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## ON OBSTETRIC NURSING.\*

BY

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I have decided to speak to you about certain obstetrical methods, with particular reference to those in vogue at the Maternity Hospital, and to show, if possible, good reasons for their existence. Indeed, a limited experience with general work, outside the Hospital, makes it difficult for me to speak of many of the relations of nurse to patient; but I would remind you, that with your potentialities, obstetric nursing offers the widest scope for the exercise of the Golden Rule.

Obstetric nursing differs from other nursing in that the illness itself does not usually begin with the onset of labor. The patient has for the greater part of nine months been under a tremendous strain, which increases as she approaches an ordeal more fatal in its direct consequences than the acquisition of any disease, save tuberculosis.

The obstetric nurse is usually engaged some months in advance of the expected confinement. If this time could be devoted to a certain physical care of the patient it would do much to help the course of things later on, and also do away with that reliance on purely social intercourse, which is as unsatisfactory for the patient as for the nurse. It is to the nurse's interest to know something of the past medical history of the patient, and possibly of that of her family. For example, a previous history of nephritis is important in connection with toxæmia; while hereditary tendencies to hæmorrhage or mental derangement are also important. I wish nothing I may say to be considered as countenancing that most aggravating practise of prescribing by the nurse, but, particularly when engaged early, she may be consulted and give helpful advice on many things considered too trivial for the attention of the physician.

It is in the interest of patient, nurse and physician, that a preliminary examination be made some weeks prior to the expected confinement.

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\*An address to the Nurses' Association, April 6th, 1909.

Even apart from this examination by the physician, each nurse who makes a specialty of obstetrical work should know at least the meaning of pelvic contraction, and be able to judge roughly whether any pelvis is normal or abnormal. Any of you who have observed at all closely, have noted the effect of the pelvis on the way in which the child is carried during pregnancy; and all should know the old dictum that a pendulous abdomen in a first pregnancy means a contracted pelvis, or at least disproportion between the fetal head and the pelvis. Ability to hear and count the fetal heart, an accomplishment requiring only a little training and practise, may often save the life of a child that would otherwise be sacrificed. Further, a rough estimation of the size of the outlet of the pelvis, which can be made during the preparation for examination, may determine the possibility or probability of laceration of the perineum and the necessity for preparing instruments and material for repair.

You will hear and read a great deal about threatened eclampsia, about albumen in the urine and about the diminution of urica, and of the necessity for advising the physician should these conditions arise. Now this is all very well, but we are apt to forget that these three conditions are evidences, often imperfect evidences, of a general toxæmic condition which may be manifested first in headache, nausea, vomiting, swelling of the feet, or alteration in the character of the pulse, symptoms obvious to those who have had the most meagre training. It seems unnecessary to remind you that the pregnant woman is peculiarly liable to disorders of metabolism from the fact that she is ingesting, digesting, and excreting for two individuals; and that more important than active treatment is prophylaxis, in which you may do your part by insisting on good food, aiding good digestion and free diuresis and catharsis. The bowels may be stimulated by fruits, while as a diuretic nothing is better than the drinking of large quantities of water. Many conditions, all closely allied, such as toothache, salivation, heartburn, pruritis, for which there is no specific remedy, are all favourably influenced by those factors which go to make up the general health.

Apart from these special conditions it may be wise to say a word about hæmorrhage, which early in the pregnancy suggests the possibility of impending abortion, and in the later months the possibility of placenta prævia. It is always a grave symptom and one that calls for immediate attention. In rare instances women menstruate during their pregnancy, but these are important only on account of their rarity.

With regard to the conduct of the nurse during the labor two points have seemed worthy of mention, firstly, a familiarity with the anatomy of labor, and, secondly, that bearing down is of no avail if the cervix

is incompletely dilated. Due consideration of these points would prevent much misguided help to the patient which—as the aid in bearing down—so often results in serious laceration of the undilated cervix, or in the marked descent of the uterus with resultant rectocele and cystocele. Then, too, you should know and keep constantly before you the fact that too early operation will result in far more harm than good. On the other hand we should realise that too long labor results in a permanently relaxed condition of the overstretched abdominal muscles, and that the retention of the head upon the perineum will not only make a tear more probable but will render its repair less possible. Careful watching of the patient and child will give the mother a feeling of confidence.

Exhaustion of the mother is best evidenced by the change in pulse and temperature, while in asphyxiation of the child there is to be noticed a change in the fetal heart rate. A diagnosis of trouble, based upon the observation of the irregularity of the fetal heart rate, is extremely gratifying to the attending physician and is always possible for any nurse of average experience and ability.

In preparing the patient for operation, or for vaginal examination, our practise has been considerably criticised, chiefly in two respects; first, the vulva is shaved; second, no preliminary vaginal douches are given. It has been said that in one respect we are over-cautious and in another lacking in caution. Since we began the use of a safety razor, non-union of perineal repairs in clean cases has been of the greatest rarity, while before this, non-union was no exception. It is evident that an accumulation of blood at the vulva offers a most excellent medium for the growth of bacteria, and where the patient has not been shaved the more vigorous manipulation is necessary to keep the vulva clean, the worst possible thing for a uniting wound. No patient either public or private has objected to the procedure when its object was explained.

Vaginal douches have been discarded as unnecessary as well as unscientific. It is accepted that organisms capable of causing puerperal fever are not present in the vagina, and the introduction of a douche nozzle is therefore unnecessary in clean cases, while even where the secretion is abnormal a certain amount may be washed away, but more will probably be carried up by the douche into the cervical canal and into the uterus.

This danger of carrying up infection should also be remembered in giving post partum douches, and in my own cases I have never so far as I can remember used a douche immediately after delivery, believing that the introduction of the douche nozzle into the uterus is dangerous and

copious bleeding has a better effect than the douche, so far as cleansing the cavity is concerned.

The use of rubber gloves has passed the stage when it was considered a fad. Often when called to a case it is impossible to thoroughly scrub and sterilize the hands, and the nurse should carefully guard against the possibility of infection, which when it occurs is often wrongly credited to her account. It should be unnecessary to warn you of the danger of vaginal examination. So much do we believe in vaginal examination as a cause of fever, that in the past six months I have made no vaginal examination in normal cases delivered in the Maternity Hospital and have depended on external palpation and a rectal examination when necessary to determine the dilatation of the cervix, using, of course, a rubber glove, which was used for no other purpose and which was sterilized by boiling immediately after being used.

A strong believer in the simplification of matters connected with the technique of delivery, I would, however, like to say a word with reference to the conduct of obstetric operations in private houses. The too firm adherence to the possibility that labor is physiological and that operations, in cases of delayed labor, should be made as simple as possible, results often in serious harm to the patient and damage to the reputation of the physician and nurse. In all cases, apart from perhaps very simple forceps operations on multiparæ, a table should be used when an operation is undertaken. It is my firm belief that practically no serious operations, and indeed comparatively few operations, such as low forceps, can be performed without lacerations which require suturing. Indeed in a large proportion of cases, classed as low forceps operations, the necessity of the operation is dependent upon the narrowness of the pubic angle which throws the head far back on the perineum and renders delivery impossible except at the expense of laceration of the perineum. Moreover, operative cases are more liable to bleed than are normal cases, if for no other reason than that the uterus has become tired out in attempting to overcome some obstruction to the birth. Now while it is possible that the child may be delivered with the patient on a bed, or at the side of a bed, this position is not adapted for the proper suturing of lacerations nor the control of hæmorrhage, should it occur. A small table is always available and the patient can be put into position more satisfactorily with the so-called Kelly strap, which costs but a few cents, than with any other appliance that I have seen. Its adjustment is simple, it holds the patient steady and allows the nurse, when no assistant is present, to give her whole attention to the operation without the fear of the patient becoming free from her supports.

Most physicians knowing the tolerance of the pregnant woman for chloroform are, I fear, rather careless in its use. If it is given slowly, drop by drop, there is little danger, and that danger when present is, I have found, always evidenced by a slowing of the pulse, which may become 60 or less. Whatever the danger in ordinary anæsthesia, this slowing of the pulse is usually the first danger sign when it is given in obstetrical practice.

If you are called upon to deliver a patient in the absence of a physician your attention should be directed to the prevention of infection, to the prevention of unnecessary lacerations, and to the prevention of other accidents, the gravest of which is hæmorrhage. The necessity for careful asepsis has already been considered.

The best safeguard for the perineum is the slow descent of a well flexed head. Passage of the head through the vulva may be compared to that of a foot and ankle through a small cylinder. The small fontanelle, the large fontanelle and the neck may be compared to the toe, heel, and instep of the foot. It will be seen that pressure with the thumb downward upon the toe, and with the fingers upward against the heel until the instep has passed the lower plane of the cylinder lessens the danger of impaction and facilitates egress. Pressure made with the thumb upon the small fontanelle and with the fingers against the large fontanelle, until the neck is well in the symphysis pubis, will minimise the danger of tearing when the head descends. After the head is born, unless there is evidence of asphyxia on the part of the child, wait for further pains before attempting extraction. If the cord is about the neck and too tight to allow the passage of the body, through the loop, it may be necessary to cut it, and for this purpose a pair of sterile scissors should be at hand. Needless to say the portion of the cord attached to the child should be tied as soon as the birth is completed. After respiration has been established by means of a few brisk slaps upon the buttocks of the child, your entire attention should be devoted to the mother. If the fundus is watched carefully, and not actively handled, there is no danger for the mother so long as the uterus remains below the level of the umbilicus; a rise above the umbilicus suggests that the placenta has separated, and if this is so friction will induce pain which, with bearing down by the patient, will usually cause spontaneous expulsion. Under no circumstances pull on the cord, nor, after the placenta is born, pull roughly at the membranes, which can nearly always be brought away intact by slowly rotating the placenta. In all cases the placenta and membranes should be saved for the inspection of the physician. After the birth of the placenta is the proper time for massage

of the fundus, and firm contraction of the uterus is the only preventive of hæmorrhage into the uterus, which is always alarming and sometimes fatal. The administration of ergot will aid in keeping the uterus well contracted. Remember that brisk hæmorrhage after the completion of the third stage is always dangerous, and in these cases do not wait but send at once for the nearest physician.

