who had led a simple life, and gave no personal or familiar history which had any bearing on her case:—

She had, however, suffered lately from a trophic ulcer of the cornea, which had healed under tonic treatment.

The onset of the disease was characterized by tingling in the hands, which she complained of principally as being an annoyance; while to this six months later was added the same sensation in the feet.

Three months later she began to complain of a feeling as if a tight band were drawn around her knees, and this symptom remained to the conclusion of the illness, only being varied at times by being felt at a higher level in the body.

Toward the close of the first year, the earliest motor signs were complained of, in the form of slight difficulty in walking, her legs feeling heavy; and ocasionally there was present slight increase in the frequency of micturition.

Examination at this period showed, a thin, poorly nourished and apparently anaemic woman of the full age she claimed to be. Mentally, quite normal, of rather a nervous type,—and easily worried over any detail regarding herself or her illness.

Her cranial nerves and special sense organs were free from disease, excepting the corneal scar resulting from the old ulceration.

Her gait was slightly ataxic; (and on attempting to stand still, one could see the tendon-movement on the front of the feet) yet she was able to do a certain amount of walking, limited by the feeling of exhaustion and by the slight difficulty from the ataxia. The power of her upper extremities was apparently normal. No objective sensory disturbance could be made out. The reflexes of both knees were *most* markedly

exaggerated, the right, if anything, showing the greatest excess in tonus, and yet no ankle clonus could be obtained and the plantar reflex was indefinite.

The urine showed no trace of albumen or sugar, but was extremely offensive. Digestion was impaired and bloating frequent.

In brief, at this period the case appeared to be one of functional origin, although the band sensation of the legs and the hyper-tonus of the legs made the organic possibility a factor to be considered.

Examination of the blood in the 13th showed marked anaemia, but not the characteristic blood types of pernicious anaemia. Reds, 1,992,000. Whites, 10,000. H.B. 60 per cent.

Treatment by arsenic and bone marrow with intestinal antiseptics, raised the blood count to nearly 4,000,000 reds, but the occurrence of increased tingling in the hands, pains in the arms and conjunctivitis advised the necessity of discontinuing active arsenical treatment.

During the blood and constitutional improvement, the patient's power of walking also increased, and yet a gradual increase in the affection of the nervous system took place, as a right patellar clonus of the rectus came into evidence.

During this period of improvement the effect of strychnine was very noticeable, markedly increasing the difficulty of walking and the tonicity of the already too spastic limbs. Also it is interesting to note that movement about the room was difficult on account of the ataxia, but the patient could walk with a little aid for some distance on the street.

Following this period of improvement there followed a severe relapse, gradual in its onset, but bringing the patient to a lower level than in her former attack. The anaemia, toxicity of urine and weakness became again troublesome and rectus clonus was now present on both sides, while ankle clonus appeared for the first time on the left side, which was now slightly in advance of the right in degree of paresis.

During this time several attacks of acute nervousness affected her and her condition usually appeared worse after these attacks. Her power of walking gradually diminished until she was practically bed-ridden.

In the eighteenth month, subjective numbness up to about the 10th dorsal root was complained of, and ulceration of the cornea again appeared, while general malnutrition was marked. The ankle clonus was obtainable on both sides, but on the left more easily than on the right.

Arsenical treatment again helped to a certain degree of improvement, but had less action on her paralysis than on her general condition, as she did not regain the power of walking.

Two months later the disease terminated fatally, the patient first passing through a period of incontinence and showing certain mental impairment.

The diagnosis at the earlier stage lay between a functional affection of the nervous system; disseminated sclerosis and acute combined. The gradual accession of symptoms removed the doubt of its organic nature, while the termination, the anaemia, the marked paralysis without definite extensor response, and the combined signs of a myelitic like process with those of a general toxaemia aided in the diagnosis of the disease being one of those relatively common, but rarely diagnosed toxic affections of the nervous system, called by Risien Russell—Acute Combined.

VACCINE THERAPY IN MEDICINE AND SURGERY.*

By W. L. SILCOX, M.B., Hamilton.

AS it is from the standpoint of the opsonic theory that I wish to discuss vaccine therapy it will be necessary for me to draw your attention to that theory and the manner of estimating the opsonic index. The opsonic theory of Wright is opposed to the phagocytic theory of Metchinkoff in that the determining factor in phagocytosis is held to be in the blood serum and not the phagocytic cells themselves as taught by Metchinkoff. Wright proved that phagocytosis was absent when the blood serum was replaced by a neutral solution, and also that the degree of phagocytosis varied according to the variation of the blood serum. The substance in the serum responsible for this action is called "opsonin." The opsonins were found to be distinct from the other bacteriotropic substances, such as the agglutinins, lysins, antitoxins, etc. They act by preparing the bacteria so that they can be taken up readily by the phagocytic cells.

It has further been shown that each form of bacteria has its own corresponding opsonin. That is, the opsonins are specific in their nature. Thus a person's serum may be of normal opsonic power towards one form of bacteria, and at the same time be below normal to another form. So we think of a serum as containing as many different kinds of opsonins as there are different kinds of bacteria. The nature of the experiments carried to reach these conclusions will be somewhat indicated as I speak of the manner of estimating the opsonic index.

Opsonic Index.

The opsonic index is the variation from normal of the amount of opsonin for a stated bacteria found in the patient's serum. To estimate a patient's opsonic index to the staphalococcus, for instance, a person is selected whose phagocytosis has been found to be normal to the particu-

* Read at meeting of Ontario Medical Association, Hamilton, May 26th.

lar bacteria, or, in other words, he is one whose serum has been found to contain a normal amount of staphylococci opsonin. He is used as a control. A few drops of blood are taken from the patient and from the control in separate capsules. (Shown.) From each of these bloods the serum is separated—conveniently by means of a centrifuge. In another receptacle a thin emulsion of staphylococci in a sodium chloride solution is prepared. Next is required a quantity of fresh leucocytes, which may be obtained from any source, but usually from the operator's own person by allowing ten to fifteen drops of his blood to flow into a sodium citrate solution. This is centrifuged, thus throwing down the corpuscles. These are again washed through a sodium chloride solution. After the centrifuging the leucocytes are found as a cream covering the mass of corpuscles at the bottom of the tube. The supernatant fluid is removed and the corpuscles are pricked off by means of a pipette.

We have now three different elements :—

I. Serum (*a*) Control's; (*b*) Patient's.

II. Emulsion of Staphylococci.

III. Leucocytes.

From these three elements two mixtures are made in two tubes (shown) by taking equal volumes of each element. The only difference in the two mixtures is that one contains the serum of the control and the other the serum of the patient. These tubes are placed in an incubator at 37° C. for 15 minutes, after which ordinary slide films are made from each After appropriate staining they are examined microscopically.

The number of staphylococci found in forty or more polymorphoneuclear leucocytes on each slide are counted. If the forty from the tube containing the control serum we may find say 120 staphylococci, while in the forty from the tube containing the patient's serum there may be only 60. Thus we would see that the opsonin in the patient's serum would be only one-half as potent as that in the control serum. Calling the control 1.0 the patient's opsonin index would be 0.5.

The estimation of the opsonic index for the other forms of bacteria is made in the same way. The bacterial emulsion is always made of the same bacteria for which we wish to obtain the index.

Vaccines.

The object of treatment is to increase the amount of opsonins. This is brought about by inoculating patients with bacteria and their products to which the name of vaccines has been given. These vaccines are made by growing artificially the form of bacteria with which the patient is infected. The growth is collected in a sterile normal salt solution, and then killed by exposure to a temperature of 60° C. for one hour. This

vaccine, as it may now be called, is proved to be sterile by inoculating a suitable culture media with a few drops of it, when no growth will result after being incubated for twenty-four hours.

For use the vaccine is placed in a convenient-sized bottle (shown) and reduced to a strength suitable for inoculation. To the vaccine is added lysol, 1 in 400, in order to preserve it aseptic. These bottles are covered with a rubber cap as protection against contamination, and the vaccine is withdrawn when necessary by plunging the hypodermic needle through the rubber with aseptic precautions.

The vaccine of tubercle is obtained in a somewhat different way. It is Koch's New Tuberculin T. R., which is a suspension of ground tubercle bacilli prepared in a special way. It is always measured by weight in contrast to the other vaccines, which are measured by the number of bacteria in them.

Diagnosis.

The investigations of the bacteriologist have given us a long list of diseases which are amenable to vaccine therapy. The great majority of infections of known bacterial origin may be so treated. Of these the following may be named:—

Furunculosis.
Sycosis.
Empyema.
Cystitis.
Erysipelas.
Various local suppurations.
Acute general septic conditions, as septicaemia, pyaemia, etc.
Acute gonorrhea.
Gonorrheal rheumatism.
Gleet.
Tuberculosis.

For treating with vaccines a correct bacteriological diagnosis is especially necessary, as we are here to treat a specific infection with a specific remedy. Clinical observations cannot be relied upon for making such a diagnosis. For instance, a profound septic intoxication may be produced by either the streptococcus or the staphylococcus aureus, and it would be impossible to tell which was the offending organism without a bacteriological examination.

In tuberculosis the problem of diagnosis is more difficult, as it is often impossible to find the tubercle bacillus and consequently other aids are desirable. Here the estimation of the opsonic index furnishes much assistance. If repeated trials give a fluctuating index to the tubercle bacillus it is conclusive evidence of the presence of the disease. It indi-

cates that autoinoculation is taking place. Again an invariably normal index is good evidence of the absence of the disease. A low index is by no means of the diagnostic value of the first two conditions. It is, however, a point favorable to the presence of tubercle.

Treatment.

Wright was not the first to make use of bacterial vaccines in treating disease. They had been used some years before the opsonic theory was announced in 1903. The opsonic theory, however, put them on a better footing, and gave them a value which they had not previously enjoyed. It made practical much of the knowledge that had been accumulated with regard to the action of bacterial products. By means of the opsonic index we are able to determine a patient's resistance to a definite infection, and further to determine the smallest amount of vaccine that will increase that resisting power.

It is desirable to give a sufficient dose of vaccine as will increase the opsonic index without producing any constitutional disturbance. For this reason it is only by the estimation of the index that it is possible to know that an effective dose is being given. By making the estimation before inoculation and repeatedly after, it has been found that there is during the first few hours a slight fall of opsonic power, called the "negative phase"; and it then begins to rise, called the "positive phase," until it reaches a height much beyond what it was at the start. This is maintained from one to eight or nine days, according to the nature of the infection. Then it begins to decline again. But before it begins to decline the inoculation should be repeated in order to keep the index at the high level. This high index indicates that the amount of opsonins have been increased, and that the patient is better able to combat the infection in the way provided by nature. It is important not to repeat the inoculation during the negative phase.

An homologous vaccine is one prepared from the patient's own bacteria. Such a vaccine is essential in many forms of infection. This is notably true in streptococcic infections. There appears to be some subtle difference in the same form of bacteria as it exists in different persons.

The acute septic conditions such as septicaemia, pyaemia, etc., have in the past often baffled our best efforts, and we have felt powerless before them. Antistreptococcic serum has been given, frequently without much regard to the nature of the infection, simply because there was nothing else to give and there was a possible chance that it might prove of some benefit. With vaccines, however, we have a rational treatment for these alarming conditions. It takes into consideration the form of bacteria causing the infection, and the amount of opsonins specific to that bacteria in the

patient's serum. It is in such cases as these that small doses of vaccine frequently repeated show their value by the prompt improvement of the clinical picture, as will be noted in the cases to which I am about to refer. While the temperature curve cannot be said to be the exact inverse of the opsonic curve, still it is approximately so.

The following cases of acute septic infection seem to be quite striking:—

Miss D., aet. 60, had received injuries as the result of an accident. An abscess had developed in the right hip, which had been opened, but still a marked septic temperature continued, despite the administration of antistreptococcic serum. When I saw her two and a half months after the accident the temperature was still of the septic character, with discharge from the hip. There was also more or less swelling and redness throughout the whole of the lower extremity. On investigation the infecting bacteria was found to be the staphylococcus aureus.

She was given an inoculation of a hundred million of staphylococcic vaccine. The result was most marked. The next morning the temperature was normal and remained so. The discharge ceased, and the sinus and septic conditions at once disappeared. Though she had but one inoculation there was no return of the symptoms.

Mrs. I., aet. 65, had in some way become infected at the cervix uteri. When I first saw her she was in an extremely toxic condition. The temperature for the five previous days had ranged from 103° to 106° despite the use of a large amount of antistreptococcic serum. There was a thick membrane covering the cervix, an examination of which showed the presence of staphylococcus aureus only. She was accordingly given an inoculation of one hundred million of staphylococcic vaccine, and during the following two weeks she received in all five inoculations. Her condition steadily improved from the first. The temperature at once began to fall, and after the second inoculation it touched the normal point. After the third inoculation it remained practically normal. The membrane disappeared and the discharge ceased.

J. A., aet. 32, under the care of Dr. R. Y. Parry. Illness started with high temperature and pains in various locations, making an early diagnosis impossible. It finally settled down to a pyaemic condition, with abscess formation. He received several doses of antistreptococcic serum without much benefit.

When I saw him about three weeks after the onset of the disease he had had abscesses in the right hand, left arm, right shoulder and two in the back. Both knees and left ankle were swollen. His whole condition indicated a probably fatal termination under the usual treatment.