While serious infection is nearly always preventable serious hæmorrhage may not be preventable, and as the nurse shares the blame, no matter what the complication, it is well to be prepared in advance and to have ready anything that may be required should hæmorrhage occur. Dangerous post-partum hæmorrhage is a most rare condition, if the labor is properly conducted; but I know from experience in the Maternity Hospital and elsewhere that hæmorrhage is to be expected when the labor is not carefully conducted, and the nurse should be careful to avoid any responsibility by having on hand all possible requirements for its control. In the absence of the physician, while it may be unwise to attempt local treatment, the administration of salt solution per rectum, the elevation of the pelvis, tight bandaging of the limbs and often compression of the abdominal aorta are simple measures with which each of you should be familiar.

Catheterization of the patient immediately after the completion of labor is a minor point, but one which is, I think, worthy of your attention. If the labor has been long it is possible that the bladder contains a fairly large quantity of urine, and the necessity for emptying the bladder may prevent the patient obtaining the necessary sleep. Moreover, even where there has been no laceration of the perineum there are often small lacerations about the urethra which are very irritable and may cause retention unless allowed to heal, which they will do if left alone for a few hours after the delivery.

The patient should void within 12 hours, and the quantity voided should be noted. The passage of but one or two ounces means either insufficient secretion or that the bladder is full and overflowing, a condition associated with marked displacement of the fundus. By the reduction and breaking down of the uterus, most marked towards the end of the first week of the puerperium, there is thrown into the circulation a large quantity of material which must be excreted by the kidneys, and this excretion is favoured by the drinking of large quantities of water. The output of urine is one of the best indexes of the general condition of the patient and for this reason the amount should be measured for 8 or 10 days.

The fundus of the uterus should always lie below the level of the umbilicus, and its displacement upward or to either side calls for at

once an examination of the condition of the bladder. Catheterization should be avoided wherever possible, and where there is no serious laceration of the perineum the patient may be allowed to sit up to void.

The toilet of the vulva during the puerperium should be as simple as possible. Frequent change of the absorbent pads makes copious irrigation unnecessary, and apart from careful bathing away of coagulated blood the only cleansing necessary is to pour over the vulva, after urination or defecation, hot sterile water, boracic or a weak antiseptic solution such as 1-10,000 bichloride, and to dry off the excess of this fluid with sterile absorbent. It is unnecessary, and where there are sutures it is dangerous, to separate the labia widely and to give copious vulvar or vaginal douches.

Evil odour of the lochia suggests mild, so-called sapræmic, infection; in the most severe infections there may be no unusual odour to the lochia. The reason for this is that the more virulent organisms attack live tissues, while others, less virulent, live on dead material, clots or fragments of placenta or membranes, which thus undergo putrefaction. When the lochia is foul the odour may be improved by a vaginal douche, but as the vaginal douche does nothing to remove necrotic tissue from the uterus, its favorable effect is chiefly the prevention of stagnation of the lochia in the vagina, though possibly it may also have a good effect by inducing uterine contraction. Better results will be obtained from flushing the uterus with some aseptic fluid, but in view of the serious complications which frequently arise after the administration of an intra-uterine douche this operation should be performed by the physician and not by the nurse. Where there is no rise in temperature, and the lochia is normal, but where the uterus is slow to regain its position in the pelvis, hot vaginal irrigations together with the administration of ergot, by mouth, are of the greatest benefit.

It is the custom in Canada to keep patients in bed for from 10 days to 3 weeks after confinement. Many patients are, however, compelled to be up and to resume their usual work after a much shorter period, and it is interesting to note that in the German hospitals excellent results have been obtained when patients are allowed out of bed early in the first week, often within 24 hours after the confinement. When allowed up early it is imperative that they should not move about or under any circumstances do ordinary household work. Experiments at the Maternity with this early rising have indicated its great value, particularly when the patients are kept under careful observation; the result at the end of two weeks has been equally satisfactory, if not more so, than when the patient remained in bed for the usual ten days.

Whether allowed up early or late it is of equal importance that the abdominal wall be supported by a well fitting corset or a binder. While the patient is in bed the question of wearing a binder is debatable.

The history of the binder is interesting. It is probable that the binder was first introduced as a means of irritating or massaging the fundus of the uterus. In some countries the bark of trees is placed upon the abdomen, while in others the placenta is used for the same purpose. The first large binder was made from the skin of a black sheep, flayed alive, which, powdered with roses and myrtle, was placed over the abdomen and the lumbar regions. This was supposed to have a very marked effect in stimulating uterine contractions. Upon the occasion of the confinement of the Dauphine, Anna Marie Victoria of Bavaria, in 1652, a lamb which had been flayed in an adjoining room followed its pelt into the confinement room and caused such consternation among the ladies of the court that this custom was discontinued.

It is true that the Aborigines wore a binder, but this was applied by the patient herself after she had left her bed. One end of the binder was caught by a door or other convenient piece of furniture and the patient holding the other free end, gradually wound herself into the material. Note that it was applied after the patient was up and about. At the present day the binder is used very largely in England and in Canada, used less in Germany and used comparatively little in France and in the United States. It is true that there has been somewhat of a reaction in favour of its use in Germany, based on the fact that many of the patients have what is commonly known as "hangebauch," but, as has been pointed out, this has been due to too early rising rather than to the lack of binding. In Japan the binder is not used while the patient is in bed, but is used during the latter part of pregnancy and again when the patients begin to move about after the confinement, the result being very satisfactory.

Against the binder it has been urged that it (1) interferes with the action of the intestines, (2) prevents involution of the uterus, and (3) that it is not clean; and further, that its use prevents a close observation of the involution of the uterus. In its favour has been urged that (1) it is a comfort to the patient, (2) that it has a beneficial effect upon the intra-abdominal pressure, and (3) that it aids in preserving the figure of the patient. Hermann, of London, after investigating these last three contentions concluded that the binder has absolutely no effect upon the preservation of the figure, in which he was anticipated by the great French physician Mauriceau by about 200 years. He concluded that it was absolutely useless in the prevention of hæmorrhage, and where too

tight pressure was made it had a marked effect in causing displacement of the uterus. Remember then that the binder is a help in the latter part of pregnancy, that if loosely applied it can do no harm while the patient is lying on her back, but under any circumstances it should be used when the patient begins to sit up and particularly when she stands and begins to go about her work.

The care of the breasts is one of the most important features of the care of the patient. No other complication of the puerperium is more painful than fissured nipples, the sequel of which too often is absence of the breast.

During pregnancy much can be done by prophylactic massage of the nipple and the application of some emollient with, later, some such fluid as a mixture of alcohol and witch hazel. After the child is born great care is necessary, particularly during the first few days when there is very little food for the child and consequently greater irritation of the breast by the child; at this time one may either apply an ointment or keep the breasts and nipples clean by means of a saturated solution of boracic; the latter is simpler and probably cleaner. If the nipples are tender but not cracked the application of the silver solution will greatly relieve the tenderness; while, if deep fissures develop, nothing gives such satisfactory results as cauterizing these with silver nitrate crystals, or a silver stick, and then anointing with a mixture of Balsam Peru and lanoline 1 in 8 to which 10 per cent. of Argyrol is added. The early care of the nipples will minimize the possibility of abscess formation, but you cannot be too much on your guard when lumps appear, and these should be reported at once to the physician. I would warn you against the common and indiscriminate use of the breast pump, which aggravates the condition it is sought to relieve. If the breasts are engorged the pump stimulates them to still further engorgement and is extremely dangerous, even when carefully used.

When it is necessary to dry up the breasts, leave them absolutely alone save for the application of a supporting binder, which is all that is necessary to check the secretion of milk. The administration of strong purgatives is not necessary nor is it necessary to diminish the quantity of fluid given. After the first 24 hours the breasts become turgid and are rather painful, but this pain may be relieved by the administration of some suitable anodyne, and the patient may be assured that within 24 hours the engorgement will be decreased and the breasts will become soft and painless.

In the event of abscess formation, or where the incising of the abscess has resulted in such scarring of the breast that the milk does not flow

properly, the child may be nursed from one side, and by leaving the affected breast absolutely alone much trouble may be averted.

There are certain particulars in connection with the new-born child that have much direct bearing upon the health of the mother. In the first place the installation of silver nitrate into the eyes of each and every baby born under your supervision can do no harm, provided it is assumed to be done as a matter of routine, and may save much trouble later.

The care of the cord is also important and here there is but one caution, keep it dry. An excellent dressing may be made of starch and boracic with 30 grs. calomel added to each ounce. If the dressing is changed frequently and not allowed to remain too long the cord will dry and come off about the eighth day. Should it become moist, this fact should be reported at once to the physician.

If the bowel movements should cause irritation of the skin about the anus, a mixture of olive oil and lime water should be used after each bowel movement and soap and water should be avoided. The child should nurse regularly by the clock and for a certain definite time. Personally I believe that infants, unless much below the average weight, can be trained to sleep from 10 at night to 6 in the morning without doing them the slightest harm; any disadvantage upon the baby may be compensated by the excellent effect upon the mother. This clock regulation is not a fad, it is something conducive to the comfort of the family in that the child does not cry to be fed, while injudicious and ill-timed feeding results in chronic irritability.

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# PSYCHO-ANALYSIS IN PSYCHO-THERAPY.

BY

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The evolution of psycho-therapy, like that of all other modes of treatment, is marked by an ever increasing precision in method and an ever deepening comprehension of the conditions to which it is applicable. Progress in these two respects must always go hand in hand, for the moment therapeutics becomes divorced from pathology and diagnosis it leaves its scientific basis and stands in danger of approximating to that medical charlatanry which it is the highest interest of our profession to resist. The two studies are peculiarly interwoven in the case of the psycho-analytic form of psycho-therapy, for, as I shall presently indicate, treatment is here carried out by simultaneously laying bare and remedying the pathological mechanisms at the basis of the malady. From this point of view we can discern two stages in the development of any new method of treatment, and these I can best illustrate by a reference to more familiar methods, for instance the operations of trephining or of laparotomy. When the possibility of these operations was first realized we saw the first stage in development, in which, namely, they were regarded merely as an adjunct to the therapeutic armamentarium, and were applied in the relief of conditions that were already well known and studied on established pathological lines. The second stage arose when, through the repeated performance of such operations, conditions that could be relieved by them came to be studied anew, fresh aspects of pathology opened up, and questions of precise diagnosis that had previously been academic problems of trivial interest now became urgent matters of life and death. A moment's reflection on the history of appendicitis will remind you of how little we knew of the pathology, the diagnosis or even the existence of the affection until the surgeon's knife shewed that it could be cured. We might, in fact, paraphrase the motto underlying British Imperialistic policy, to wit, that Trade follows the Flag, and say that in medicine Diagnosis follows Treatment.

Now in psycho-therapy most of the medical world is at present only entering on the first stage. That the medical world of America will definitely enter on this stage as a prelude to further advancement will, I trust, be one of the results of this afternoon's conference. In this stage we clearly recognize that we have secured a new therapeutic weapon of

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An address read at the Symposium\* on Psychotherapy before the Annual Meeting of the American Therapeutic Society in New Haven, May 7, 1909.

\*An account of the Symposium may be seen in the Journal of Abnormal Psychology, The Gorham Press, Boston, for June, 1909.

the utmost value, which we may describe as the capacity to alleviate certain complaints by purely mental measures, in other words as psycho-therapy in its broadest sense. Our attitude towards the nature of these complaints, however, remains in this stage substantially the same as it was when they were treated only by physical remedies. Hence we may see the strange picture of a physician removing by verbal suggestion a symptom which he considers is produced by a toxin circulating in the blood. However, a thoughtful person who employs any form of psycho-therapy soon realizes that a symptom which can be removed by mental measures is in all probability of a mental nature. It may parenthetically be remarked that he further realizes how the suffering endured by the patient, so far from being unreal, is all the more dreadful and formidable for having a mental and not a physical origin. A non-appreciation of this important fact is still all too common. Only recently an article appeared in one of the leading medical journals in which the writer remarked: "In this manner I hope that we will always be able to trick a malingerer or hysterical subject into betraying the falsity of his claim." This attitude, though rarely in such an outspoken form, is frequently implicit in medical writings, and cannot be too strongly condemned. Apart from yielding an inkling of the mental nature of various disorders, the first stage in the evolution of psycho-therapy is characterized by an indeterminate attitude towards the origin and pathogenesis of them. The older conceptions have begun to dissolve, but the knowledge won by the new method of treatment has not yet been formulated. Psycho-therapy is in this stage employed in a quite empiric way, and the physician either does not concern himself with the intrinsic *modus operandi* of his treatment, or else offers explanations of it which are so superficial as to be of little scientific value.

Psycho-analysis represents the second stage in the evolution of psycho-therapy. Here a deeper insight is sought into the essential nature and origin of the morbid phenomena with a view to obtaining a fuller understanding of the aims of treatment and so to achieving a greater precision in the application of it. The psycho-analytic method we owe almost completely to the genius of Professor Freud of Vienna, who in the past sixteen years has wrought it into an elaborate science of which I can here give only the most summary outline. The method is based on the knowledge that the symptoms present in the psychoneuroses owe their origin to a conflict between different groups of ideas or mental processes which cannot be brought into harmony with one another. One complex of mental processes is for some reason or other of such a kind as to be unacceptable to the main body of the personality.

The personality fails to assimilate it, will have nothing to do with it, tries to forget it, to submerge it, to "repress" it. The "repressed" complex then takes on an automatic existence, and acts as an irritating foreign body in the same way as any physical foreign body that has not been absorbed. From this point of view we may define the pathology of the psycho-neuroses as a *defect in assimilation*.

Let me illustrate my meaning with a concrete instance. A man conceives an attraction towards the wife of a near friend or relative, and in his imagination perhaps plays with the thought of what might happen were the friend to meet with a fatal accident. If he honestly faces his wish and realizes its nature he will instantly see that, though possibly a perfectly natural one, it is of such a kind that for social and ethical reasons it must obviously be suppressed. If he adopts this healthy attitude he will probably think no more about the matter except in the most harmless way. The wish-complex is here assimilated by the main body of the personality. If on the other hand he regards the mere possibility of entertaining such a wish as a sin and a sign of the most desperate iniquity he may refuse to own up to himself that he has ever felt it, even momentarily; whenever the thought occurs to him he endeavours to put it from him, to get away from it, in other words to *repress* ("verdrängen") it. The complex here is not assimilated, it therefore continues to act, and the more the man strives to escape from it, the more hauntingly does it torment him. He has now become the prey to a fixed idea which is out of his control, and which evinces its independence by appearing irregularly whether he wills it or not. In actual practice we never meet with cases so simple as this, but the instance will serve to illustrate the notion I am trying to convey, namely that certain mental processes, particularly strivings, desires and impulses, if they are not absorbed in the main stream of the personality are apt to manifest an independent activity out of control of the will. This activity is usually of a low order, of an automatic and almost reflex kind, and—if I may be allowed to use the term in a clinical and non-philosophic sense—it is generally an *unconscious* activity, that is to say it operates without the subject's being aware of it.

As I have just said, matters are not so simple in practice, and what actually happens is that the activity of the repressed complex is manifested not directly but indirectly in some distorted form that is often hard to recognize. In the above example, for instance, the subject might have counterbalanced his real attitude towards his friend by developing an exaggerated solicitude for his welfare, and have shewn great concern and dread whenever the friend ran the slightest risk of accident or

danger. Again, an abnormally strong emotion might be evoked by anything accidentally associated with the persons in question, a condition that Professor Morton Prince described some ten years ago under the name of "association neurosis." This distortion in the manifestation of the activity of the mental complex is often exceedingly involved, and one of the main difficulties in the psycho-analytic method is the unravelling of the confused end-product, which clinically we call a symptom. The psychological mechanisms by means of which the distortion is brought about are very intricate, so that in the time allotted it would be impossible for me to describe them. They have been worked out with great accuracy and detail by Freud and Jung, and an exact study of them is essential to the use of the psycho-analytic method.

Investigation on the lines presently to be indicated discloses the fact that every psycho-neurotic symptom is to be regarded as the symbolic expression of a submerged mental complex of the nature of a wish. The wish itself on account of its unacceptable nature is concealed, and the symptom arises as a compromise between it and the repressing force exerted by the main personality. The stream of feeling that characterizes the wish is dammed up, it can find no direct outlet and so flows into some abnormal direction. The metaphor of "side-tracking" is, I believe, used in American psychiatric circles to indicate this process. In more technical phraseology we may say that the effect of the original complex is inhibited, and so becomes transposed on to an indifferent mental process. This indifferent mental process has now become invested with the strength of feeling that properly belongs to the original complex, and so may be said to replace the complex. Thus arises what Professor Adolf Meyer calls a substitution neurosis, in which an abnormal outlet has been found for a pent-up affective process. The outlet may be in a purely mental direction, in which case we have such a symptom as a phobia, or towards various bodily processes, a condition that Freud calls conversion-hysteria, in which case we have such symptoms as a tremor or a paralysis. In the symptom the patient obtains a certain unconscious gratification of the repressed wish, and this means of obtaining the gratification, however perverse and abnormal it may be, is still the only means possible to the patient under the circumstances. This fact explains the obstinacy with which such a patient may instinctively cling to his symptoms, and is one of the causes of the resistance that the physician encounters when trying to remove these. I need hardly remind you that this obstinacy is often erroneously interpreted even by physicians as indicating mere wilful perversity, a mistake that does not conduce to success in treatment. Not

only does the observer commonly fail to understand the significance of the symptom, but the patient himself has no knowledge of its meaning or origin. In fact, *enabling the patient to discover and appreciate the significance of the mental process that manifests itself as a symptom is the central aim of the psycho-analytic method.*

In carrying out this method several procedures may be adopted according to circumstances. The hypnotic state, for instance, may be utilised in the search for forgotten memories. Only a very few of those acquainted with the psycho-analytic method employ this procedure at all extensively, for it has grave disadvantages which I need not here discuss. Personally I employ it only as a rare exception and for special reasons; under certain circumstances, however, it undoubtedly has a legitimate place. The procedure introduced and developed by Freud is the one most generally used, and gives by far the most satisfactory results. It is one of the ways of obtaining what is known in psychology as "free association," and is carried out by getting the patient to concentrate his mind on a given idea, generally one in relation to a symptom, and asking him to relate in the order of their appearance the various thoughts that come to his mind. It is essential for him to do this quite honestly, and fortunately we have several objective tests of his behaviour in this respect. He must suspend his natural tendency to criticize and direct the thoughts flowing in, and must therefore play a purely passive part during this stage. At first he will omit to mention a number of thoughts on the ground that they are apparently irrelevant, unimportant or nonsensical, and others because they are of a painful or unpleasant nature. After a time, however, the length of which largely depends on his intelligence and sincerity, he acquires the capacity of adopting the non-critical and passive attitude essential to success.