On investigation I found a pure culture of streptococcus. A vaccine was prepared from patient's own bacteria, and he was given inoculations

in doses of ten to fifteen million streptococci. He immediately began to show improvement, though much slower than the other cases I have mentioned. He received an inoculation usually every second day. The temperature showed a gradual decline, and after twenty-three days it remained normal. No new abscess developed during this time, and the patient's general condition improved daily. But it is but fair to add that after the temperature had been normal for more than three weeks two other abscesses did develop, with some rise of temperature. They were opened and quickly healed, and the temperature returned to normal. The progress of convalescence was only slightly delayed.

PANCREATIC CYST.*

By D. E. MUNDELL, M.D., Kingston.

CYSTS of the pancreas, though relatively rare, have been observed and operated upon a number of times.

Herchse gives a description of the different ways in which a pancreatic cyst may displace the peritoneum, viz:—1. It may project into the cavity of the lesser omentum, in which case the stomach may lie above or below the tumor. 2. The tumor may push the transverse colon either upwards or downwards, and, 3. It may appear entirely below the mesocolon, invading the general peritoneal cavity.

As our time is limited, we do not wish to enter into any review of the different theories as to the causation, diagnosis, etc., of pancreatic cysts, but merely desire to record a case that recently came under our care.

J. H., aged 56, had been struck on the upper abdomen by a board thrown from a circular saw in May, 1907. He suffered severe pain for some days, but soon returned to his work at which he remained until October, when he noticed an enlargement in his abdomen. His health had been fairly good between May and October, although he occasionally suffered from attacks of epigastric pain. In December, the abdominal enlargement had become quite noticeable, and in February he was referred to me by his attendant.

Inquiry elicited the history of the accident, and that he had suffered from occasional attacks of pain in the abdomen. His bowels and urine had been normal as far as he could tell, but he had lost flesh considerably during the earlier portion of his illness, although latterly, he had improved so much that he was almost up to his usual weight.

On examination, a tumor was evident and situated about two inches to the left and slightly below the level of the umbillicus, and although at

* Read at the meeting of the Ontario Medical Association, May 28th.

first it seemed comparatively superficial, more thorough examination indicated that it was deeply placed.

It was smooth, tense and elastic, with fluctuation clearly marked, was fairly movable from side to side, the lateral movement being freer towards the umbillicus than externally. Vertical motion was less marked than lateral, while displacement upwards was more free than downwards.

Palpation of the left flank was negative and there was no appreciable connection between the liver and the tumor. Nor did a deep inspiration materially effect its position. Dullness was evident immediately over the swelling. My diagnosis was conservative, in that while bearing in mind the possibility of a pancreatic cyst, an hydatid or a hypronephrosis, I was rather of the opinion that it was a mesenteric or an omental cyst. Urinalysis indicated a normal condition of the kidneys, no glycosuria. The patient being willing to undergo an operation, an incision was made through the outer edge of the rectus, immediately over the tumor exposing the latter, with the transverse colon directly above it. The tumor was cystic, and on introducing the finger could be felt passing upwards and backwards towards the vertebral column. The cyst wall was seized with a pair of forceps, and after protecting the surrounding area with gauze, was punctured with a large aspirating needle, and about two pints of an amber colored fluid were evacuated. The needle opening was controlled by forceps after the evacuation, and a more thorough examination showed that the sac was connected with the pancreas near its head to which it was attached by a rather broad base.

The wall of the cyst was then incised and the finger introduced into the interior; quite a search was made for a calculus without finding one, however. The peritoneal covering of the cyst wall was united to the parietal peritoneum, a large rubber drainage tube was introduced almost up to the base of the cavity and held in place by a catgut suture through the tube and the edge of the incision in the wall of the cyst; the margin of the latter incision was then united to the fascia of the abdominal wound. This tube was shortened every few days, and in about two weeks was discarded altogether. Union which occurred by granulation was complete in about two months, before which time the patient had left the hospital for his home.

The fluid evacuated was examined by Dr. W. T. Connell, Pathologist to Queen's, who submitted the following report:—

"Fluid, yellowish, and slightly smoky of alkaline reaction (alkalinity due to fixed alkali) Sp. G. 1016. On heating, after acidification with acetic, it forms a solid coagulum. On Esbachs' tube it gives a reading of 20 grammes per litre of albumen. No reduction of Fehling's solution, no urea.

"On addition of the fluid to a 2 per cent. starch solution free from sugar, and digesting for an hour at 37° C. there is a slight reduction of copper (control tests carried out), due evidently to the presence of some diastatic ferment.

"Microscopically; some blood cells, numerous flat cells and some large rounded cells, loaded with blood granules, also some cholesterin crystals, and crystals of triple phosphate, fragments of tissue in the form of elastic tissue, and soft disintegrated fibrous tissue. In general characters, this is a serous cyst, but the presence of the diastatic ferment renders it probable that the cyst is of pancreatic origin."

Remarks.—This case resembled the majority of pancreatic cysts in that there was a history of traumatism, viz. :—A blow from a board striking the abdomen, but differed in that the tumor arose from near the head rather than from the body or tail of the pancreas. Doran, (British Medical Journal) 1897, stated that melancholia and epigastric distress were generally present in pancreatic involvement, and in these particulars the present case agreed since as above mentioned, the patient had suffered from mental depression and paroxysmal epigastric pain. It is interesting to note that these conditions improved materially, so, that when seen by me some nine months after the injury, he had regained his normal state of health. Possibly the escape of the tumor into the general cavity of the abdomen had lessened the tension on the nerves of the pancreas.

The limitation of downward displacement that is said by some to be a distinguishing feature, between pancreatic and omental cysts, was not strikingly evident in this case, while the low position of the tumor in the abdomen favored the idea that it was omental or mesenteric, rather than pancreatic in origin.

The employment of a needle for eploration purposes would undoubtedly have been productive of harm. Doran objects very strongly to paracentesis in cases of doubtful abdominal tumors, since, as he said, escape of cyst contents may cause serious symptoms. Senn's statement, that normal pancreatic juice does not hurt the peritoneum, is not applicable here, since the fluid in the cyst is rarely normal juice.

That the fluid in the present instance was subjected to considerable pressure was evident. When, before inserting the canula, I punctured the wall with a fine hypodermic needle, with the result that the contents were forced through this narrow opening, a distance of fully two feet. If, therefore, a needle had been used for diagnostic purposes, a considerable amount of the contents of the cyst would have necessarily escaped into the abdominal cavity.

As to the choice between excision on one hand, and incision with drainage on the other, there can be no question but that the latter is far safer than the former. Korte, collected 101 cases of incision with drain-

age with only five deaths, whereas, the few recorded cases of extirpation have shown a mortality of nearly 50 per cent.

The dangers of the latter operation being due to the difficulty of access to the operative field, because of the deep situation of the latter, and the presence of important blood vessels lying near the pancreas.

One disadvantage of incision with drainage, is, that the fistula may not close (about 50 per cent don't heal). Another possible objection might be the presence of the resulting fibrous bridge, stretching across the abdomen. Yet we must remember that the bridge is rather high up to engage the small intestine, while the stomach and transverse colon would not occupy a different position to that which either had during the continuance of the tumor.

Care should be taken, however, to prevent the stomach or colon insinuating itself in inspiration into the cleft between the abdominal and the cystic wall when entering these structures.

Lastly.—The present instance was an example of the third variety of Hersches' classification, i. e., one projecting into the general peritoneal cavity below the transverse mesocolon.

Discussion.

Dr. McKeown said this case tended to discredit the too commonly accepted diagnostic point in tumors of the pancreas that they are inmovable. This is not true and that it is not should be more generally recognized.

Dr. McKinnon, Guelph, referred to a case of hydatid cyst of the pancreas which presented as a rapidly growing cystic tumor at the margin of the left costal cartilages with the stomach and colon displaced downward. The incision was so placed as to reach the cyst wall from behind. It was freely opened and drained by gauze and a large rubber tube, the cyst wall having been stitched to the skin. The diagnosis of the character of the cyst was made from a microscopical examination of a few drops of the fluid obtained by a small exploring needle the previous day without any ill result to the patient. The late Dr. Peters was associated with me in the operation which resulted in an uneventful recovery in a few weeks.

Dr. Metcalf, Detroit: Pancreatic cyst is a condition with which I have had practically no experience. I have never operated upon a patient presenting such a condition. I saw in consultation, however, one case in which the signs and symptoms seemed to establish this diagosis. A large tumor was present, but operation was not permitted. The patient was in a desperate condition and a prognosis of death, probably within

twenty-four hours, was given. A week later I was informed that he was better. I called at his home and found that the tumor had disappeared. Eventually his health was fully restored. Similar cases have been reported.

REPORT OF CASE OF MOLE PREGNANCY.*

By C. R. CHARTERS, M.D., Chatham.

MRS. C., aet. 33. Mother of two healthy boys, after first confinement had puerperal sepsis, was very ill for several weeks, but made a good recovery. No trouble during the second pregnancy, at delivery or after. Was called to see this patient on the morning of July 24th, 1906, found her suffering some bearing down pains, flowing moderately, abdomen somewhat tender to pressure; pulse, temperature, and respiration normal. The history she gave me was that she had not menstruated since March, thought she was pregnant and expected her confinement about Christmas of that year, was very much afraid that she was about to miscarry. On examination I found, as previously stated, that the abdomen was somewhat tender and slightly distended, the breasts were somewhat enlarged and the areola around the nipple markedly discolored, evidence of moderate flow with some small clots, which examination disclosed no signs of a foetus, on examination per vaginam found the os slightly dilated the cervix and body of the uterus firm. Taking into consideration her history of suppression of the menses from March, with the enlargement of the breasts and discoloration of the nipples, I concluded that she was pregnant and was threatening to miscarry. I examined all clots and napkins and found no trace of a foetus having passed, ordered rest in bed, light diet, internally Fl. Extr. Viburnam in half-dram doses every three hours till pain and flowing ceased. That evening her husband telephoned me that she was resting easy, had no pain and that the flow had entirely stopped, I visited her daily for several days and at the end of a week she was able to be up and felt as well as usual. I did not see her again until the month of September, when she called at my office evidently much distressed and concerned about herself as her menses had not returned and she had not grown any stouter, and was anxious to know if there was anything wrong. I examined her and found that the breasts were small and flabby, the discoloration around the nipples had disappeared, the abdomen soft and not at all enlarged and no sign of uterine enlargement could be felt through the abdomen, nor could I make out any uterine enlargement on examination per vaginam. As she appeared somewhat

* Read at the meeting of the Ontario Medical Association, Hamilton, May 28th.

anaemic, I put her on Blaud's pills, grs. 3, one after each meal, to be increased later to two after each meal. This was continued for a couple of months, when her general health improved and the anaemic condition disappeared entirely. I saw her a number of times during the winter, when she expressed herself as feeling quite well, but that the menses had not appeared. I was at a loss to know the cause of this till in the morning of the 3rd of May, 1907, she sent for me again. This time I found her suffering some pain, flowing moderately and per vagnia found the os dilated with what appeared to be a clot plugging it. I put her on Huoni gr. 1-12 every three hours and advised her to remain in bed and I would call again in a few hours. I thought this was either the reappearance of the menses or a miscarriage from a later pregnancy. About two hours after I left she sat upon the chamber to urinate and passed the mass which I here present. She sent for me at once and on my arrival I found the specimen exhibited and on careful examination of it I found a spongy mass about the size of a goose egg completely closed up, no sign of any opening. On opening it I found a cavity containing quite a quantity of jelly-like fluid with a number of smaller vessicles in cysts also filled with this gelatinous fluid. The flow gradually ceased until in four or five days it stopped altogether and she made an excellent recovery, and the following month menstruated normally and continued to do so up to the time she left the city in August, 1907. The interesting point in this case is the length of time this mole or blighted ovum was carried, being fourteen months, without any effect upon the general health, other than the anaemia previously spoken of. Jardine, in his work on clinical obstetrics, says they may remain in utero for several months, that he had seen one which had been retained for four months and speaks of one which was said to have been retained for sixteen months, also says that it not unfrequently happens that a fleshy mole or blighted ovum is expelled at full time along with a fully developed child, I think this comes under the head of a fleshy mole and not Hydatid, which later would have gone on growing in size and the patient would have presented the appearance of a normal progressive pregnancy.

CURRENT MEDICAL LITERATURE

MEDICINE.

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

CHRONIC SIGMOIDITIS.

In the *Medical Record,* Feb. 29th, 1908, Stern of New York describes this condition, which he claims is frequently wrongly diagnosed. He defines it as a chronic inflammatory state of the sigmoid flexure, characterized by frequent exacerbations, lasting from several hours to several days, of the otherwise more or less subdued phenomena, viz., tenderness or pain in the lower left lateral and median anterior regions of the abdomen increasing upon pressure, moderate abdominal distention, with some resistance in the left iliac fossa, slight elevation of rectal temperature, obstipation, burning and aching sensation in buttocks and left thigh, various nervous phenomena, and, frequently, vesicular irritation in males, and spasmodic leucorrhœa in females.

The diagnosis is made by the recognition of the condition through the electric sigmoidoscope, and this means should be used in all cases which present a long-continued colitis. The pathological changes are as a rule confined to the mucosa, with all gradations of the inflammatory process from simple hyperæmia to circumscribed and diffuse suppuration; the inflammatory swelling is hard as a rule, and seems to interfere with the mobility of the part. There may be such a hypertrophy as to interfere with the lumen and there is generally some contraction. The mucous secretion is increased, there may be hæmorrhages and a discharge of thick creamy pus; if it is thin and watery there is a suspicion of malignant disease.

Pain is always the first, and often the only symptom of this condition and is notable for the fluctuating character and non-accentuation of a point of tenderness, although pressure-symptoms are invariably present when exacerbation is well under way. With a fæcal accumulation in the inflamed sigmoid the pain is frequently felt in the back; a burning and tenderness in the buttock and painful left thigh are due to the pressure on the nerves and vessels.

A genuine exacerbation is always accompanied by a certain degree of distension in the colon above this point; it is not, as a rule, excessive. The temperature in the rectum will be raised, if there is pus production going on, even though it may not be severe enough to cause a general pyrexia. Obstipation is present practically all the time, even when associated by intermittent attacks of a watery diarrhœa. It is either atonic—the most frequent form—due to congenital or acquired asthenia of the

musculature, to systemic deterioration, to an atrophy of the mucosa, to degeneration of the splanchnic nerves, and to enteroptosis. Spasmic obstipation is either a reflex phenomenon due to disease of some other organ, or with greater frequency it is due to an exaggerated motor innervation of the musculature. The atonic form causes stools of short cylindrical form, hard and dry, the spasmic to the ribbon-like form. Various manifestations of the neuropsychosis hysteria are in evidence in a majority of the instances of chronic sigmoiditis.

An irritable bladder is frequently found in the male due to tension and pressure from the enlarged and misplaced sigmoid. In females there is a spasmodic leucorrhœa, in many cases occurring with the exacerbations, due to mechanical interference with the adjacent generative organs though the sequence may be the other way in the case of a retroversion of the uterus.

The writer claims that the condition is as frequent as inflammatory states in any other part of the intestinal rac, e.g., he cæcal region, and says that unless the symptoms occur in the lower left quadrant here is no attempt in many cases to differentiate them. He has seen four times as many cases in women as in men, due, he thinks, to gestation, and they occur usually at ages over thirty. The course is that of an exacerbation which lasts usually from twelve to thirty-six hours with a state of abatement of from three days to two weeks. The intermission period is an indefinite and widely varying one.

The diagnosis is made on the history, inspection and palpation with percussion, but in all recurring cases the sigmoidoscope should be used. It must be differentiated from neoplasms, adhesions, prolapse of the left kidney, wandering spleen, and diseases of the female generative organs.

Treatment. The causal treatment consists in the regulation of the functional activity of the part. The spasmodic condition will yield readily to the use of atropine; in milder states he uses lupulin. The dietetic treatment is the most important part, a proteid diet does not leave enough residue, and carbohydrates cause flatulence, distension and irritation. The diet best suited for sigmoidal lethargy is one in which green vegetables, like spinach, lettuce, savoy cabbage, string beans, and absorbable fats with comparatively high melting point, like the yolk of the egg, predominate. In the ratio in which the motor mechanism improves may the amount of green vegetables and fats be reduced, to be replaced by proteids and carbohydrates. The sugars are the carbohydrates producing the least digestive difficulty.

Exercise, as walking, or better, swimming, is a valuable adjuvant; standing on one foot and raising the other knee to the level of the hip, then suddenly jerking it forward, repeating this twenty times, is a useful movement. Massage and vibration are overrated. The writer has found

the strong faradic sinusoidal current of value, one pole in the left iliac fossa or on the thigh and the other at the sigmoid flexure. Cold sitz baths and cold packs, with the requisite treatment in the way of support, if there are relaxed abdominal walls, are indicated. For pain, opium should never be given. Heat, with belladonna suppositories, will control even severe cases.

When inaugurating local treatment, the part to be kept at rest as much as is compatible with health. A high enema of soap suds should first be given, then a soothing irrigation as follows:

Sage	15 grams.
Hyssop	15 grams.
Borax	2 grams.
Water, boiling	500 c.c.

Infuse the drugs with the water, and dissolve the borax in the colature.

Healing may be assisted by the use of irrigation with mild astringents, as 2 per cent. borax, 1 per cent. zinc sulphate, or 2 per cent. lead acetate solution. All other local treatment should be applied through an ordinary rectoscopic tube of about 10 inches in length, the milder astringents should first be tried as the organic silver salts, or:

Menthol	2½ grams.
Oil eucalyptus	20 grams.
Bismuth subnitrate	12 grams.
Glycerin	15 grams.
Gum tragacanth and water	q. s. ad 60 grams.

Oil eucalyptus	30 grams.
Bismuth subnitrate	30 grams.
Oil olive	15 grams.
Powdered gum acacia	Make emulsion.
Water	enough to make 60 grams.

These are protective, analgesic, antiseptic, and slightly astringent, if stronger measures are required then silver nitrate or tannic acid are used, but they tend to produce a leathery condition of the mucosa, which interferes with its function.

Deep-seated suppurative conditions of the region belong to the realm of surgery. If after the abatement of an exacerbation of chronic sigmoiditis, and in the absence of any other disease, an elevation of temperature has continued for two or three weeks, together with chills, emaciation, anæmia, and malaise, there is probably some such condition present.

THE PASSAGE OF FOOD THROUGH THE HUMAN ALIMENTARY CANAL.

In the *British Medical Journal* for January 18th and 25th, 1908, there are reproduced two lectures on this subject, given by Hertz, of Guy's Hospital, to the advanced students in London University. in October last. They review the subject fully and give the results achieved by a large number of experiments of extraordinary interest made by the writer. To the expense of these a contribution was made by the British Medical Association. The investigations were carried out by means of skiagraphy, auscultation, percussion and palpation in normal individuals.

The action in swallowing of the bolus of food has been described at length by various investigators, and with the main facts up to the time that the food reaches the œsophagus there is little difference suggested, the fact that the food passes over the posterior rather than over the anterior surface being emphasized.

Fluids.

Milk with which bismuth carbonate was mixed in the proportion of two ounces to half a pint, was swallowed. When the rays passed through the individual from side to side, the fluid was seen on the fluorescent screen as a dark shadow passing through the thorax in the clear space between the shadows thrown by the spinal column and the heart. In the vertical position the fluid passes with great rapidity to the back of the pharynx and equally rapidly down the upper part of the œsophagus; a mouthful of ordinary size occupies at any given moment between one and two inches of the length of the œsophagus. When the fluid reaches the cardia its rapid descent is retarded owing to the narrowing of the lumen of the œsophagus, and at a comparatively slow rate the upper border of the shadow descends. The whole time required. averages five and three-fifths seconds, and half this time is required in the passage through the cardiac orifice. The total time may vary as much as three seconds in the same individual. The slow passage of the fluid through the lower part has a practical significance in poisoning with corrosives; the greatest amount of injury will be found in the lower part of the tube on this account. In the horizontal position the fluid passes slightly more slowly, and in the vertical position still more slowly.

When solids are eaten they are normally made into a semi-solid or semi-fluid consistency, in which state they act as fluids, and when bread in which bismuth was incorporated in baking was properly chewed, the process of swallowing did not differ materially from that observed in fluids, but there was a greater tendency for small particles to remain in

the œsophagus after the main part had disappeared into the stomach. But when a cachet filled with bismuth was observed it was found to pass much more slowly. On one occasion it took fifteen minutes, although the individual had no sensation and believed it had reached the stomach. When it was well moistened with saliva and water was drunk after it, the time required was reduced to eight to eighteen seconds. When several cachets were swallowed in succession, they could be seen to move slowly along in procession, but occasionally there would be a reverse movement of one due to the strong contraction about the one ahead. When swallowed in the vertical posture there was a considerable delay at the cardia. These facts probably indicate what happens when food is bolted without proper mastication, and what is noted on swallowing pills or capsules. The passage of the food in the œsophagus is due to a peristaltic contraction of the muscular wall and is attended by a rise in pressure first in the pharynx and then in the tube itself, the latter lasting for some time. Two successive and distinctive sounds are described with which people are familiar in the process of swallowing, and the causation discussed, but no certain conclusion is arrived at.

The Movements of the Stomach.

In the empty condition the pear-shaped fundus, which forms the upper third of the stomach in man, contains gas, the rest of the organ passing obliquely to the pylorus in the form of a closed tube, which corresponds in shape to the lesser curvature of the filled stomach. Its muscular coat is in slight tonic contraction, so that the mucous lining is thrown into folds. Holzknecht pointed out that when food reaches the cardia of an individual who is sitting or standing, it runs down the mucous membrane of the inner aspect of the pear-shaped fundus to the point where the gastric walls are in contact with one another. Succeeding mouthfuls collect here until sufficient is present to overcome by its weight the resistance produced at the entrance of the body of the stomach by the cohesion of the mucous membrane, after which it passes slowly down to the pylorus without the aid of peristalsis. If food is taken in any other position it reaches the pylorus more slowly, and when given in small quantities, as to a bed-ridden patient. it may not pass from the fundus until a sufficient quantity has accumulated to carry it down by its weight.

The stomach is divided into two parts by a transverse band due to muscular contraction, and rarely visible post-mortem, and these two parts are functionally different. By means of a manometer introduced in a tube into the stomach it has been shown that the minimum pressure remains at 6 to 8 cm. of water; in the antrum pylori it rises three or four times a

minute to between thirty and sixty, but in the fundus there are only irregular variations of 2 to 5 cm. The *x* ray demonstrates that the peristaltic waves seen in the pylorus are never seen in the fundus. The amount of food in the pyloric cavity is constant, while the amount in the antrum slowly decreases, and no mixing of the contents of the two parts occurs. When new food enters the stomach it passes into the centre of the mass already there, displacing what is there to the outside of the mass in the fundus, and at a time when the food in the pyloric end is uniformly acid; only the outside layer of that in the fundus is acid and the seat of gastric digestion, salivary digestion is still going on in the alkaline content of the fundus, and may go on for some time. Thus the ordinary arrangement of the menu is the correct one physiologically, the proteids coming first and the carbohydrates last, when more time is allowed them for the prolonged action of the ptyalin.

The pyloric end of the stomach has a much thicker coat than the cardiac end, and there are present there regular peristaltic waves at intervals of fifteen to twenty seconds; these waves at first finding the pylorus closed, cause the food to pass back into the stomach again, thus ensuring a thorough mixing of the contents; later each wave passes a part of the food out through the pylorus. Insufficiently masticated food causes more violent peristalsis, and this may have something to do with the greater frequency of gastric cancer and ulcer at this site than in the quiescent cardia.

The pylorus is surrounded by a very strong muscle sphincter, which keeps it well closed, the stream passing through it at any time is so small that it hardly casts a shadow with the *x* ray, so that when large particles have to be forced through there is required a very violent peristalsis. Carbohydrates leave the stomach rapidly, no trace of a meal of potatoes or rice being found in the stomach of a cat after three hours. Both proteids and fats leave more slowly, some still being present after six hours; egg albumen, however, acts like carbohydrates. Fat added to carbohydrate or proteid delays the food in the stomach—perhaps the reason of the indigestibility of pork and veal.

The stimulus which results in the opening of the pylorus has been shown to be chemical, and to depend on the action of the acid contents, but it is true also that there is a reflex action which closes the pylorus until the duodenal contents have been rendered alkaline. In this manner the intestine is protected. It is protected also by a mechanical reflex which prevents the passage of large or solid particles for as long a period as possible in order to submit them to the influence of the gastric action. Fats cause a reflex flow of bile and pancreatic juice, and there is frequently a reflux of the mixture into the stomach, so that the fat is partially digested in this way in the stomach, the oil inhibiting the flow of

gastric juice. This method has been used to get samples of the pancreatic juice and bile for examination, and for feeding in gastric and duodenal ulcer. So, too, the stomach protects the intestine against fluids at a higher or lower temperature than that of the body. Such fluids are retained until they reach approximately this temperature.

Note. The investigation has shown that very large doses of bismuth can be given without poisonous effects, as much as two ounces, and that, too, without apparent constipation. How a twenty-grain dose acts is a marvel. Poisonous results have been recorded from the subnitrate, but that is doubtless due to the acid constituent and not to the base.

GYNÆCOLOGY AND ABDOMINAL SURGERY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist to the Toronto Western Hospital, and Consulting Surgeon Toronto Orthopedic Hospital.

PYOSALPINX EMPTYING INTO UTERINE CAVITY.

Cadenat (*Bull. et Mém. de la Soc. Anat. de Paris,* July, 1907) reports a case of a salpingitis discharging into the uterus through the ostium uterinum, the specimen being exhibited before a society. It threw light on the disputed question of the ordinary course of a pyosalpinx, or collection of pus in the tubal canal closed or unclosed. The specimen consisted of a fibroid uterus removed with the left tube. The fibromyoma occupied the wall of the uterus in its right and anterior portion. On opening the uterine cavity greenish pus was seen at the site of the uterine orifice of the canal of the left tube. The tube was pressed and more pus issued from the orifice. No pus had escaped before the operation, and Cadenat took pains to note that in this specimen the uterine orifice of the tubal canal was so wide as to be visible to the naked eye. Cadenat admits that little trust can be placed in cases of reported emptying of the Fallopian tube based on purely clinical evidence. Jayle relates a case which showed up a fallacy. A woman underwent curetting for uterine discharge. A swelling of the appendages was definable when the curette was applied. The usual gauze plug was applied; when it was removed pus escaped, and the swelling was found to be smaller. Abdominal section was performed, and nothing could be detected save serous peritonitis traced to purely ovarian lesions. Hence Cadenat remains sceptical about the discharge of pus in purulent salpingitis and pyosalpinx into the uterine cavity; it is apparently a most exceptional condition. In Jayle's case the diminution of the pelvic swelling did not represent the

emptying of a dilated and obstructed Fallopian tube; it was the subsidence of inflammatory engorgement in the ovary brought about by rest after the application of the curette.—*British Med. Journ.*, May 2nd, 1908.