Other means of reaching buried mental complexes may briefly be mentioned. A study of various mannerisms, symptomatic movements and tricks of behaviour, and slips of the tongue or pen often reveals the automatic functioning of some repressed train of thought. The word-reaction association method as developed by Jung is of the highest assistance, particularly in furnishing us with a series of clues to serve as starting-points for future analyses. In this method a series of test-words are called out to the patient, who has to respond with the first word or thought thus called to his mind. From a general review of the kind of responses given much can be learnt about the mentality of the patient and the type of psychosis present. Further, by noting certain peculiarities in the individual reactions we may discover certain complexes or trains of thought that possess for the patient a high emotional value,

and these can then be followed and studied more fully. The peculiarities I refer to are ten or twelve in number. The chief are: undue delay in the time of reaction, failure to respond at all, response by repetition of the test-word, perseveration affecting the succeeding reactions, anomalous clang associations, assimilation of the test-word in an unusual sense, and erroneous reproduction of the reaction when the memory for it is subsequently tested. Last but not least is the analysis of the patient's dreams by means of the special technique introduced by Freud. The study of dreams is in this connection of supreme importance, for of all the means at our disposal it is the one that best enables us to penetrate into and understand the most hidden parts of the mind. No one can have more than an outsider's notion of the psycho-analytic method who has not thoroughly studied Freud's *Traumdeutung*, for in this work he has laid down the technique of his methods, and discussed the principles on which they are based, with a fulness to be found nowhere else in his writings.

By means of the methods just outlined we are enabled to determine the origin of the symptom by retracing the steps along which its pathogenesis proceeded. It is impossible to deal with the underlying complexes, to discharge their pent-up effect, to render them more assimilable by the patient, unless one succeeds in this task and brings them to the full light of day. The symptoms constitute a veiled language in which hidden thoughts and desires find the only means allowed them of coming to expression. We have to get the patient to translate his symptoms into more direct language, and thus to understand and appreciate the origin of them. In so doing we give the patient a deeper insight into the workings of his mind so that he is enabled to correct abnormal deviations, to overcome internal inhibitions and impediments, and to acquire a more objective standpoint towards the repressed mental complexes the automatic functioning of which has produced the morbid manifestations. He is in this way able to free his personality from the constraining force of these complexes, and, by taking up an independent attitude towards them, to gain a degree of self-control over his aberrant thoughts and wishes that was previously impossible. The method is thus in almost every respect the reverse of treatment by suggestion, although several would-be critics have naively exposed their ignorance of the subject in maintaining that the successful results are produced by suggestion. In suggestion treatment the physician adds something to the patient's mind, confidence, belief, etc., and thus makes the patient more dependent on him. The psycho-analytic method does not add: it takes away something, namely inhibition. It enables the patient to

disentangle confused mental processes, and, by giving him control over the disharmonies of his mind, leads him to develop a greater measure of self-reliance and independence. The training received by the patient is thus an educative one in the highest sense of the word, for he not only achieves a richer development of will-power and self-mastery, but acquires an understanding of his own mind which is of incalculable value for future prophylaxis. He grows both in capacity to know and in ability to do.

The conditions that lend themselves to psycho-analytic treatment comprise practically all forms of psycho-neurosis, the different types of hysteria, the phobias, obsessions, anxiety neuroses, and even certain kinds of sexual perversions. I shall refrain from relating any individual cases, for to do so would be only to weary you with the recital of a list of typical and atypical instances of these various conditions. It is further impossible for me to narrate any single instance of an analysis, for in every case the richness of material is so great that it would take several hours to give even an outline of the main points in the case.

The results obtained by the treatment, though by no means ideal, are yet very gratifying. They surpass those obtained by simpler methods in two chief respects, namely in permanence and in the prophylactic value they have for the future. Although most symptoms can be removed by other methods, such as hypnotism, yet anyone who has devoted much time to the study of these cases knows how great is the tendency to relapse, to recurrence, and to the appearance of fresh groups of symptoms. Mild cases can indeed be not only alleviated but even cured by the simpler psycho-therapeutic measures, so that these all have their sphere of usefulness; severe cases, on the other hand, need a more radical treatment, an uprooting of the actual morbid agents. It is easy to understand how this must be so. Hypnotic and other suggestion acts merely by blocking the outward manifestation of the underlying pathogenetic idea. The idea itself persists, because it has not been reached and dealt with, and sooner or later it will again manifest itself either in the same direction or in some fresh one. The analogy of a tubercular, or better still of an actinomycotic abscess, occurs to me in this connection. If the suppurating sinus is forcibly plugged then the symptom of discharging pus is removed, but sooner or later the pent-up pus will find a vent in either the same or a fresh direction. Before satisfactory healing can take place the tension must be relieved by instituting free drainage for each pus pocket, and the more thoroughly the focus of the disease is dealt with the better will be the result.

A few words are now necessary on the clinical applicabilities and limit-

ations of the method. It is a method that makes great demands on both physician and patient. Apart from technical knowledge the physician must evidently possess, not only unimpeachable integrity, but also a considerable measure of tact, patience and sympathetic understanding; without these qualifications he is unlikely to gain the patient's confidence to the requisite degree. The treatment further makes a great call on his time. Freud often finds it necessary to devote to a patient an hour a day for three years, but he acknowledges that the cases sent to him are generally of a very severe nature. In milder cases one can achieve very satisfactory results in a few months, a fact to which I can fully attest from my own experience. The amount of time may appear excessive unless one remembers the hugeness of the task imposed, for in all cases the roots of the trouble go back to early childhood, and important modes of reactions have to be altered which have been fixed and stereotyped for many years. When we consider how much trouble and time frequently has to be expended in the orthopedic straightening of a deformed limb, we should not grudge the same to the far more intricate task of the orthopsychic training of a deformed mind, especially when this results in converting an intolerable existence into a happy life, and a person paralyzed by doubts, fears and suffering into an active and useful citizen.

The demands made on the patient are no less great. The results of the treatment will vary with the intelligence, courage, honesty and perseverance he shews. With stupid and quite uneducated patients relatively little can be done, so that happily we can most help those whose value to the world is greatest. Again, age sets a formidable barrier to our efforts. In old age, when the plasticity of the mind is diminished, far less can be done than at an earlier period, and furthermore the time necessary to trace back the erroneous mental reactions through so many years is naturally longer. Still I have had a few fairly satisfactory results even above the age of fifty.

It will be realized that the method is at present not one generally applicable by the practising physician. Not only is the time necessary for the treatment a great hindrance, but also a laborious special training is necessary before the technique of psycho-analysis can be acquired to an adequate extent. It is generally admitted that this demands three years' incessant practice, a good previous knowledge of neurology being assumed. Here, as elsewhere, therefore, good work exacts arduous labour, and there is no royal road to the art of handling the most intricate and delicate machine we know of, the human mind.

You may now legitimately ask why I have taken up so much of your

time by describing a mode of treatment which I acknowledge not many will have the opportunity to learn or to apply. My answer is a two-fold one. In the first place I am not one of those who hold that the general physician should be cut off from all advancing knowledge except that which he can immediately apply in his daily work. No physician can apply all methods of diagnosis and treatment, but it is surely well that he should at least be aware of the existence of them. I cannot believe that because a country practitioner is not expected to apply the Wassermann test in the diagnosis of syphilis, or to perform excision of the Gasserian ganglion for the relief of trigeminal neuralgia, it is therefore better for him not to know about such methods. In the second place I wish to contribute to the general effect that this symposium must have in bringing home to you in some degree the present unsatisfactory state of medical education so far as psychology is concerned, for this is the main cause of the helplessness of the medical profession against the very maladies that are the triumph of the quack, religious or otherwise. The sooner we honestly face the shameful but undeniable fact that unqualified empirics can relieve distressing affections in cases that have defied medical skill, can produce results where we fail, the sooner will this flagrant lack in our system of education be remedied, and the better will it be for the dignity and honour of the medical profession. While the present state of affairs lasts, in which most physicians are given not five minutes' training in psychology in the five years of their student life, and in which there is no teacher of clinical psychology in any University or Medical School in the country, our profession must submit to being the prey of the charlatan and the mock of the scoffer.

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## THE DIVIDED RESPONSIBILITY IN REGARD TO PUBLIC HEALTH.

BY

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For the enforcement of all public health measures the personal or individual responsibility must ever rank as the most important factor. Municipal councils may pass by-laws and legislatures enact laws, it is just here at this point both bodies rise to their responsibility but fail to enforce the same, or as is too often the case but imperfectly enforce them, as is often necessary—this is done by the officials in a perfunctory manner whereby there is set up a false security, and good intentions are thwarted.

It must ever rest with the certain number of right thinking citizens of a community to act as watch-dogs in keeping any particular municipal health authorities up to the highest standard of efficiency so far as regards municipalized Public Health, for as Huxley correctly states:—"The higher and more complex the organization of the social body the more closely is the life of each member bound with that of the whole," and failure in action results seriously to a community.

Unfortunately in the past it has been the custom for most men and women to think they should do nothing but that which it pleases them to do without the least reference to the welfare of the home and particularly as to the welfare of the community in which they live. In fact if we look around the world from the sanitarian's standpoint—every prospect pleases and only man is vile. It is time the people realized to the full all the meaning of the words of Milton: "Accuse not nature, she hath done her part. Do thou thine."

These are times for action, and it is in the personal responsibility of the individual wherein lies the success or failure in attaining all that public health means to a people. It begins with the parents in the prenatal period of their offspring and continues with increasing import until their offspring in turn leave the home to assume similar responsibilities.

Canon Kingsley very truly stated some fifty years ago, it is our duty to see that every child that is born shall be developed to the highest possible pitch of development in physical strength, in intellect and virtue. And if this most desirable end is to be reached one of the chief factors must be by the adoption and enforcement of all the known rules of hygiene in the home, within municipal limits, and in conformity with uniform state enactments wisely and properly directed and assisted.

Unfortunately for the nation there is a widespread ignorance on the part of parents of the principles the knowledge of which is essential in properly caring for infants: this alarming and widespread ignorance is most disastrous from a national standpoint, and the fact that their helplessness has not gained for them the interest they deserve in the home, we must claim it as their rights as citizens and by municipal and state enactment provide for that most valuable of all national assets, that by which it lives and is perpetuated, viz.; the lives of its children.