THE ETIOLOGY OF PUERPERAL RETROFLEXION OF THE UTERUS.

R. Olshausen, Berlin, *Zentralblatt für Gynäkologie*, January 4, 1908, contends that retroflexion following the puerperium is always due to the condition occurring after the first pregnancy, although it may recur after succeeding labors. The mechanism seems to be the great thinning of the cervix, produced by the fetal head, which for weeks before labor may descend low into the pelvis, and by the still greater thinning of the cervix which is due to the contraction necessary to overcome the narrow and often unyielding vagina. The anterior part of the cervix is thinned out more than the posterior; this should favor postpartum anteflexion, but probably the dorsal decutitis during the puerperium and the over-distension of the bladder serve to change the position into retroflexion. Olshausen does not agree with Küstner that uncomplicated puerperal retroflexion produces pelvic peritonitis; the inflammation being due to infective causes.

It is absolutely essential to examine every woman 4-5 weeks postpartum to look for a retroflexion. If this false position is found, the uterus should be replaced and retained with a pessary. A cure usually results in a few weeks. Pelvic massage, on the other hand, although frequently used at present, never effects a cure.—*American Journal of Surgery*, March, 1908.

GALL STONES.

The gall-stone that is quiet in the gall-bladder or in the bile-ducts cannot be influenced by any medicinal treatment. There is no solvent for gall-stones, and there is no medicinal means for removing them.—John H. Musser in *The Therapeutic Gazette, American Journal of Surgery*, March, 1908.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty McGill University, Montreal.

THE MANAGEMENT OF LABOR IN MINOR DEGREES OF PELVIC CONTRACTION, WITH SPECIAL REFERENCE TO THE RELATIVE INDICATIONS FOR ABDOMINAL CAESAREAN SECTION.

In the treatment of minor degrees of pelvic deformity, according to Henry D. Fry in *Amer. Jour. of the Med. Sc.*, May, 1908, to see the cases early, to recognise the possible necessity for Caesarean section, and to conduct the labor accordingly, are the great needs of modern obstetric surgery. As a large proportion of the obstetric work falls into the hands of the general practitioner he should be in a position to recognise early, disproportion between the infant's head and the maternal pelvis. The author insists that the physician should be as wide awake to recognise pelvic deformity as he has proved himself to be in regard to early symptoms of ectopic gestation.

The author then quotes various authorities as to the frequency with which pelvic deformity is encountered in this country. The author's own observations agree with other Americans in that justeminor is the prevailing type of deformity in this country.

Discussing the external conjugate, the author dwells on the unsatisfactory results in estimating the true conjugate from this measurement. It is a matter of common observation that a C. E. from 16 to 19 c.m. is found, and yet most of these women deliver after a natural labor. This result is probably due either to, first, that the C. V. is normal though the E. C. is diminished, a condition due to thinness of the sacrum present in women with small bones; or second, the infant is of small size with a soft head. A chart is given showing the relation between the weight of the infant and the degree of shortening of the E. C. upon the averages of 272 observations, the general result being that the smaller the pelvis the smaller was the child, because of non-development of infant and mother.

The author gives records of 18 Caesarean sections, in one of which the C. E. measured 20.5 cm. while the other diameters were also normal or above, yet the woman had a contracted pelvis with a true conjugate of 9 c.m.

He then draws attention to the external oblique diameter.

The pelvimetry should be performed in all primipere in the 8th month of pregnancy and in those multiparae who have passed through difficult labors. If a case is not seen until the advent of labor, and the head is found high or non-engaged the pelvis should invariably be measured.

He then discusses the important question of the infant's head, showing that mere size is not all important, it is the relative disproportion between the head and the pelvis. This question can only be answered by careful palpation, and by forcing the head into the superior strait. "In a primipera the head should always be engaged under normal conditions, and descended within the pelvic cavity after the eighth month of gestation; in a multipera, if disengaged and moveable above the brim, it ought to engage by supra pelvic pressure, with or without anaesthesia."

The author then discusses the treatment as of minor degrees of pelvic contraction discovered at the 32nd week of pregnancy, as consisting of three lines of treatment.

1. *The Induction of Premature Labor.* By this method there is a slight increase of danger to the mother, and a very material risk to the infant. He recommends testing weekly to see if the head can be pressed down in the inlet, beginning at the 32nd week.

In these cases whether the labor is induced or spontaneous the case should be conducted in such a way that the patient will be in a favourable condition for Caesarean section, should it prove necessary.

Should natural delivery not take place, and the head is engaged and moulded, forceps in the Walcher position may be attempted. If failure results, Craniotomy or Caesarean section must then be resorted to, according to the condition of the infant.

2. *Elective Caesarean Sections.* "When the disproportion between the diameters of the foetal head and the mother's pelvis is decided, and the head cannot be forced into the inlet by pressure under chloroform, the chance of a successful delivery by the natural passages is so small that Caesarean section should be performed at a period shortly anticipating full term.

3. *Delay until Labor has demonstrated the Resources of Nature.* This course should be pursued when the disproportion between the head and the pelvis is not great. In two-thirds of the cases that come under observation spontaneous delivery will take place as a result of moulding of the head in consequence of good strong labor pains.

The author then quotes several authorities for and against version and high forceps. The choice should be guided by the experience of the individual operator, though he states it is his opinion that to perform either operation in any case when a test of labor pains fails to engage the head is unscientific. He advises after from two to six hours' of labor according to the severity of the pains if the head is not engaged, perform Caesarean section, and not forceps or version. If the head has engaged, attempt a careful application of the axistraction with the woman in the Walcher position, and if the result does not give some assurance of success, perform Caesarean section.

The author states that inability to force the head through the inlet under chloroform should be recognised as a justification for the operation of Caesarean section regardless of the degree of contraction. He then quotes several cases supporting his contention.

He discusses the indications for syphysiotomy and pubiotomy with brevity, dwelling on their difficulties and dangers, and states that he believes that it is seldom that neither will be resorted to as a primary operation, though useful in certain cases in preference to craniotomy, on a living child.

Craniotomy is justified after a prolonged labor, or failure of version or forceps, the infant being dead or dying.

The paper concludes with a tabulated report of 18 cases of Caesarean section, performed by the author within the last 18 years, with a mortality of one infant that was viable, and one mother. The indications for the operation were absolute in 8 of the cases.

A PROPOS DU FONCTONNEMENT DE LA CLINQUE BAUDELOCQUE.

Under this title Prof. A. Pinard gives a brief statistical report of the results of the work in the Clinique Baudelocque and the Clinique Lariboisere which he has directed in the course of the last 20 years.

From 1882 to 1908, 56,177 parturients have been cared for in these two institutions. Of these, 294 died, giving a total mortality of 0.52 per hundred. The statistics show a definite reduction both in cases of infection and in total mortality in recent years.

In 1907, 3,034 women were delivered in the Clinique Baudelocque, there being but one fatal case: a mortality of 0.03 per cent., 187 of these cases were delivered by means of more or less serious operation. Among others may be mentioned:—Forceps operation, 35; embryotomies, 15; caes. section, 10; porro operation, 6; artificial delivery, 69.

This is a truly magnificent result in view of the number of grave operations performed. The author is justly proud of his results which he attributes to the rigorous application of aseptic and antiseptic methods. He dwells on the great success of what he designates the "consultation permanente pour les femmes enceentes," which was started in 1897; from 5,000 to almost 9,000 consultations have taken place per annum since that time, and he thinks the good results are to be attributed in no small degree to this prophylactic clinic.

The author states with regard to the infants, very satisfactory results have been obtained. Since he has employed "coveuses" he has not had a single case of "sclerem" to show his students; and since

he has used ovens to sterilize all linen, he has not had a single case of erysipelas of the umbilicus. Each year cases of purulent opthalmia have become more rare. In 10,907 infants born since 1904, there have been but 23 cases of opthalmia, 0.21 per cent.

In the total of 327 cases of purulent opthalmia met with in the 20 years, the author states that but one infant lost an eye, and that was in 1889. He attributes this success to the use of the Crede's method of instillation of one drop of 2 per cent. solution of silver nitrate to each eye as soon as the child is born, before cutting the cord.

Pinard states that in spite of the advances made which are eminently satisfactory, that in some ways we are still in the same position as in the time of Madame Lachapelle; first, that pregnant women deliver dead and macerated children quite as frequently as in her time. Also, that malformed and monstrous infants are no less frequently met with. He asks the question, "are we still condemned to see such things and to remain powerless in their contemplation?" He answers that "assuredly not," it is our duty to bring about improvements in these lines. He thinks it is strange that of all human instincts that of reproduction is the only one which still remains in its primitive state, not having received the slightest cultivation. Procreation takes place to-day as in the stone age. In a typical peroration Pinard affirms that to-day hazard alone presides over procreation of infants. He states that his statistics show that a large proportion of children are born before term, and that this alone handicaps development. He pleads for puericulture before procreation and during gestation with a view to conservation and amelioration of the human race.

UTERINE FIBROIDS COMPLICATING PREGNANCY.

Dr. C. C. Barrows (*Am. Jour. of Surgery*, April, 1908) reports ten cases in which pregnancy was complicated with the presence of fibroids.

The author is of the opinion that fibroids more frequently complicate pregnancy than is generally believed. Many of these cases abort early in pregnancy, after which the tumor shrinks rapidly and thus escapes observation; the abortion being attributed to some other pathological condition.

The difficulty of diagnosis is referred to and it is stated that when there is a sudden and rapid increase in the size of the tumor, pregnancy should be considered. Brief reports of ten cases are then given.

The first case refused Cæsarean section and at the eighth month labor was induced and the child delivered with difficulty by means of podalic version. The child perished, and the third stage was complicated by hæmorrhages necessitating manual removal of the placenta. The uterus

failed to contract well and the patient was almost exsanguinated when the uterus was packed with gauze. She made a slow recovery.

The second case was complicated by hæmorrhages. Labor had to be completed by manual dilatation assisted by incision of the cervix. Child delivered alive. Difficult delivery of the placenta. Uterus packed with gauze. Died of sepsis forty-eight hours after delivery. The child died next day.

Case 3. Labor was slow, pains weak; forceps delivery. Profuse post-partum hæmorrhage. Puerperium uneventful. On discharge fibroids could hardly be felt.

Case 4. Abortion on account of fibroids at the end of the third month.

Case 5. Labor complicated by adherent placenta; profuse hæmorrhage; uterus packed; puerperium normal. Fibroids disappeared rapidly inside of three weeks after labor.

Case 6. Breech delivery; adherent placenta; manual extraction; profuse post-partum hæmorrhage; recovery uneventful.

Case 7. Hæmorrhages throughout pregnancy. Profuse post-partum hæmorrhage; adherent placenta; manual removal; puerperium normal.

Case 8. Labor was complicated by eclampsia accouchement force; adherent placenta; post-partum hæmorrhage; manual extraction. Death of the mother six hours later.

Case 9. Two miscarriages. Multiple fibroids; eclampsia; death of mother.

Case 10. Pain in lower quadrant of abdomen throughout latter part of the pregnancy. In the fifth month elevation of temperature, condition diagnosed as ovarian cyst with twisted pedicle. Operation. Acute peritonitis. Pedunculated fibroid with twisted pedicle. Pedicle ligatured, tumor removed. Abortion two days after operation. Recovery.

The author is in favor of exploratory abdominal incision and if possible removal of the fibroids by tying off pedunculated tumors or by myomectomy, or, if necessary, hysterectomy. He thinks that as a rule myomectomy during pregnancy is not attended with danger. He mentions three cases in which he operated along these lines with successful results, full details of one being given. On opening the abdomen at the fifth month of pregnancy, interstitial fibroid on anterior wall. It was shelled out without much hæmorrhage and weighed 9½ pounds. The uterine wound closed by eight stitches of chromicized gut. The next day some slight vaginal hæmorrhage. Recovery. Normal labor at term. Eight-pound living child.

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EDITORIAL.

THE MEDICAL PROFESSION.

A great deal has been written upon the ancient and honorable nature of the medical profession. It is an ancient calling to be sure. It may be honorable or not as we may choose to make. If our ideals are high and we live up to them, it may be properly regarded as honorable.

Apart from board and clothing the cost of a medical course in Britain, including examinations, is about $1,000 for the four years of undergraduate work. In this country it is nearly as high.

In Great Britain the minimum period in which to obtain a qualification is now five years. But, according to a recent issue of the *British Medical Journal,* we learn that in the case of 1,111 students whose undergraduate records were examined, the average time required to secure their qualifications was just three weeks short of seven years. In this country students are not set back by the examinations so severely as the foregoing would show to be the case in the Mother Country.

Grant that a student secures his degree and license to practise, what is the prospect for his future? The late Sir James Paget followed the after histories of 1,000 medical students. Of these 23 achieved distinguished success, 66 considerable success, 507 fair success, 124 very limited success, 41 died while students, 87 died within 12 years of commencing practice, 56 failed entirely in the profession, and 96 abandoned it for some other calling. At a later date Dr. Squire Sprigge made a somewhat similar study of 250 students, and with somewhat similar results. In this country, we think the after history of our medical students would show up better.

In Britain it has been made quite clear that the incomes of general practitioners are declining, while the expenses of living are increasing. In this country the cost of living is certainly steadily rising, and we do not think that the average income of the medical profession is increasing. In Britain the average income of the general practitioner is put at about $1,200. It is difficult to strike an average for this country, but it is certainly higher than that pertaining in Britain. Taking cities and rural districts together, it might not be far astray to state that the average income of he medical profession is about $3,000.

It will thus appear that while the medical profession holds out the prospects of a fair income with care and attention to one's patients, it does not hold out the hopes of large gains that some other callings in life do. It has the advantage of reasonable certainity, however; and this counts for much. It has within it also rewards of honor, respectability, and the confidence of the community that usually falls to the lot of the doctor who conducts himself well before his fellow men.

For the great majority of those who enter the medical prefession, the future holds out only the prospect of a general practice, as only a few can hope for medical appointments. It should be borne in mind, however, that, in the words of Professor Osler, the general practitioner of high character and abreast of the times is the finest flower of the medical profession. The way may be often toilsome and discouraging, but in the words of Goethe:—

"Here is all fulness,
Ye brave to reward you;
Work, and despair not."

THE MEDICAL CURRICULUM.

It is well to stop and review the course over which we have travelled, and from the experiences of the past gain information that will help to guide us in the future.

It is now admitted that the teaching of anatomy by the system of lectures on the bones is almost entirely a waste of time. Professor Sherrington at the recent meeting of the British Medical Association called it a relic of mediaevalism. This indictment might be applied to many other subjects as well as to anatomy.

Then, again, the teaching of anatomy that calls for the name of every little irregularity on the bones and the name and description of every little artery is folly. A student may be compelled to waste a vast amount of valuable time learning the markings of the sphenoid, the bones of the wrist, etc., that in the practice of surgery or medicine is of no use whatever, and cannot, even by the most gifted, be remembered much beyond the day of his examination.

There seems to be a growing tendency to the belief that anatomy and physiology should be as practical as possible, and taught with the object in view that they are to be fitted into the student's general and working knowledge of his medical education. These subjects can be made so extensive as to defeat there own purposes; and, instead of the medical student becoming well acquainted with the essential principles of anatomy

and physiology, he is overburdened with an enormous amount of detail which he feels to be useless and which he hastens to forget, as soon as he has delivered it into the hands of the examiners on these subjects. If any one wishes to acquaint himself with the views of a number of eminent teachers, he should read the discussion on medical education at the recent meeting of the British Medical Association.

But we come to the subjects of chemistry, embryology, botany, and histology. If it can be said that anatomy and physiology are crowded with far too much detail, what must we say of the foregoing? That a medical student should be required to cover a vast amount of ground on the chemistry of the metals and the so-called inorganic substances, to learn about the physiology and histology of plants, to waste weeks of valuable time over the details of histology and embryology, seem to be nothing short of folly.

We do not for a moment wish to say that he should not have a working knowledge of these subjects. The embryology required for any member of the medical profession can be acquired as part of his physiology or anatomy, and need not be raised into the dignity of a separate department with its own text books and a separate examination paper. So with histology. This subject is being pushed altogether too far, and is interfering with the time of the student in acquiring a better knowledge of physiology. The main chemistry taught should be the chemistry of the human body, or physiological chemistry.

The subjects of chemistry and biology should be taught so as to introduce the student as soon as possible into the work of his life—man and his diseases. No wound was ever treated well because a student knew all about the petrous portion of the temporal bone, or had spent much time on embryology that could have been better spent on the real institutes of medicine, namely, anatomy and physiology. Some time ago the leading medical journals in Britain contended that the real physiology and chemistry for the student to know were those of the cell and the human body. As Professor Starling has so well said: "The preliminary education should be built up with his clinical training into one compact scientific fabric—the science of man and his diseases." Professor Starling would also have botany and zoology from the morphological side, as ends in themselves, abandoned. Any instruction on these subjects should lead up to or bear on general biological problems. The work done on biology in turn should lead only to the real work of the medical student—his study of anatomy and physiology.

We do not hesitate to contend that the medical curriculum is being loaded up with too much scientific matter along the lines of biology and chemistry; and the effective work that should be done on anatomy and physiology is very largely defeated because of the too great detail that is

demanded from the students upon those subjects. As a great teacher said the other day: "A surgeon is content to pick up a bleeding artery and dispose of it without troubling himself over its name or its origin."

There is a strong tendency for each teacher to magnify the importance of his subject, and in this way the curriculum comes to be made up of scientific specialties, far beyond the needs of a medical education and the time at the disposal of the student.

THE VISIT OF FRENCH PHYSICIANS.

The recent visit of a number of eminent French physicians is a matter of more than passing moment. They arrived in Toronto on the morning of the 18th of September, and were met by a number of Toronto doctors. The visitors were escorted to the King Edward Hotel. Later on they were taken through the city in automobiles. At 1 o'clock they were entertained at luncheon by Dr. Reeve in the medical building at which many members of the profession of Toronto were present. In the evening Dr. J. F. W. Ross, for the Academy of Medicine, and Dr. W. H. B. Aikins, for the general profession, entertained them at dinner, along with many doctors of Toronto, at the Toronto Club.

The party included Prof. Landouzy, Dean of the Medical Faculty of Paris; Prof. Arloing, of Lyons; Prof. Tessier, Paris; Prof. Courmont, Lyons; Prof. Leon Bernard, M. Piot Bey, of Cairo; M. Augustin Rey, Dr. Calmette, M. Braine, Dr. Cornudette, Dr. Chaboux, Dr. Paul Gallot, Dr. Guirandin, Dr. R. Hirschberg, Dr. de Kerdel, Dr. Kaufmann, Dr. Mignon, Dr. Sargiron, Dr. Servant, M. Andre Servant, Dr. Triboulet.

Among the guests at the dinner were the following: Sir William Mortimer Clark, Prof. Ramsay Wright, Doctors A. H. Wright, G. S. Ryerson, W. P. Caven, Allan Baines, A. H. Garratt, J. Ferguson, W. A. Young, Geo. Elliott, A. J. Johnson, W. Oldwright, G. A. Bingham, J. O. Orr.

At the luncheon given by Dean Reeve the three toasts were "The King," "The President of France," and "The Visitors." In reply to the latter several interesting speeches were made, some in French, others in English.

At the dinner at The Toronto Club in reply to the toasts "The King" and "The President of France," the gathering sang "God Save the King," and the Marseilles Hymn.

We feel certain that these eminent medical scientists will carry back to their own country happy memories of their brief stay in Toronto. In

conversation with many of them we gathered that they had a very inadequate conception of this country before their visit. Their stay in the old City of Quebec, in Montreal and again in Toronto, had done much to set them right. They were evidently much impressed with the advancement made along the lines of higher education in this country.

THE ONTARIO MEDICAL COUNCIL.

We have already expressed the view that the degrees of the various universities in Ontario should confer upon the holder the right to practise his profession in the province.

We do not mean that the council should not retain a controlling influence in the standard of medical education. This can be done in a very simple manner. Council could appoint colleagues to the various boards of university examiners. These could satisfy themselves that the written and oral tests were such as to maintain a proper standard.

This condition would be an advance upon the present system. A student is no sooner out of the examination hall of one of our universities when he has to step into the examination hall of the College of Physicians and Surgeons of Ontario. No good can come from this.

It seems to us that the functions of the Medical Council may be summed up as follows:—

1. To fix a proper curriculum of studies, both as to subjects and time.
2. To appoint censors to the various university boards of examiners.
3. To allow no one to register who cannot conform to the standard laid down.
4. To keep the profession as free as possible of undersirable practitioners, or those who resort to improper methods in the conduct of their practices.

PASTEURIZING MILK.

We wish to utter a word of warning on this subject. There appears to be undue haste to force upon the public a system of pasteurization of milk.

It is well known that unless the process of pasteurizing is carried to the extreme limit the milk will not be rendered perfectly sterile, and that it will, as a consequence, undergo fermentation. Further, milk may be rendered sterile and become again infected and decomposed, or become unhealthy.

But the important thing to be borne in mind is that milk that has been pasteurized has lost much of nutritive qualities. This is too important to be overlooked. A child may starve on thoroughly pasteurized milk.

One of the great problems before us in the milk question is that of thorough cleanliness in every detail of the handling and keeping of milk. Milk as it comes from the cow is clean; but dirty stables, dirty pails, dirty hands, etc., come in to contaminate it. We then think of pasteurization to take out of the milk the germs that careless and dirty methods have put into it.

But in taking these germs out of the milk, we take out of it some of its best qualities for feeding purposes. We first allow the milk to become contaminated, then we injure it again in order to undo the first injury. Would it not be better to think this whole matter over.

We are of the opinion that much better results will be secured along the lines of proper dairy inspection. Any milk dealer whose methods are not up to the standard should be put out of the business. A bacteriological, as well as a butter-fat, test should be made. If the bacteriological test shows too high a grade of contamination the methods of caring for the milk is bad, and proper methods should be insisted upon, or the right to sell should be withdrawn.

One thing is certain, namely, that it seems too bad that milk, the main food of so many infants, should be injured as a food, in order to undo the dirty and careless methods of carrying on the dairy business.

PUBLIC HEALTH MATTERS.

Many topics of interest were discussed at the recent meeting of the Health Officers in Winnipeg. Among these might be mentioned the care of the health of school children, the care over the milk supply, the proper management of tuberculosis, the formation of central boards of health.

These subjects are of much importance, and mean much to every country. We have always contended that it is better to take proper care of our own people than to be securing immigrants of a very low grade from foreign countries.

Dr. Hodgetts, Secretary of the Ontario Board of Health, was strong in his advocacy of the system of central boards with power to enforce proper health regulations. This is a sound position to take. Evolution comes very slowly. We are told that we cannot have a Dominion Board of Health because health affairs are under the control of the provinces. This may be true from the legal standpoint; and, yet, the law should be

amended if necessary to permit of the formation of a national system of health regulations and administration.

We hope to see steps taken soon to establish a truly national board of health. When such is brought about we may expect real progress to be made on such vital questions as pure milk, the pollution of streams, defective and diseased immigrants, the control of tuberculosis, and the prevention of infant mortality. On these subjects we are not doing much more than indulging in discussions. It may be taken for granted that it is now known what ought to be done. It remains to be seen whether or not it will be done.

THE PREVENTION OF TUBERCULOSIS.

A very distinguished authority on tuberculosis has just visited this country, in the person of Dr. Philp, of Edinburgh. Dr. Philp has given much thought to the subject of tuberculosis, and makes the statement that the greater part of humanity is infected with the disease at some time or other. He also said that the mortality from tuberculosis in any community multiplied by ten would give the number affected with the disease. According to this test there are about 80,000 suffering from the disease in Canada.

He had a number of suggestions to offer along the lines of prevention. These were summed up under the five headings, compulsory notification to the medical health officer, central tuberculosis dispensaries, hospitals for advanced cases, sanitariums for early cases and colonies for those who have recovered, but who are unable to follow their vocations.

These are the views that are now becoming almost universal. Some years ago one would be ridiculed if he were to propound as Dr. Philp does, that tuberculosis is as infectious as scarlet fever, the only difference being that one is acute and the other chronic.

We have been urging for many years—over twenty—that the disease is highly infectious, and the real secret of success must lie along the lines of prevention rather than cure. As King Edward said some time ago: "If the disease is preventable, why not prevent it?"

IMMIGRANTS COMING TO CANADA.

We have frequently referred to this topic, and it is one of such vast moment to this country that it cannot be too often discussed.

This is a comparatively young country. The population is still thinly spread over an immense area, except in a few of the larger city

centres. It is not possible, therefore, for the people of this country to absorb many of these foreign-born people.

When these foreigners come to this country they remain in colonies. This is a most dangerous state of affairs. It tends to spread crime, disease, and ignorance.

If one will only take the trouble to look at the average foreigners who come to this country, it will only take a moment to come to the conclusion that in the vast majority of instances the country would be better without these people. Take better care of our own people and let them increase in the normal manner. There is no need for the heavy infant death rate we have in this country, nor is there any excuse for the fact that some 8,000 die annually of tuberculosis.

The standard of our people socially, morally and physically is of far more importance than their numbers. We have taken the ground before and wish to repeat it that no one should be allowed to come to Canada as an immigrant who cannot qualify on the tests of education, character, health, and past success in whatever occupation he or she followed.

Defective, degenerate, and ignorant immigrants will fill our asylums with insane inmates, our jails and prisons with culprits of all sorts, will leave their trail over the country in a record of murders and crimes, and will give rise to low and degenerate offspring. All this we do not wish, and it can only be avoided by proper vigilance over the immigrants coming amongst us.

THE INTERNATIONAL MEDICAL CONGRESS AT BUDAPEST.

The Sixteenth International Medical Congress will be held at Budapest, Hungary, under the distinguished patronage of the aged Emperor of Austria, from the 29th of August to the 4th of September, inclusive, 1909.

A strong Canadian committee has been formed to represent the medical profession of Canada at this Conference. The following is the committee:—Drs. H. S. Birkett and F. Shepherd, of Montreal; Dr. J. D. Courtenay, of Ottawa; Dr. J. Third, of Kingston; Dr. Ingersoll Olmsted, of Hamilton; Dr. J. D. Wilson, of London; Dr. Halpenny, of Winnipeg; Dr. S. T. Tunstall, of Vancouver, and Dr. O. M. Jones, of Victoria; and Doctors W. H. B. Aikins, A. H. Garratt, E. E. King, J S. MacCallum, G. R. McDonagh, A. McPhedran, G. S. Ryerson and A. H. Wright, Toronto.

The secretary of the committee is Dr. W. H. B. Aikins, 50 College street, Toronto.

PERSONAL AND NEWS ITEMS.

ONTARIO.

Rev. James Menzies, M.D., of the Honan Mission, China, has been in Toronto enjoying a furlough from his work.