In respect to many of the small tombstones and of the unmarked graves how correctly could be written the epitaph, "victims of parental ignorance in respect to Public Health." It is no exaggeration to say that 75 per cent. of the deaths of all first-born infants are preventable, their deaths being largely due to parental ignorance, I include both father and mother, in respect to the rearing of their offspring.

It must be remembered that ignorance of the temporal law is no excuse; how much greater then is the personal responsibility where the health of the nation's greatest wealth is concerned?

I may be pardoned for a brief reference to what is perhaps of still greater moment than the care of children, one which has been felt by at least one of the great European nations, and one which certainly would have been considered by one nation of this continent had it not been less prominent owing to the great tide of immigration which has increased by leaps and bounds its population. I refer to that very important question popularly known as race suicide—that damnably pernicious and criminal practice now so common in all classes of the community, but particularly in vogue amongst the wealthy and those of the middle walks of life—the prevention of conception—the guilty parties are to be found in both sexes and the guilt may be placed at the door of both fathers and mothers, for if the former are the chief offenders or criminals as regards prevention, certainly the latter are the criminals in respect to the inducing of miscarriage and thereby bringing on the physiological process of menstruation at a much earlier period than would be normally the case after conception has once taken place.

This is a subject in which some few of the members of the medical profession have at least in some portions of the country been too much identified with, and if for nothing higher and better, certainly for the credit and ennobling of the medical profession, the sooner such men are prevented from continuing such pernicious practices under the cloak of a medical license the better.

Certainly but little progress will be made against the insidious inroads made by these pernicious customs into the social life of our people until the men and women of our country are educated as to their great evil, and of the dangers which follow their practice.

Returning again to the question of the children—a child may be taught in school a few of the cardinal rules of hygiene, but if he returns to a home where every rule of health is ignored, what profiteth the child? Similarly he may be given the best physical instruction, but much of the good is undone if the home be dark and sunless and God's fresh air is regularly excluded during the eight or ten hours he spends in sleep, all on account of the ignorance of fond parents.

It is not the purport of this paper to indicate how the knowledge appertaining to public health shall be disseminated to the people; enough has been said to indicate the lines of individual responsibility. Parents must know the laws of health before sanitarians can hope for them to exemplify the same in their lives—many know of them in the abstract,

but to be of any worth they must know them of a truth and they must teach them to their children. Parents must realize the importance of the body as well as of the soul and mind. They must know that it is their duty to study the rules of hygiene, as they apply to growth and development of the body and the adoption of all preventive measures which will protect the child as it passes through life. They must realize the importance of the sound body as well as of an educated mind, for in life's struggle the latter will little avail if the offspring is a physical incompetent.

And looking higher still and considering the body as the earthly temple, surely it is essential, it is fitting and proper that the individual should know how to preserve it in health, strength and purity, for certainly as regards our bodies each one should realize his responsibility.

Of personal responsibilities perhaps that of the physician is the most onerous. Certainly the great advances made in medical science along the lines of serum-therapy, the application of toxins and similar therapeutic agents, as also the general and particular application of preventive medicine all enhance their responsibilities, and the medical practitioner who does not teach and practice to the full public health is simply a charlatan.

It will not suffice as at present for medical colleges and licensing boards to relegate hygiene or public health, or whatever term they choose to apply to this important branch of medicine, to a third rate or even second rate position. To know how to prevent illness is more important than to know how to stop a cough. This latter is the prerogative of the patent medicine man and requires no skill, but to prevent illness requires that the medical practitioner shall have more than the mere knowledge of how to vaccinate, how to properly isolate a case and subsequently disinfect. It calls for a knowledge of accurate bacteriological, physiological, chemical and the public health laboratory knowledge as well as the practical application of all that is represented in these groups of medical instruction in so far as they relate to the maintenance of the human body in normal, physiological health under all its varying conditions—the study of human environment—all of which knowledge must be given in medical colleges everywhere—and the day is not far distant when “preventive medicine” must rank as the most important subject in the medical curriculum, and curative medicine, and diagnostics and surgical skill, and dexterity be merely what they should be, the useful and proper allies of the Goddess Hygiene, and placed in that Limbo from which Public Health is only now coming forth in its might and power to work great and as yet untold blessings for mankind.

Dealing with Public Health from the municipal standpoint the fact must be recognized that personal liberty has its limits and the relation of man to man requires the formation of rules of action which have for their object the preventing of one man taking from another those rights, economic and individual, which are essential to present day happiness. So also are health rights to be obtained through common action and thereby the better is the guarantee that we shall work together not to injure either our own health or that of our neighbor, and that our neighbor shall not injure our health.

Many are the municipal health laws, codes or ordinances—they are all similar, having been copied from one another. The powers they confer upon municipalities are often very great. Some of the laws are bad by reason of their not conferring upon local authorities the power to enforce the same, others are good. Laws define right—men enforce them, and law making is one thing, law enforcement another, and doubtless thousands of lives are being lost every year, millions of dollars being spent on curing disease and caring for those incapacitated from labor thereby, and millions of days are taken from industrial pursuits, and in the end the working life of nations is materially shortened because health laws are not enforced both by the individual as well as the municipality.

One illustration will suffice. What law will ever stop the present waste of infantile life due to the character of the milk supplied in all large cities, unless dairies are systematically inspected and cleanliness enforced, unless milk is kept at a low temperature ( $50^{\circ}$ ) from immediately after milking—in the creamery, on the train, at the receiving station, in the milk waggon and milk shop? Not until dealers scald and cleanse their cans, unless licenses are taken from farmers, creameries and retailers who violate the law, and not unless mothers are taught to scald and thoroughly cleanse bottles, nipples, cups and dishes from which milk is fed to infants, will this be remedied. Here is an illustration of the interdependence of individual and municipal responsibility. We may discuss the subjects of certified milk, pasteurized milk, clean milk, or indeed any other kind of milk, but until the proper authority is vested with full power to control the supply from dairy to consumer along some other channel than through the many by which milk now reaches the consumer, we may inspect and inspect milk until we are dead, for at the best the method is imperfect, and inspection cannot be made perfect.

We cannot guarantee the present imperfect milk of our cities and towns under the most rigid inspection; how then will those who wish to load up the system by pasteurization guarantee that each and every vendor deals out a correctly pasteurized milk?

They want a precise and exact laboratory method to be conducted daily by every dealer under the highest sanitary requirements, and the municipality to guarantee that each dealer sells pasteurized milk that is pasteurized milk.

Can this be done under present methods? Here is a point where we cannot take the word of the individual or accept the guarantee of the municipality, owing to the difficulties of inspection and supervision.

Is it not therefore a point where the municipality should for the benefit of the community as a whole, simply step into the breach and establish a milk depot, or depots as the size of the municipality may require, to which the milk shall be delivered by all licensed and inspected dairymen, paid by the municipality for the same on a basis of quantity and quality? Let the municipality deliver the milk pasteurized or otherwise as the health authorities decide, in regular routes with no overlapping in delivery, and let all be upon a cash basis as between the municipality, the furnisher and the consumer, at the minimum cost of inspection and where the maximum of purity will be assured.

In this country the legislature of each province is given full control over municipal institutions, it having been evidently thought better to teach each locality to manage its own affairs in keeping with the old proverb—if you wish anything well done do it yourself.

In brief the situation is this in most civilized countries: when you are born your name must be registered with the proper city or municipal official: when you are of school age the municipal authority provides you with a school and teacher, and requires your attendance, some times you are provided with school books free of charge. When you go out upon the streets you find them paved, lighted and cleaned by the council and you cannot under penalties remove or alter the pavement or pollute the street. Your life and property are protected by police and firemen provided by the council, it demands a tax should you engage in certain classes of business, and should you be fortunate enough to build a house you must submit your plans and secure a permit.

As to conveniences the council, sometimes assisted by Carnegie, provides you with a free library, it provides officials to inspect the quality of your food and drink, it removes your garbage from your yard and your sewage from your house and provides you with water, with parks and squares, and a hundred other things, and if poverty overtakes you it will aid the charitable in giving you a home, and when the end comes it will, if your friends do not claim your body, bury it and before doing so register the facts of your death. Thus from birth to death the municipal council affects our lives. The individual rights of

the citizen are vested in the council and to it for all these privileges we pay taxes, and thereby the rich unconsciously provide many things which have important bearing on the public health which those in more humble walks of life could not otherwise afford. Thus in benefitting themselves they unconsciously add very materially to the improvement of the health of the masses.

It will thus be seen that in this evolution of municipal government as apart from state or federal laws the responsibility of the enforcement of a large amount of public health measures has been placed upon municipal authorities, and in the past the central authorities have been satisfied with the enactment from time to time of more advanced public health laws, but the enforcement thereof has usually been placed upon local health authorities, and the central authorities have thus been relieved of any responsibility though willing at all times to tender advice usually through the Central Board of Health. With such a system generally prevailing it cannot be said the results have on the whole been satisfactory.

In regard to such an important group of questions embraced under the head of public health, it is essential they must be uniform for the larger community of people as comprised in a state, dominion or country, in order that they may be efficient, but in so far as the higher power enacts these laws for various municipalities whose councils change from year to year as the municipal elections recur, so the administration of the laws are subject to more or less change. And further, as the inhabitants of a state, dominion or country are really residents of different municipalities for longer or shorter periods of time incident to the many modern means of transit, it is essential for good government, for the affording of the highest protection to all, that while details as to the adoption of any particular set of health measures must remain with the municipal authorities, yet the supervision and the power to enforce, if necessary, should be vested in and the power judiciously exercised by the government which enacts them, but the expenses of their enforcement should be a cost chargeable to and collectible from the municipality which fails in their enforcement, otherwise it will be found that municipal authorities will readily yield up their duties to the larger and more powerful central body.