Dr. C. O. Fairbank, of Petrolea, will be a candidate for East Lambton in the coming Federal elections.

Dr. Clarence L. Starr, Toronto, has gone into general and orthopedic surgery exclusively.

Dr. R. D. Rudolf, Bloor street, Toronto, will in future devote his attention to office and consultation work.

Dr. J. M. Jory, of St. Catharines, has been appointed a coroner for the County of Lincoln.

Dr. D. A., Sinclair, of Melburn, has been appointed one of the coroners for the County of Middlesex.

Dr. Charles O'Reilly has returned to Toronto after his extended trip to Britain.

Dr. W. P. Caven has quite recovered his health, and resumed active work agin.

Verna Elizabeth, wife of Dr. Gray, died August 26th, in the hospital at St. Catharines.

Dr. Philp, of Edinburgh, the eminent authority on tuberculosis, paid a visit a short time ago to Toronto.

Dr. W. S. Harrison, one of Toronto's most popular controllers, has been nominated as a candidate for the Federal House for the County of Halton.

Dr. E. A. E. Howard, for two years house surgeon at St. Michael's Hospital, Toronto, has resigned and accepted a position with the Canadian Pacific Railway, as ship's surgeon on the Empress of India.

Dr. J. N. E. Brown, Medical Superintendent of the Toronto General Hospital, has been visiting hospitals throughout Britain, gathering new ideas.

The Board of Health for Hamilton has under consideration the inspection of milk so as to include a bacteriological test as well as for butter fat, and the increasing of the license fee from $1 to $10 a year to milk dealers.

Among recent marriages in the medical profession of the Province of Ontario may be mentioned those of Dr. J. H. Lowe, of Toronto; W. J. Dobie, of Weston; A. R. Jackson, of Bolton; Mildred Gray, of Toronto, and Wesley T. Rich, of Horning's Mills.

Dr. Charles M. Stewart, who has been doing post-graduate work in London this last six years, has returned to Toronto and opened an office at 142 Carlton street. He will confine his practice to diseases of the ear, nose and throat.

Dr. Edith Beatty has been chosen by the Board of Governors of Grace Hospital, Toronto, to succeed Miss Patton, who recently resigned the position of Lady Superintendent. Dr. Edith Beatty graduated from the University of Toronto three years ago, and for the past two years has been in practice in Guelph.

Dr. R. J. Gibson is seeking political honors in West Algoma in the coming Federal elections; Dr. G. A. Routledge is a candidate in East Middlesex; Dr. Giles in Victoria; Dr. John Barr in Dufferin; Dr. J. W. Edwards in Frontenac; Dr. T. S. Sproule in East Grey; Dr. T. Chisholm in East Huron, and Dr. Chabot in Ottawa.

MARITIME PROVINCES.

Dr. D. H. McAllister, of Sussex, N.B., has been nominated for the House of Commons for the constituency of Kings-Albert.

Hon. Dr. Pugsley, Minister of Public Works in the Federal Cabinet, is again a candidate for St. John, N.B. He will be opposed by Dr. Alexander McRae.

At the meeting of the Maritime Medical Association it was agreed that papers dealing with Public Health be read at an opening meeting at which the public might attend.

WESTERN PROVINCES.

The vital statistics of Winnipeg for July were 146 births, 139 deaths, and 128 marriages.

The Alberta Asylum is to be two miles from Ponoka. The Government has purchased 800 acres for this purpose.

Dr. Brown, of Saranac, has recommended that the Sanitarium for Consumptives for Manitoba be located at Brokenhead River.

The Hospital Building at Prince Rupert is completed, with accommodation for 75 patients, and with Dr. Ewing as superintendent.

The contracts for a large Sanitarium for Consumptives at Tranquille, have been awarded, to cost about $65,000.

The Saskatchewan Medical Society this year held a very successful meeting. Dr. Munroe, of Saskatchewan, was elected president, and Dr. Charlton, of Regina, secretary-treasurer.

The Medical Public Health Association held its meeting this year in Winnipeg. The attendance was large and the meeting discussed many questions of much public interest.

At the recent meeing of the Council of the College of Physicians and Surgeons of Manitoba, the relationship between it and the University of Manitoba was discussed. It was agreed to leave it over until the report of the University Commission had been received.

BRITISH COLUMBIA.

The British Columbia Medical Society held a very successful meeting in the latter part of August.

Dr. L. E. Borden has located in Nelson, and Dr. LaBaw has left that place and gone to Spokane, Wash.

Dr. Fagan, Provincial Health Officer, met with a severe accident while driving in an auto-car.

The annual meeting of the Interior Medical Association, held at Rossland, was a very successful affair. The attendance was large and the papers were good. The next meeting will devote a considerable portion of its time to the subject of contract practice.

FROM ABROAD.

Sir T. Lauder Brunton has been made a Baronet in recognition of his services in the cause of the National League for Physical Education.

In Italy the marriages last year numbered 7.77 per 1,000 of the population, the births 31.93, and the deaths, 20.68.

Owing to the plague in the Punjab, the death rate has risen from 37 per 1,000, the usual condition, to 62.

Dr. George Edebohls, professor af gynaecology in the New York Post-Graduate Medical School and Hospital, died recently.

The total amount contributed to the Hospital Sunday Fund at Bristol for 1908 was £1,859.

In Bengal the birth rate last year was 37.70 per 1,000 of the population, and the death rate was 37.72 per 1,000.

Professor Reverdin, of Geneva, the author of skin grafting, recently died. He was the author of many articles on surgery.

Dr. Bruce has been knighted for his services on Malta fever. He has been appointed to take charge of the work in Africa on the Sleeping Disease.

Professor Henri Becquerel died recently. He was a distinguished chemist and was closely associated with Madame Curie in her work on radium, and allied products.

Drs. Robertson and Buchan, of Birmingham, have given out a report which goes to prove that mussels, contaminated by sewage, are a means of spreading typhoid fever.

It is reported that out of 50,000 children attending the schools of Milan, about 47,000 have some form of buccal malady, mostly of the teeth. An inspection of the children is to be instituted.

In India useful instruction is being given in Army Hygiene. Much improvement is also being effected in ambulance work. The sanitary supervision of barracks is also receiving attention.

Glasgow is making great strides in the matter of sewage disposal. When the present system is completed the Clyde pollution will cease. All vessels must keep their water closets closed while in harbor.

The State of New York has placed tuberculosis among the infectious and contagious diseases. Very strict laws have been passed regarding the District of Columbia.

The deaths from the plague in the Punjab district for the first five months of this year were 25,852, as compared with 535,919 for the same period last year.

Steps are being taken to secure a suitable memorial to the memory of the late Dr. Ashby, of Manchester. It is proposed to found a research scholarship.

Dr. McKay, of Durban, who has been paying a good deal of attention to the question of leprosy, claims that there are 2,790 lepers in South Africa.

The Medical School of Sydney, Australia, celebrated its silver jubilee a short time ago. There have been 400 men graduated from the school, and there are at present 270 students in attendance. Judging by the speeches there is a scarcity of doctors in Sydney.

Sir John Byers, in his speech before the Anti-tuberculosis League for Ireland urged that compulsory notification was necessary. He urged also that efforts should be put forth to render the Bill, dealing with tuberculosis in Ireland, effective.

The recently published statistics go to show that the death rate for England and Wales has declined during the past year, as it was only 15 per 1,000 of the population. This is one of the lowest records ever known in Britain.

According to the statement of Dr. Biasalski, of Berlin, at the Congress of German Orthopedic Surgeons, there are 75,000 cripples in Germany under 15 years of age. He advocated the forming of institutions for the care and education of these.

The University of Vienna has recently celebrated the centenary of the birth of Oppolzer, the eminent clinician, whose statue now stands in the aula of the university. A statue was also recently unveiled to the memory of Professor Dittel, the father of urology.

The University of Bern has inaugurated a great festival to commence on the 15th of October, in memory of Albrecht Von Haller, the distin-

guished anatomist, physiologist, botanist, and poet. He is regarded as Berne's greatest son.

During the past 40 years in Scotland there has been a decrease of the ordinary poor requiring relief from 40 per 1,000 of the population to 19 per 1,000; and an increase in the insane from 1.8 per 1,000 of the population to 3 per 1,000.

A short time age a patent medicine vendor inserted in the midst of his advertisement a portrait of Sir James Crichton-Browne. Sir James would be the last man in the world to lend countenance to a patent medicine. This shows how far some of these vendors may go.

Two cases of stricture of the oesophagus in children of 4 and 5 years were successfully treated in Paris by the injections of thiosinamin, from 15 to 20 grains being injected twice daily. This enabled dilators to be passed and soon the patients could take food freely. Before treatment was commenced the finest catheter could not be introduced.

In Paris a case of tetanus has been successfully treated by M. Grifon and Mr. Lian, by means of intraspinal injections of sulphate of magnesium. Some cerebro-spinal fluid is withdrawn, and then 1 cubic centimetre per 25 pounds of body weight of a 25 per cent. solution of magnesium sulphate is injected. If the spasms return this injection may have to be repeated the day following, and so on for a few days.

OBITUARY.

WILLIAM NATTRESS, M.D.

Lieut.-Col. Dr. William Nattress, principal medical officer for the second military district and widely known in military and medical circles in Toronto and throughout the privince, passed away a little after five o'clock of the 14th of September, at his home, 42 Carlton street. The late Dr. Nattress was taken ill with empyaema, while taking part in the Tercentenary celebration at Quebec, and was operated upon. From the effects of the operation Dr. Nattress rallied well, and was able to return to Toronto and go out driving a good deal. A week ago, however, he suffered a relapse, and gradually sank until his death occurred on the above date.

Drs. E. E. King, J. T. Clarke, and W. H. B. Aikins were in attendance upon Dr. Nattress throughout his illness.

The late Dr. Nattress, who was in his 56th year, was born near Woodbridge, and was a graduate of Trinity University and Trinity Medical College. After taking a post-graduate course in England and being enrolled as a member of the Royal College of Physicians and Surgeons,

he returned to Toronto and began the practice of his profession. It is now nearly a quarter of a century since the late Dr. Nattress joined the Queen's Own Rifles, afterwards seeing active service in the Northwest rebellion. For fifteen years he was attached to the medical staff of this district, and for the past ten years he was the principal officer. While holding the latter office the late Dr. Nattress was called upon to pass those who volunteered for service in South Africa. Deceased was a member of the Northwest Field Force and the Military Institute.

He leaves a widow, who is the third daughter of Colonel G. T. Denison, Police Magistrate. He was a member of the Holy Trinity Anglican Church, and was on the staff of Grace Hospital. The funeral took place to St. John's Cemetery, Weston.

ANGUS McLENNAN. M.D.

Dr. Angus McLennan, M.P., became suddenly ill while addressing a meeting at Little River, Cheticamp, N.S., on Saturday, August 22nd, and died on 28th following. He had practised for many years at Inverness, N.S., where he was highly esteemed, and was regarded as one of the best citizens of that place.

Dr. McLennan was born at Broad Cove, Inverness County, on May 3rd, 1844, and was educated in the Grammar School and at St. Francis Xavier College, Antigonish, Harvard and the University of Pennsylvania, graduating an M.D. in 1872. In 1874 he married Miss Maggie J. Frizzle, who died a few years later. In 1881 he married Miss Mary A. McDonald, who died some years afterwards, and in 1901 he married Miss Catharine McNeil, who survives. He was a member of the Inverness County Council for sixteen years and sat in the Nova Scotia Legislative Assembly for four years. He was elected in the Liberal interest to represent his county in the House of Commons at the general elections in 1896, and again in 1900 and 1904.

GEORGE HODGE, M.D.

Dr. George Hodge, of London, one of the best known medical men in Western Ontario, died at an early hour August 26th from an illness which began last November, but which was not thought to be serious at that time.

The late Dr. Hodge settled in London twenty years ago, and immediately became identified with educational work, as well as his practice.

Shortly after locating in London he took the chair of materia medica in the Western University, which he held for some time before he assumed charge of the department of Clinical Medicine. He commenced life as a school teacher, and graduated from Queen's University in 1870. Following this he took up the practice of medicine in Lakefield, where he remained for some time, when he moved to Mitchell, from which latter place he went to London.

Dr. Hodge was sixty-eight years of age. His surviving children are Ray, of London, studying medicine; Gertrude, of Durham, Ont., where she is teaching in the Collegiate Institute; Bertha, at home; and Mrs. Wiley, of Port Arthur.

J. C. SMITH, M.D.

Dr. Smith died on July 30th at his home in Barrie, where he had practised for some years. He graduated in 1891, and located at first in Orillia, from which place he removed to Barrie, He was in his 44th year. He was taken ill with an attack of typhoid fever, during the progress of which he suddenly became comatose and died.

JOSEPH A. MALLOY, M.D.

Dr. Malloy graduated from Trinity in 1895. For some years he practised in Brampton. He removed to Okanagan Centre in British Columbia, where he died on 22nd of June.

CORRESPONDENCE.

A VALUABLE DISCOVERY—A NEW HYPNOTIC.