In public health matters the municipality would naturally be expected to work out its own salvation. The common health interests of the individuals living in the municipality, both men and women, and particularly the children, being of such moment as to require the rigid enforcement of the most modern health requirements.

But it is too often the case that local health by-laws or codes of health, although upon the face of them bearing the impress of all that is good for the community, yet in the method of enforcement or the manner of inspection are in the end really a farce, and the strong arm of the government which created their local powers must for the general good retain the power of enforcement.

In conclusion a short reference is desirable to the responsibility of the national government in respect to all that appertains to the health of the people. It will not suffice for any federal government to say that the question of public health is relegated to this or that particular state, provincial or territorial legislature, that the health of any particular city or country or geographical district is a local matter and does not concern the people of any other portion of the country, and if the local authorities will not engage in the solution of their own particular district the national government should not. This is a false premise. For many public health questions are national in their import. Indeed we may go further, many health questions are international and can therefore only be dealt with by nations: for instance, the sewage pollution of the waters of the great lakes of this continent regarding which we in Ontario are deeply interested. The preservation of these waters from pollution by sewage is of interest and import to all who live along their shores as well as the hundreds of thousands who yearly visit them from all portions of the civilized world. The many points involved in the question cannot be dealt with by the province, but must be considered by the nation. It is to the national government we look for a protection as regards the health of those who seek homes in our midst; that responsibility has in part been acknowledged, but cannot we go further, what of the valuable lives born each year to the fathers and mothers of this country? Are they not a more valuable asset than all the immigrant population? Truly the wealth of the nation is in its babies, and being national the government which represents that wealth should do more in their behalf. Here in Canada the national government has in its wisdom set an example by taking over the health of our cattle which is a part of our national wealth, but what of the peoples' health? Have they no interest therein? Time fails me to indicate all their responsibilities. Surely the physical conditions are at least of national import and should have a properly constituted National Health Department working in cooperation with provincial, state or territorial departments aided by municipal local health authorities and carefully guarded and directed by public opinion.

In conclusion, Public Health is pre-eminently a national question although requiring the assistance of state, provincial and municipal ma-

chinery and laws for the proper and efficient working out of methods and the enforcement of laws for the betterment of communities, and it may be necessary for good and efficient government that well-defined lines shall be laid down upon which each of the several governing or legislative bodies in a country shall have power to legislate upon and the limitation of enactment be clearly defined, but for the better enforcement of health laws there must be some central authority clothed with proper power to act when either individual, municipality or province fail to enforce laws adopted for the protection of the health of either an individual, community or district.

It is essential for the carrying out of all laws which in any way relate to the public health that such power be retained and exercised by the national government,—it is essential for the protection of the health of each individual.

Consequent upon financial losses in respect to national wealth as regards agriculture, horticulture, stock raising and the great manufacturing industries, and other branches of national wealth, legislatures and parliament devote annually large sums of the public monies for the improvement of all these branches of the wealth of the nation; colleges have been erected at public expense, and large sums appropriated for their maintenance, chiefly devoted to the branches of agriculture; universities have set apart departments to foster agriculture and forestry, and every nation has departments of government under Cabinet Ministers for the fostering and improvement of the branches of national wealth, but how many have a Minister of Public Health? but few, or how many have the various branches relating to the health in one large sub-department? But the all of public health is not in the statutory powers of the government. There are many and great problems of public health that have yet to be worked out, and in the solving of these problems much research work, much experimental work has to be instituted and carried on, many social sanitary problems have to be studied, all of which require the expenditure of money and the engagement of a staff of the best experts the nation can engage. Certainly the physical training and developments of both boys and girls must be worked out upon national lines. In my opinion as regards the boys the best results and at a minimum cost can, and should be at once secured, by some form of modified military drill. It will be necessary that many of the vaccines, serums and antitoxines used in preventive medicines should be prepared by the state at the expense of the people and distributed to local authorities at cost, as the almost prohibitive prices of commerce prevent their general use.

The state must provide well equipped laboratories. It will not do for any country to rely upon the benevolence or generosity of philanthropists for the studying of the many questions relating to preventive medicine, these must be carried out by the national government as they have for their highest object the health of the people which means its highest wealth.

Surely this is a fit, a proper sphere for the nations of the earth to work in—none higher, none better and none of more moment or greater import. The greater the nation and the more dense the population the greater the present responsibility, while for a young nation, one looking forward to vast increases in population in the coming years, the importance of public health questions is of vital importance as it is entering the threshold of national life, and to a nation such as we Canadians have the honor to form a part there is every necessity for the creation of an Imperial Health Bureau with its unit in every branch of the Empire, each working in harmony with the Central Bureau, and each doing its part of experiment and research and laboratory work which may be most fittingly and appropriately worked out by each particular branch, all co-operating and assisting to solve the intricate questions all of which have for their object the health of mankind and the prevention of sickness and suffering.

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## ULCERATIVE STOMATITIS ASSOCIATED WITH VINCENT'S BACILLUS.\*

BY

H. B. CUSHING, B.A., M.D.

Physician to the Children's Memorial Hospital, Montreal.

The following cases are quoted to illustrate the association of a mildly contagious form of ulcerative stomatitis with the presence of Vincent's bacillus, *i.e.*, with the symbiosis of bacillus fusiformis and spirochæte dentium. These two organisms are almost invariably found together, usually in masses so that a smear taken directly from the lesion looks like a pure culture. The spirochæte is generally believed to be derived from the fusiform bacillus and to be a stage in its life history, though this has never been definitely proved. In recent text-books we find two conflicting views with regard to this organism or pair of organisms. First, that it is a saprophyte, non-pathogenic, which occurs in the mouth and multiplies enormously in the necrotic tissue of any foul ulcer, without causing any harm to the host. The advocates of this view point out that it is frequently found in the normal mouth, has been recorded in dental caries,

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\* Read before a meeting of the Montreal Medico-Chirurgical Society.

scurvy, mercurial stomatitis, syphilitic ulcers, diphtheria, noma, and other lesions, and also that it has not been proved to be pathogenic to animals. The second and more generally accepted view is that, while found in the normal mouth like many other pathogenic organisms, it is capable under certain conditions of becoming virulent; that it is particularly apt to cause secondary infection of any ulcer of the mouth and so to be found as a mixed infection in syphilitic or diphtheritic lesions; and lastly that it causes two characteristic lesions by itself, viz., the appearance of a false membrane and superficial ulceration on one or both tonsils, with mild constitutional disturbance, the so-called Vincent's angina, and secondly, an ulcerative stomatitis or superficial ulceration at the margin of the gums, often extending to the cheek or tongue, and quite frequently associated with membrane on the pharynx, in other words the same lesions as Vincent's angina with a different distribution.

It is claimed that these diseases, Vincent's angina and ulcerative stomatitis, are distinct clinical entities, that they are mildly infectious, especially in institutions, that the characteristic organisms are found in the lesions in almost pure culture, that in the newest lesions and deepest parts the smears give the most typical appearance, and that sections show the bacillus fusiformis in masses in the portions of the ulcer immediately adjoining the normal tissues.

The first epidemic, if it may be so called, to which I wish to call attention, occurred some months ago in the Children's Memorial Hospital. The first case was a little girl, B. R., 6 years of age, with extensive bone and glandular tuberculosis; her general nutrition was poor and she had several carious teeth. The disease began with a superficial ulceration along the margin of the gum next a carious tooth, this rapidly extended, so that in three or four days the gums opposite four adjacent teeth on the upper jaw were affected, a false membrane appeared on the inside of the cheek opposite the lesion, and also a small patch on the edge of the tongue. She suffered from some fever and complete anorexia, the neighbouring submaxillary glands were acutely inflamed, the cheek swollen, her breath was very foul and tongue heavily coated. From the poor condition of the child, the prostration and the foul odour, noma was anticipated, but the ulceration was very superficial, in fact practically a necrosis of the mucous membrane. Culture showed only various cocci and smears revealed large masses of bacillus fusiformis with numerous spirochætes. Under the use of cleansing solutions and liquid diet, the whole trouble cleared up in ten days, leaving no scarring. Ten days to two weeks after the beginning of this case, two other children who had been associated with the last patient, became sick simultaneously in the same way.

These children were 3 and 7 years old respectively and suffered, the younger from rickets, and the other from a tuberculous hip, and were both in a poor state of nutrition. The stomatitis began as before at the margin of the gum on one side and gradually extended in the form of a superficial ulcer, with slight constitutional disturbance and a peculiarly fetid odour to the breath. Smears as before showed the characteristic Vincent's bacilli. These two cases were milder and cleared up in about a week under local treatment. No further cases occurred in the institution.

The second outbreak happened recently in an orphan asylum in Montreal. The first case was a little girl 5 years old, poorly nourished and anæmic, recently admitted to the institution. She was said to have had a sore mouth for two weeks. Her gums were somewhat swollen and bled easily; there were shallow superficial ulcers along the margin of the gums of the upper incisors and left premolars, also a small ulcer opposite the left lower canine; her breath was very foul, temperature  $100^{\circ}$ , submaxillary glands enlarged and tender, especially on the left side. Milk diet and hydrogen peroxide mouthwash were prescribed. Three days later she appeared much worse; a shallow ulcer about the size of a 10-cent piece was present on the inside of the left cheek, and a patch of adherent false membrane on the left anterior pillar of the fauces; she seemed to suffer considerable pain and there was marked salivation. Cultures on blood serum gave only cocci, smears revealed the characteristic bacilli and spirochaetes in large numbers. I now prescribed the treatment recommended by Holt in the last edition of his text-book, viz., fairly large doses of potassium chlorate, frequently repeated, and in 48 hours to my surprise the mouth had returned to a practically normal condition. In this case the potassium chlorate certainly seemed to act as a specific.

Two weeks later I was asked to see this patient's brother, aged 8 years, also poorly nourished and anæmic. He had a similar condition of the gums, only less marked, temperature  $99\frac{1}{2}^{\circ}$ , foul breath, and enlarged glands under the jaw. Smears as before showed the typical bacilli. Under the administration of potassium chlorate and an antiseptic mouthwash he rapidly recovered. I should have mentioned before that none of these cases had received mercury in any form.

These cases then all showed the marked characteristics of the disease generally known as ulcerative stomatitis. They occurred in institutions, in children from 3 to 8 years of age, all of whom suffered from malnutrition or ill-health and there seemed to be a mild infectiousness about the disorder. The disease began as a small superficial ulcer at the margin of the gums and afterwards extended in some cases in the form of an ad-

herent false membrane or superficial necrosis to the mucous membrane of the cheek, the tongue, or the fauces; there was a characteristic fetid odour, mild constitutional disturbance, and enlargement of the neighbouring lymph glands. Smears from the lesions showed the characteristic organisms in great numbers. All recovered in one to three weeks. Potassium chlorate given internally seemed to hasten the recovery.

As these cases seem of somewhat infrequent occurrence here and the association of the disease with Vincent's bacilli does not appear to be generally recognized, I thought it might be of interest to bring them to the notice of this Society.

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### DIPHTHERIA OF INTESTINES.

BY

R. E. MCKECHNIE, M.D., Vancouver.

I wish to record an unusual case of dysentery which came under my notice recently. The patient was a female child, six years old, who was born in Fiji. The parents were on their way home to Germany, taking the child with them. Shortly before leaving Suva, the child was taken ill with what seemed a mild dysentery, and the condition persisted throughout the trip of two and a half weeks. On arrival at Vancouver, the child was found emaciated, and very much exhausted. The dysentery was fairly well held in check by the treatment the patient received on ship board, but she was having several small stools daily, stained with blood and consisting of mucus and pus. Some of the motions were of pure mucus—about half a pint at a time. To ascertain the type of dysentery, I called in Dr. McKee, bacteriologist, who excluded both the amoebic and the Shiga types. He found enormous quantities of streptococci. These rapidly disappeared under treatment with streptolytic serum, but the symptoms did not abate. Finally cultures showed bacilli of the diphtheritic type. At once anti-diphtheritic serum was used, with immediate improvement of the symptoms, and two days later a complete cylindrical cast of the bowel, about four inches in length, was passed. The child made a slow but uninterrupted recovery after this. The cast was examined microscopically, and proved to be a true diphtheritic membrane. It was noted that the patellar reflexes were absent. Later the patient developed paralysis of the anus, so that for a couple of weeks the bowels moved involuntarily and unconsciously. In this case we had a dysentery caused by diphtheritic infection of the bowel.

# FURTHER INDICATIONS FOR THE CÆSAREAN SECTION.

BY

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The indications for this wonderful operation are slowly but surely broadening. Two thousand years ago it was only done on dead women to save a possibly living child. So that the death rate was a hundred per cent. for the mothers and about fifty per cent. for the child. A thousand years later some heroic operator proposed to perform it on women who were dying but not yet dead after an impossible labor of several days duration. A few, perhaps ten per cent., of these recovered to the surprise of the operator's contemporaries, who probably looked upon him as a mendacious fellow for claiming any maternal recoveries at all. During the second thousand years the death rate was so high for the mothers that no one dared to publish his statistics. In 1874 Cazeaux and Tarnier estimated the death rate at between fifty and seventy-five per cent. of the mothers. Even these few successes emboldened others to operate earlier and earlier, so that in 1892 Coe estimated that there had been sixty-eight cases in the United States, with a maternal mortality of less than forty per cent. In 1903 Greene reported nine cases with one death, or 11 per cent. The greatest drop in the death rate was due to the introduction of Sãnger's method of sewing up the tear in the uterus; but even with that, the most improved technique, the death rate remained about ten per cent. until the family doctors began to call in consultation an expert abdominal surgeon whenever they had a known case of disproportionate pelvis.

As with ovariectomy and with hysterectomy for fibroid a lowering of the death rate induced surgeons to operate earlier, and this in turn led to a still smaller mortality. The present death rate of about two or three per cent. is chiefly due to making the operation one of election instead of one of emergency. Up to ten years ago even the most favorable cases for operation were women with deformed pelvis, who had been in furious labor for many hours and on whom repeated and forcible efforts had been made to effect delivery. The operation may have been as skillfully performed then as we can do it now, although perhaps not so quickly; so that we can safely say that the majority, if not all, of the deaths were due to the injuries received by the woman from the futile

attempts of nature or art to deliver her. The next great decrease in the mortality occurred only two or three years ago, when a few of the most courageous Fellows of the American Gynæcological Society inaugurated a new era in the history of Cæsarean Section by not only improving the condition of the class of women who had formerly been operated on, but by adding two entirely new and more favorable classes. That is to say, that instead of waiting until the life of both mother and child have been jeopardized by the violent use of forceps and then doing Cæsarean Section, they have gradually persuaded the family physician to do less and less damage; until now it quite frequently happens that we have an uninjured woman to operate on. When every family doctor becomes skilful enough to recognize that a given head cannot pass through a given pelvis without serious injury to either mother or child or to both and advises Cæsarean Section before using forceps; or even when he ceases in his efforts with the forceps before he has done serious injury; or even if he could do a moderate amount of damage without infecting the mother; then in the hands of an expert Cæsarean Section would reach its highest perfection, namely, a hundred per cent. of recoveries, which indeed it has almost reached in this year of 1909.

But, besides this class of deformed or disproportionate pelvis, which still gives a very small percentage of deaths, two other classes of women have been added, who, because they are operated on before any injury whatever has been done to the soft parts, promise to give a death rate as low as an average delivery in a private house, about one-half of one per cent. for the mother and still better for the child. One of these classes comprises the women with puerperal convulsions coming on just before the onset of labor. Up to a few years ago the best we could do for them was an *accouchement forcé* which has a high death rate for both mother and child, even if the mother were in good condition. But the woman with puerperal eclampsia has been an anæmic woman for several months and has a low opsonic index, so that injury which a woman in good health but with a contracted pelvis might easily have recovered from, is fatal to her.

It is probable, however, that even in these cases there will be one hundred per cent. of recoveries as soon as the whole mass of family doctors have been educated up to the point of abandoning entirely the *accouchement forcé* and religiously refraining from doing any injury to the soft parts.

The other class, namely those with placenta prævia, is fortunately a very rare one, but which until a few years ago had a death rate as high as forty per cent. in Europe and ten in America, when treated by rapid

delivery; it now gives a mortality almost *nil* when delivery takes place by Cæsarean Section.

With all these improvements taking place we are justified in assuring a woman with a deformed pelvis or with albuminuria or placenta prævia that she and the child run less risk from delivery by Cæsarean Section than by any other natural or artificial process, and that if she should become pregnant again and if any of these three things should happen for the second time, which they are not very likely to do, she can be delivered again and again by Cæsarean Section with little if any greater risk than an ordinary confinement. So that if the patient and her doctor leave it to us to do as we think right, we will not sterilize her. But what shall be our attitude if the woman demands to be sterilized so as to be saved from the inconvenience or expense or the slight risk which some might claim for the operation? I am inclined to think that in that case we are justified in complying with her request, not by removing the ovaries, but by taking out an inch or so of the uterine end of the tube and sewing the peritoneum over the interstitial part.

My friend, Dr. Reddy, the director of the Woman's Maternity Hospital, informs me that he has entirely given up *accouchement forcé* in favor of Cæsarean Section, of which he has done about twenty, with only two deaths, and they were desperate when they came in. Dr. Barton Cook Hirst has done over seventy with a still smaller death rate, the deaths only occurring in infected cases. By our present method the child and placenta can be delivered in less than a minute from the first incision, while the hæmorrhage is much less than from an ordinary confinement. Before closing I would like to say a word of warning against the vaginal Cæsarean Section, which has all the dangers of the *accouchement forcé* without any of the advantages of abdominal Cæsarean Section. It must always have a high death rate.

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## A REPORT UPON CASES OF GAS-AIR ANÆSTHESIA IN MAJOR SURGERY.

BY

EDWARD ARCHIBALD, M.D.

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Of recent advances in the domain of anæsthetics none, perhaps, is more interesting than the use of nitrous oxide gas, combined with air or with pure oxygen, in major operations. For very many years it had been taught that gas was suitable only for operations of minor importance and of short duration. On the one hand, it was said, the

anæsthesia obtained was fleeting, and on the other hand its prolonged exhibition was dangerous. And this opinion, I believe, still receives very general acceptance. Within the last few years, however, certain surgeons, chiefly in America (Bevan, Webster, Crile, Parker and others), have been reporting numerous cases of gas anæsthesia lasting as long as two hours, in major operations of many kinds. These interventions have not to all appearances been attended by danger; on the contrary the general opinion seems to be that the patient's condition is less affected than by a corresponding length of ether or chloroform anæsthesia. Crile, indeed, remarks (verbal communication) that he chooses the gas-oxygen combination for all his "critical cases."

It is not my intention this evening to go into the history of the subject, nor to discuss the details of the administration of gas in its various combinations. Rather is it my desire to do no more than call the attention of the Society to the matter, and in that idea, to report briefly the few cases of major surgery which up to the present constitute my own experience. It is to be remembered that the use of gas in the short operations of minor surgery and as a preliminary to ether is not here considered. That we have been accustomed to for many years.