Editor of CANADA LANCET :—

Sir,—Please allow me to call attention to the discovery that apomorphine hydrochloride when administered hypodermically in doses just short of the emetic dose is an ideal hypnotic. In doses of the 1-30 of a grain it may be used with safety in all cases in which a hypnotic or antispasmodic is indicated, but is of special value in the treatment of acute alcoholism and delirium tremens. This valuable discovery was made

by Dr. C. J. Douglas, of Boston, in 1899, but strangely enough the discovery remains almost unknown and the boon of course not taken advantage of as it doubtless will be when this important property of apomorphine becomes fully realized. We know how promptly this drug acts when administered as an emetic in emetic doses of the 1-10 or the 1-8 of a grain. With almost equal promptness is its action when administered as an hypnotic. The alcoholic, however wild or noisy, will, as a rule, be peacefully sleeping in ten or twelve minutes after the 1-20 or the 1-30 of a grain is administered subcutaneously. This sleep may last several hours, when the patient awakens refreshed and sober. Douglas employed the remedy, with these doses, in over 200 cases, mostly alcoholics, including cases of delirium tremens, and with gratifying results. Drs. Coleman and Polk, of Belleview Hospital, New York, used it in over 300 cases of alcoholism, also with gratifying results. Dr. Rosenwasser, inebriatist to Newark Dispensary, Newark, N. J., has also used apomorphine in the same manner and for the same purpose and with equally satisfactory results. The dose administered was from 1-30 to 1-20 of a grain. With these doses the hypnotic effect is secured in 67 per cent. of the cases. Even the 1-40 of a grain, in my experience, is effective with some patients.

There are vagaries in the conduct of apomorphine that should be noted, viz., it is inert when administered in a solution of baracic acid; it is almost inert as a hypnotic or centric emetic when administered by the mouth. It should also be noted that the crystaline form only should be used and also that in cases in which the pulse is feeble strychnine should be given in association with the apomorphine.

This important discovery will surely mark the commencement of a new era in the management of cases of acute alcoholism and delirium tremens. In many hospitals, at present, these troublesome cases are far from being welcome guests, but when it becomes generally known that we have at command an hypnotic, safe and prompt in its action and peculiarly adapted to the management of these perplexing cases, this reluctance to their reception should be entirely removed. It is doubtless pretty generally known to the members of the medical profession of this province that a bill was prepared several years ago for the Ontario Government for the economic treatment of indigent inebriates. This bill was drafted by a joint-committee representing the Ontario Medical Association and the Prisoners' Aid Association, respectively. From various causes this bill has never been presented to the Ontario Legislature, but a special effort will be made to have it introduced at the next session. In this bill, as will be remembered, it is proposed, with a view to economy, to utilize the wards of the general hospitals of the province for the reception and treatment of indigent inebriates of the more hopeful

class. This discovery of the hypnotic property of apomorphine, and the facility with which it brings alcoholic patients under control, will, doubtless, help very materially in clearing the way for the introduction of the bill; and when the bill is adopted and its provisions faithfully carried out, it should go a long way in cutting off the supply of recruits for the gaols of the province as well as for the combined reformatory and farm colony about to be established by the Ontario Government.

In this connection I would add that in the proposed bill provision is also made for combining the Massachusetts probation system of prolonged supervision, with medical treatment and this medical treatment may be carried out according to the nature of the case, either in hospital or in the form of dispensary or home treatment. This system of combining the probation system with medical treatment has been in operation in Toronto, by the Ontario Society for the Reformation of Inebriates, for over two years, on a small scale, with encouraging results.

Yours truly,

A. M. ROSEBRUGH,

Secretary, Ontario Society for the Reformation of Inebriates.

Toronto, August 22, 1908.

VOLKMANN'S CONTRACTURE.

Editor CANADA LANCET:

SIR,—In a recent number of the Lancet there was an illustrated article on Volkmann's Contracture which left little to be desired in so far as the description of the disease in general was concerned. The references and bibliography were also very full, but the account of the particular case described was peculiarly inaccurate and misleading. The article says there was: "A fracture of the left humerus a short distance above the elbow joint. The fracture was set under an anaesthetic and the arm was tightly strapped with adhesive plaster, the elbow being acutely flexed; the adhesive passing over the shoulder of the injured side, down around the elbow and up over the shoulder of the sound side. This strapping was removed in four days under an anaesthetic, when the hand was seen to be much swollen and a dead-white area, surrounded by a dark ring, was seen on the inner side of the dorsum of the wrist."

I have before me a letter from the medical man who attended the case in which he says: "I take strong exception to his report of the case. 1st. The adhesive plaster was simply used as a sling, applied loosely. Strapping removed in four days under an anaesthetic, when extensive

swelling was present, both above and below the elbow, but little or none at the hand or wrist. 2nd. He says nothing about any dislocation at the elbow joint. The elbow was dislocated with much tearing of the muscles on anterior of forearm, following which a calloused condition of the muscles developed."

It would appear then that the tight strapping was purely imaginary and was introduced into the article to support a preconceived theory that tight bandaging was the cause of the trouble. The fact in this case proves the direct opposite. Again, the article as quoted above says that when the strapping was removed the "hand was seen to be much swollen," but the surgeon in charge says: "Extensive swelling was present, both above and below the elbow, but little or none at hand or wrist." To support the tight bandaging theory the swelling ought to have been there and really it is too bad it was not, but it would have been better to have given the actual facts even if by so doing the theory fell to the ground. Further on the statement is made that "on the inner and posterior aspect of the wrist there is a red, thin, glazed scar with a small broken area near its centre. This is the result of presure due to the tightly applied strapping twelve weeks ago." As there was no strapping tightly applied the condition could not have arisen from it.

The article goes on to say that a surgeon "ill advisedly explored the median nerve about the elbow and found it normal." That operation may have been ill advised, but it was only done after careful consideration by four reasonably competent practitioners, one of whom was the surgeon in charge of the case from the beginning. The scar resulting from this operation is very nicely brought out in the cut and particular attention is drawn to it in the text of the article.

In this connection a very strange omission occurs in the article. No mention is made of an operation which was done at the Sick Children's Hospital, because it was thought there was an "element of ulnar nerve involvement in the callus at the seat of fracture. The nerve was found free." I quote from a letter writen by the surgeon who operated and in whose care the patient was in the Sick Children's Hospital. There is not even a cut showing the scar. No one reading the article would suspect there had been an operation "ill advised" or otherwise to explore the ulnar nerve. An article to have any value ought neither to suppress a fact nor set down as facts what actually never existed. A fair inference from the article would be that tight bandaging caused the condition when the truth is there was no bandaging at all.

A. GROVES,
Fergus, Ont.

BOOK REVIEWS.

GRAY'S ANATOMY, DESCRIPTIVE AND SURGICAL.

By Henry Gray, F.R.S., late lecturer on Anatomy at St. George's Hospital, London. New American edition, enlarged and thoroughly revised, by J. Chalmers Da Costa, M. D., Professor of Surgery and Clinical Surgery, and Edward Anthony Spitzka, M.D., Professor of Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1625 pages, with 1149 large and elaborate engravings. Price, with illustrations in colors, cloth, $6.00, net; leather, $7.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Perhaps no department of medicine is, in a literary sense, more richly supplied than Anatomy. As the student must begin with it and the practitioner must continue with it till the end, the demand is large, and nothing less could justify the great expense of creating a major work, with its requirement of immense illustration. Henry Gray, fifty years ago, evinced the boldness of his genius in producing an original work so novel and so far in advance in matter and method, both in text and engravings, that it leaped to the front and established itself as an institution, a unique position for a book. Generally it is easy to improve on a model, but "Gray" has proved the exception. It is the quality of genius to defy analysis and imitation. Gray manifested his genius both in a text of inimitable didactic power and in a series of equally masterly illustrations. His invention of placing the names of the parts directly on them was in itself a great one, and at once removed the former difficulties of toilsomely looking for them at the ends of lines, or, what is worse, finding merely reference letters explained somewhere else. It costs vastly more to cut the names on the body of an engraving, but it is worth while for the reader's sake, especially if he has to pay no more for the advantage. That the concentration of demand would justify this was Henry Gray's bold forecast, and he was right. It brought about another advantage scarcely less imporant, namely, the possibility of frequent editions, a necessity in so progressive a subject. Here again the barrier of expense can only be crossed by a work able to subdivide it by unexampled sales. "Gray" proves all these qualifications at once by coming to seventeen editions in its first fifty years, and it now enters upon its second half-century stronger and better than ever. This new edition is the best of all the line. It has been thoroughly revised, every page bearing alteration and improvement, and the whole section on the Nerve System has been rewritten in conformity with recent revolutionary changes in methods of approaching and viewing it. Professor Spitzka, who has done this section, has made the subject a special field of study, and to the qualifications of an anatomist of the first rank he adds the skill of an artist as

well, so that his own hands conveys his knowledge directly to the eye of his reader. Professor Da Costa is both an anatomist and surgeon, and the editorial combination therefore unites what is required for the revision of a work on this subject. The use of colors is another valuable aid initiated by "Gray," and it is developed even further than before in this new edition.

The foregoing statement explains the reason for an observed fact, namely, that "Gray" reduces to a minimum the labors of student and teacher, or in other words, increases their efficiency to a maximum. This has been impartially tested by numbers of teachers independently, who, after using other works and finding more difficulty during sessions and less success in preparing men for college and state license examinations, have concluded that the consensus of opinion is right in placing "Gray" where it is—at the forefront.

DUDLEY'S GYNECOLOGY.

A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. Fifth edition, thoroughly revised. Octavo, 806 pages, with 431 illustrations, of which 75 are in colors, and 20 full-page colored plates. Cloth, $5.00, net; leather, $6.00, net; half-morocco, $6.50. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Ability to live and thrive despite competition indicates a strong book. Professor Dudley's Gynecology answers this test fully by coming out in a new edition, the fifth in ten years. This decade has been most productive in the literary sense, but Dudley's competitors, excellent though they be, only add to its lustre. It is interesting to analyze the causes of popularity. Fitness is the first, or rather, all combined. Every living thing (and a book is essentially living) must suit its environment or disappear. Conversely, a living thing that does not disappear, but persists and grows stronger, must suit its environment, must be fit. Dr. Dudley was first to see the advantage of presenting gynecology along natural lines of cleavage, by causes, rather than regions. With the cause or nature of a disease in mind, the reader can readily follow it to any region it may invade, and understand and treat it, but the labyrinth cannot be so easily traversed the other way. He thus displayed and simplified gynecology as had not been done before, and his book was quickly appreciated, both by professors for their students' use and by practitioners for their own. It grew in favor, and some years ago the author gave it further impetus and distinction by making all its abundant illustrations original, each drawn for its special place and purpose, and therefore exactly fit. He also saw his reader's advantage in showing him the steps of operations, a clinic on

paper, and better than a clinic, because the detail could be studied at leisure. Now Dr. Dudley again responds to popularity by bringing out a new edition, thoroughly revised to date, with everything obsolete in text or picture eliminated, and with still more original drawings added. It is the strongest issue yet of a very strong book, and so will continue and improve upon its position as the one to be preferred by the practitioner having gynecology to do or professors wishing to teach with the greatest efficiency. For the efforts of both the author and the publishers in this case we have only words of unstinted praise. The work is thoroughly trustworthy in every way.

APPLIED PHYSIOLOGY.

A Handbook for Students of Medicine. By Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, Assistant Physician to the Hospital for Sick Children, Great Ormond Street; late Chemical Assistant to the Professor of Physiology, University of Edinburgh, and Demonstrator of Physiology, London Hospital Medical College; Author "Foods and the Principles of Dietetics," "Lectures on Diseases of Children," "Clinical Methods," and "Index of Treatment." London: Edward Arnold, 1908. Price, 7s. 6d., net.

We have not in a long time enjoyed more the task of reviewing a new book than has been our lot in this instance. The book covers somewhat new ground, in so far as it brings the facts of physiology into the practical work of the physician. There are many books on applied anatomy for both the surgeon and the physician, but this is a new field and it is well tilled. The book deals with the applied physiology of metabolism, body heat, the blood and blood-making organs, the heart, the circulation, respiration, digestion, excretion, etc. The work is very suggestive. The chapters on the heart and circulation will show the reader how much he can gain from the application of the teachings of physiology to the practice of medicine. We can speak in very high terms of this book, and commend the efforts of author and publisher.

MEDICAL GYNAECOLOGY.

By Howard A. Kelly, A.B., M.D., LL.D., F.R.C.S., (Hon. Edinb.), Professor of Gynaecological Surgery in the Johns Hopkins University and Gynaecologist to the Johns Hopkins Hospital, etc. Pages 662, 163 illustrations for the most part by Max Broedel and A. Horn. D. Appleton & Company, New York and London, 1908.

This recent production of Dr. Kelly's should do much to satisfy a need that is pressing. It is especially adapted for the use of the general practitioner, into whose hands practically all gynaecological patients first come. Dealing, as it does, with the various diseased conditions and

their management up to the point where the gynaecological surgeon, as such, becomes essential, it is not burdensome. For the student at College it is excellent though insufficient as a work on gynaecology, because it does not treat of the surgeon's work in respect to gynaecological conditions,—the students of to-day being expected by slave-driving medical educationists to attain a specialist's knowledge in all and sundry departments of medicine and surgery before graduation. A careful and complete perusal of its pages from cover to cover convinces one of the high capabilities of the writer, both as a surgeon and as an instructor in the science of gynaecology. The information contained in the book is vast, valuable and of a practical kind. Reading it has been a profitable pleasure. It is true, that a certain amount of plodding was necessary to get through with "Affections of the sacroiliac joint" and the description of the syphilides, but no doubt their importance deserves the space given to them.

The illustrations are of high order, though, perhaps, somewhat more profuse than is necessary to clear understanding. Nothing would be lost by the omission of such an one as appears on page 48—"Toilet accommodations for twenty-two families," or of that on page 462, in which the careworn, despondent attitude is anything but soul-inspiring.

In all places and at all times references to "Gynaecological tinkering" abounds. Dr. Kelly's valuable book should hasten the demise of such detrimental practice.

DEARBORN'S PHYSIOLOGY.

A Text-Book of Physiology: For Students and Practitioners. By George V. N. Dearborn, A.M., (Harvard), Ph. D., M.D. (Columbia), Professor of Physiology in Tufts College Medical and Dental Schools, Boston. Octavo, 550 pages, with 300 engravings and 8 colored plates. Cloth, $3.75, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Professor Dearborn's new work enters its field, already rich in literature, well equipped to achieve a position in the forefront. It is easier to write verbosely than concisely, to state many things rather than to determine what is really important. Our author conceives it to be the duty of a book to guide and instruct a reader presumably unacquainted with its subject beforehand. Instead of turning him loose in a mass of more or less arranged facts, a true text-book should present its principles and data in orderly logical form, and should also indicate their mutual relations and bearings, so that the student mastering it may have a clear view of the whole subject. Dr. Dearborn obviously possesses both the requisite physiological knowledge and didactic ability, and his work, manifesting and combining these qualities, is certain to be appreciated by teachers as

an excellent text-book for their students, and therefore as a first-class aid in the performance of their own duties. It is very much to be regretted that general practitioners do not read physiology more than they do. It is our opinion that every physician should procure a new book on this subject every few years and carefully study its contents. He would be the first to realize the benefit to be derived from this habit. Physiology is truly the Institute of Medicine. This work of Professor Dearborn is eminently well suited for this purpose.

REPORT ON TUBERCULOSIS.

Fourth Annual Report of the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis, February 1, 1906, to February 1, 1907. An account of the General and Special Clinical and Pathological work done by members of the Staff at the Institute during the year. Edited by Joseph Walsh, A.M., M.D. Published by the Henry Phipps Institute, 238 Pine Street, Philadelphia, U.S.A.

This report is along similar lines to those of former years. It deals with the tuberculosis problem from many standpoints, and especially the important one of the methods of contagion and the spread of the disease. We can recommend the perusal of this volume to all who wish to keep themselves posted in the latest views on tuberculosis.

PROGRESSIVE MEDICINE FOR SEPTEMBER, 1908.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 285 pages, with 30 engravings. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00 carriage paid to any address. Lea & Febiger, Publishers, Philadelphia and New York.

The September volume of Progressive Medicine deals helpfully with four topics of great practical importance.

Under the title of Diseases of the Thorax and its Viscera, Professor Ewart gives an admirable summary of the recent advances in our knowledge of tuberculosis. The treatment of emphysema, the associated disturbances which may arise in disorders of the heart, blood pressure and its relation to disease are topics with which the author has dealt in a manner which will command special attention.

Dr. Gottheil's contribution, covering Dermatology and Syphilis, possesses much of interest, even for those whose practice lies outside of the lines of these subjects. In particular, we would allude to his views as to the use of carbon dioxide in the treatment of nevi and other growths and to the sections devoted to the uses and limitations of the x-rays in diseases of the skin. The general resumé devoted to Syphilis is excellent.

The advance in our knowledge of Obstetrics has been very completely covered by Dr. Davis. Among the topics in his contribution, which possesses more than ordinary interest, may be mentioned changes in the various organs of the body produced by pregnancy, eclampsia, ectopic gestation, face presentation, narcosis during labor, pubiotomy and the management of the third stage of labor.

The department of Nervous Diseases concludes the volume. The author, Dr. William G. Spiller, has produced a very complete and lucid review of the advances in this rather abstruse department of medicine, as is especially apparent in his treatment of the subject of brain tumors and locomotor ataxia.

Progressive Medicine occupies a field apart from that of the magazine. It performs for the general practitioner, the surgeon and the specialist a most important service, bringing him knowledge which he could not otherwise obtain, either by his own efforts or in any other publication.

Most of the advances in medicine are of course first announced in periodicals as the quickest means of publicity. Many of them are lost to the man who does not read a half-dozen languages, and this vital knowledge would moreover be limited to very small circles were it not for the existence of this medium for universal diffusion.

MEDICAL PREPARATIONS, ETC.

CATARRHAL DISEASES OF THE NASO-PHARYNX.

By H. M. MARSH. M.D., Auburn, Ky.

As the season is now fast approaching when this class of dieases take up most of the physician's time, and is the cause of more suffering among more people than almost all other diseases combined, I wish to say something in regard to a simple and effective treatment of this class of diseases. In this climate this is the commonest of all diseases, there being very few who do not suffer from it in some of its various forms. Chronic nasal catarrh is in most cases a result of repeated attacks of acute catarrh or "common colds." In this short article it is not necessary to go into details or take up time or space with causes and symptoms; everyone is familiar with them. My object here is to simply give my plan of treatment plain and simple, yet eminently successful. In the treatment of these cases every physician is well aware of the fact that cleanliness is in most cases all that is necessary for a cure. Every physician also knows that in order to have a perfect cleansing agent it must be both alkaline

and antiseptic. My success in treating these diseases, viz., acute and chronic uasal catarrh, including ozena, acute and chronic tonsillitis, pharyngitis, catharrhal deafness, etc., has been due almost entirely to the systematic and thorough cleansing of the mucous surfaces with Glyco-Thymoline. I have been using this ideal alkaline antiseptic in my practice for years, and have never been disappointed in it. A few cases from my note-book will better explain my method of treating these cases:—

George C., boy, aged six. Was called early one morning to see him. Found him with a severe attack of acute tonsillitis. Temperature 104½, three hours after a hard chill in the night, both tonsils inflamed and badly swollen, one covered with the characteristic patches. I at once ordered Glyco-Thymoline and hot water, equal parts, and instructed him how to gargle and hold his mouth and throat full by lying on his back. In this way he could retain it in contact with his throat for some time, this to be kept up "ad lib." all day. I gave 1-10 drop tr. aconite every two hours. When I visited him at night I found him much improved. I kept him on the same treatment during the night and discharged him well on the morning of the second day. This is my way of treating acute tonsilitis, and I want to affirm here that it will cure almost every case if begun early and used persistently. I always use the Glyco-Thymoline and water as hot as possible. In chronic follicular tonsillitis I use Glyco-Thymoline, frequently pure with an atomizer, spraying with force directly against the tonsil every day. In this way you can clean out the crypts thoroughly, and it has been the most successful treatment I have ever used in this hard to cure disease. In chronic Pharyngitis, ministers' and singers' sore throat, I use alternate hot and cold sprays with success. In the ulcerated throats of scarlet fever I find nothing so soothing and effective as Glyco-Thymoline used in the same way.

One other case I will report was a case of ozena of several years' standing. Young lady, aged eighteen years, was brought to me. She had been a sufferer for several years, having been treated by several physicians at home and by one specialist who had operated upon her, removing the turbinates and cauterized with no success. I found her in a most pitiable condition from the ulceration. Discharge profuse, greenish yellow and of the most offensive odor. Frequent nosebleed, hearing badly impaired in the right ear; flesh very much reduced; general health bad and with a tubercular history making the prognosis very unfavorable. I ordered her to use locally Glyco-Thymoline, 50 per cent. solution, treating her at my office with an atomizer every other day and having her use it at home with the K. & O. douche. I also put her on tonic treatment. While treating her at the office the third time she blew from the nostrils a mass of decomposed flesh containing pieces of dead bone which was expelled with difficulty, followed by a severe hemorrhage. After this her improve-

ment was rapid and continuous, resulting in her complete recovery in less than two months. I have used this treatment in numerous cases, and always with eminent success. I have no reason to change. Glyco-Thymoline is certainly the ideal alkaline antiseptic, and I am glad to recommend it to all my fellows in the treatment of all catarrhal diseases.

THE PROTEID IRON PREPARATIONS OF THE NATIONAL FORMULARY.

Apropos of this subject, Dr. Robinson, editor of the *Critic and Guide*, has some trenchant things to say in the June issue. Very much to the point are his quotations from a paper by Professor W. H. Harrison of the Northwestern University School of Pharmacy, Chicago, entitled, "Notes on Proteid Iron Solutions." This paper appeared in *The American Journal of Pharmacy* for April. In reference to the three principal proteid iron preparations, he writes as follows:

Liquor Ferri Peptonati.

"The present National Formulary formula yields a product which is a thick red-brown liquid, with a very *disagreeable gluey** odor. It is clear in neither reflected nor transmitted light, and of such a colloidal nature as to render filtration impossible even under greatly increased pressure. The taste is at first pleasant, followed by a strongly *alkaline* and *ferruginous* aftertaste, which persists."

He then proceeds to show the reasons why a good preparation is impossible. The chief trouble lies in the peptone, of which it is impossible to obtain in the open market satisfactory or uniform specimens. Whether obtained from meat or fish albumen they "are prone to *rapid putrefaction* and yield iron combinations of most *offensive* odors."

Of Liguor Ferri Peptonati cum Mangano, which is openly and frankly intended as a substitute for Pepto-Mangan Gude, and on which substitute an immense amount of time and labor has been expended, the author has the following to say:

Liquor Ferri Peptonati Cum Mangano.

"When made according to the present formula, with the materials obtainable on the market, the National Formulary preparation may be described thus:

"A dark brown *sluggish* liquid, with a most *offensive* odor, not unlike a mixture of *ammonia* and *putrefied beef extract*. Taste *alkaline*,

saline and *nauseating*. It deposits after a time a *dirty white sediment*, which soon covers the bottom of the vessel.

"The finished product contains about .15 per cent. iron, .145 per cent. or less manganese and .234 per cent. ammonium hydroxide, the latter serving the *sole purpose* of developing more *offensive* odors.

"I have prepared four samples, in each case using different samples of peptonized iron, the finished products being almost identical.

"The trouble with this preparation lies principally with the peptonized iron and ammonium hydroxide, although there is room for improvement elsewhere.

"Of six samples of peptonized iron examined, the products of the principal manufacturers of pharmaceutical chemicals, *all* showed that *putrefaction* was in progress.* Of seven examined for iron content, only one showed over 5 per cent. Fe O (3.5 per cent. Fe), and this one sample has not yet been on the market under the name of peptonized iron or iron peptonate.

"At the time this work was started but two samples of iron peptonate and none of the soluble manganese citrate were obtainable on the Chicago market.

"After some time I succeeded in collecting some direct from the manufacturers, seven samples of peptonized iron and two of soluble manganese citrate.

"These two samples of soluble manganese citrate, although bearing the same title, are *entirely different substances*.

"(1) A light red-brown powder with a strong odor of acetamide and ammonia. It is a manganese-ammonium citrate containing about 18 per cent. manganese. Incompletely soluble in water, but solution is rendered clear by standing for some time with a slight excess of ammonia.

"(2) Pearl-colored scales (evidently made after the formula of F. B. Power, Proceedings A. Ph. A., 1902, 937). Contains 13.5 per cent. manganese. It is a manganese sodium citrate, freely water-soluble.

"In view of the above facts, it seems that a satisfactory preparation according to the present N. F. formula is *impossible*, although with a good sample of peptonized iron it could yield a *passable* one."

*Dr. Harrison is not alone in his opinion. All pharmacists who investigated the matter think the same. Mr. M. I. Wilbert, one of our foremost pharmacists, and a member of the Council of Pharmacy and Chemistry of the American Medical Association, says: "This formula [*for Liquor Ferri Peptonati cum mangano*] directs that commercial ferric peptonate be used. This substance *at best* is *variable*, is *unstable*, and, as *usually* met with, is *decomposed* and *unfit* for use. Commercial manganese peptonate, suggested in the alternative formula, is even more unsatisfactory than the ferric peptonate." (*Amer. Jour. of Pharmacy*, May 1907, p. 211.)—Editor *Critic and Guide*.

"BARLEX" (MALT EXTRACT) WITH COD LIVER OIL.

A combination of highly active, nutritious, concentrated Malt Extract, prepared by a special process, with the best Norwegian Cod Liver Oil. In this way the oil is readily taken, and produces the fullest result as a most valuable food-nutritive in all debilitated conditions, especially in wasting diseases.

To insure the full benefit from Cod Liver Oil, which as a fatty food is considered by the medical profession to be of greater use than any other fatty food in the treatment of disease, it should always be given when there is other food in the stomach because, it is thus more easily digested and readily absorbed. It is plain, therefore, that the combination of "Barlex" Malt Extract with Cod Liver Oil is the most effective way of administering this invaluable nutrient. By breaking up the oil in this way we secure three things: palatability of the preparation, its easy assimilation as food, and complete absorption. Patients take it readily, can take it for prolonged periods such as in convalesence, without creating distaste for it, or the least digestive disturbances, and it can be taken all the year round, summer as well as winter. It is always acceptable to the most sensitive palate. Always begin with a small dose—a teaspoonful—increase gradually. It should always be borne in mind that it is the quantity taken up by the system, not simply the quantity administered, that does good. Prepared by Holden & Company, Manufacturing Chemists, Montreal.

NEW HOME FOR THE ANTIKAMNIA CHEMICAL COMPANY.

The Antikamnia Chemical Company, of St. Louis, U.S.A., announce that a site has been secured and immediate steps are being taken to erect thereon a suitable building to cost about $75,000. It is also expected that in the near future a second building, costing about $50,000 will be erected and on adjoining site. These changes will give the company proper facilities for the carrying on of its business.

MORE LIGHT ON THE SUBJECT.

The Doctor—"We know that hay fever is caused by the pollen of plants."

The Professor—"Then the cure for it, of course, is apollinaris water."