The more interesting cases of the series, briefly recounted, are as follows:—

Nine cases of appendicitis, of which 5 were of the catarrhal type, 2 perforated with local abscess, and 2 with general peritonitis; one case of intestinal obstruction by a Meckel's diverticulum, in which the appendix was removed as well as the diverticulum; one of obstruction by volvulus with old adhesions; one case of traumatic rupture of the bowel with general peritonitis; one amputation at the knee-joint for senile gangrene; two cases of empyæma. The duration of the operation in these 15 cases varied from 12 to 35 minutes. Only twice have we had the opportunity of a longer gas administration than this. One of these was the division of the descending colon and the formation of an artificial anus, a procedure which, owing to difficulties peculiar to the case, occupied 53 minutes. The other was a nephrectomy with excision of the ureter down to near the bladder for tuberculous disease, occupying one hour and twenty minutes. It should be added that in this last case about one oz. of ether was used at an early stage to overcome a rigidity of the lumbar muscles, a rigidity which did not reappear with resumption of the gas.

It would be presumptuous to dogmatise upon the basis of such a small series as the present one. Yet, I can at least say that the experience of these 17 major cases, added to that gained by the more frequent

administrations for minor cases, is confirmatory of the results obtained by those who have used the method most extensively. The advantages and disadvantages are well known. It is objected that the anæsthesia obtainable is imperfect and short; that muscular relaxation is incomplete; that it needs especially skillful administration; that it is insufficient in anæsthetizing power for stout, plethoric and alcoholic patients; and that its cost is comparatively great. It is also urged that the cyanosis is disturbing to the operator; and that the prolonged use of gas is dangerous.

These objections, though well found in the main, need qualification. Thus, the anæsthesia is imperfect in the sense that the patient is kept always near the border-line of consciousness, and that the muscles are frequently only partially relaxed; yet in our experience the anæsthesia is good enough, in that the patient never feels pain, and that complete muscular relaxation is in most cases quite unnecessary.

The anæsthesia is short, certainly, if the patient receives no renewed supply of gas. But when he is given a judicious admixture of oxygen, either pure, or in atmospheric air, either simultaneously with the gas or in alternation with it, the anæsthesia, with a little practice, may be maintained, as reports testify, for two hours. I would like at this point to mention that I have had in the adoption of this form of anæsthesia, the advantage of the collaboration of Dr. Nagle, Anæsthetist to the Royal Victoria Hospital, whose experience and skill in administration have been of the greatest value. We have not as yet installed any special apparatus for the combined use of gas and oxygen. The method has been simply to anæsthetize with gas, as in the usual gas-ether combination, and then, as judgment dictated, to admit air at intervals in large amount by removing the mask, and also continuously by not allowing the mask to fit tightly.

It is true that the application of this method is, as compared with ether and chloroform, more or less restricted. The stout, plethoric, and alcoholic patients, difficult to get under with ether, are still more difficult to get under with gas. Yet I believe the limitation in this direction is not so great as is generally supposed. This comes to be a matter of judgment in each case; and an anæsthesia begun with gas may need to be completed with one of the other agents. There is no harm done thereby.

The skill necessary in administration is apparently soon acquired; and Dr. Nagle informs me that one learns, just as with ether, the trick of a smooth anæsthesia by dint of attention to details.

By our calculations, we find the cost of gas to be but little greater

than that of ether, except when pure oxygen is added. This, as a matter of fact, we have not, hitherto, found necessary. As compared with ether, one saves by the rapidity of the effect, by greater quickness in operating, and by the lack of waste.

As to the cyanosis, one must just learn to disregard it. It disappears at the close of the operation as quickly as it comes; and it leaves no material trace of its presence. It is much less during the operation, once anæsthesia is obtained, than at the beginning, while anæsthesia is being induced.

The danger alleged to accompany the prolonged use of gas would seem to be present—arguing purely from general principles and from experimental work, for we have as yet neither seen nor heard of fatal cases in man—only when oxygen is continuously excluded and the gas pushed to the point of absolute asphyxiation. Then, naturally, the respiratory centre gives out. The heart continues its function, however, and artificial respiration, under such circumstances, is of far greater saving power than when the primary failure is on the circulatory side. We have not as yet sufficient experience in the prolonged use of gas to assert that it is absolutely without danger, though we have long known that its use over a short period is practically without mortality. Yet this last fact, together with the exceedingly favorable reports of hundreds of cases now published of operations lasting from one to two hours, encourage us to believe that the gas-air combination is the safest general anæsthetic we now possess.

The advantages of gas in major work are striking. Personally, I count its safety as one of them, though that is an impression or a belief not yet, perhaps, sufficiently proven. In any case, the freedom from post-operative nausea and vomiting is incontestable, and the advantage thereof enormous. We are accustomed to accept with complaisance the suffering of the patients in this respect, a suffering which causes many of them to swear that "they would rather die than take ether again," and to console the particular sufferer with the remark that "ether is so safe." This is frequently an insufficient consolation to the patient. In our series, nothing has been to me personally more gratifying than to find the patient resting comfortably and in complete consciousness almost immediately after operation, not vomiting, not choking with mucus, not suffering, in short, except from the smart of his wound, often indeed, in virtue of a little morphia, not suffering at all. The pain caused in the wound by the vomiting of ether is excruciating; this is avoided with gas. A fourth year medical student, upon whom I had operated for the removal of an acutely inflamed appendix, woke up as the bandages were

being applied, and immediately demanded to see his appendix, discussed *con amore* the scientific aspects of his case, assured us that he felt very comfortable, and extolled, as one who knew, the virtues of gas as compared with ether. As to insufficient relaxation of muscles, that objection only partially holds. It is applied usually to abdominal operations. For myself I have not found either that the muscles were noticeably tense, nor that, when they were incompletely relaxed, that factor interfered at all with the operation. Retractors always overcame the condition easily, and the field was always ample.

We have not conducted any regular examination of the urine after gas, save for acetone. This substance was absent in practically all the cases: and in any case its appearance in the urine cannot, even with other general anæsthetics, be considered yet as due to the anæsthetic with certainty. Fasting for a day will cause its appearance. However, it is well known that gas has practically no deleterious effect on kidney excretion.

Another considerable advantage is that the patients come out of the anæsthetic in as good condition as when they entered it, apart from the effect of the operation in itself. This was particularly noticeable in two or three interventions, not recorded above, upon very weak patients, abdominal explorations for suspected abscess in the subphrenic space. These occupied only a few minutes, five to fifteen, it is true; but, as compared with similar operations under ether, it was evident that the gas taxed the patients' strength very much less; in fact the gas seemed to leave them absolutely no worse than it found them.

We are not yet certain as to the applicability of gas to cases of weak or irregular heart action. I have not used gas in such cases, and I should hesitate to use it.

We found that operations in the upper half of the abdomen, particularly if the mesentery were much pulled upon, were unsuited to gas. Anæsthesia must here be deep to overcome the severe respiratory reflex so easily excited in this region of the abdomen. The amputation for senile gangrene seemed to show the value of gas in such elderly and weak patients. It was completed in 25 minutes, and there was not the least shock. In short, as Crile has remarked, the method seems valuable for the "critical cases," apart from serious cardiac conditions. The weak, the septic, the anæmic stand gas well.

## THE PIRATES OF MEDICINE.

BY

JOHN MCCRAE

When the great Sancho Panza became Governor of Barataria, his physician stood by his chair and with much outflow of words, ordered away dish after dish, as soon as, or before each was tasted. Sancho threw himself backward in his chair, and looking at the doctor from head to foot very seriously, asked him his name and where he had studied. To which he answered, "My lord governor, my name is Doctor Pedro Rezio de Aguero, I am a native of Tirteafuera, lying between Caraquel and Almoddobar del Campo, on the right hand, and I have taken my degree in the University of Ossuna." "Then, hark you," said Sancho in a rage, "Signor Doctor Pedro Rezio de Aguero, native of Tirteafuera, lying on the right hand as we go from Caraquel to Almoddobar del Campo, graduate in Ossuna, get out of my sight this instant—or, by the light of heaven, I will take a cudgel, and beginning with your carcass, will so belabour all the physic-mongers in the island, that not one of the tribe will be left: I mean of those like yourself, who are ignorant quacks, for those who are learned and wise I shall make much of and honour as so many angels. I say again, Signor Doctor Pedro Rezio, begone! or I shall take the chair I sit on, and comb your head with it to some tune, and if I am called to an account for it when I give up my office, I will prove that I have done a good service in ridding the world of a bad physician, who is a public executioner."

I have gathered a few notes of some of the Doctor Pedro Rezios—who flourish to-day as they did then; those for example who from wealthy factories turn out the remedies that are "household words." What bad language people do permit in their homes!

These loud-shouting remedies make extravagant claims as to their powers; some of them are indifferent honest, others not at all so, and they make interesting reading as found unveiled in the last "Extra Pharmacopœia." Here are some grouped all together, the good and the bad: Beecham's Pills contain aloe, ginger and soap; Carter's Little Liver Pills, podophyllin gr. 1-8, aloe gr. 1-3; Cuticura soap is hard and soft paraffin; Hood's Sarsaparilla contains 19 per cent. alcohol and less than 2 grs. pot. iodide per dose; Mrs. Terry's Drink Cure, 98 per cent. sugar and 2 per cent. salt; Munyon's Blood Cure and Munyon's Kidney Cure, 100 per cent. sugar; Zam-Buk contains eucalyptus oil and paraffin; and for these and their like, in the year ending March 31, 1906, the British public paid \$11,500,000.

This trade has built itself upon the regard that the man has for the physician; and the most blatant quacks generally reason that the older the physician the more the regard; until one reads advertisements of old Dr. So-and-so's remedies, which almost turn one's stomach in the reading and entirely do so when one considers that there are people to trust them.

Since every physician is liable to sad mistakes, one may find the regular and the quack in the same boat as far as results obtain; but one difference that we have always insisted upon is that any knowledge we have must be given freely to the profession at large; yet this was not always so. Two of the famous physicians of Queen Anne's time, whom I shall mention, sold medicines of a secret composition, Sir Hans Sloane, who had an eye salve, and Dr. Mead, who used a powder for the bite of a mad dog. To judge such men, one has to put one's self into their times, for knowledge is a plant of slow growth, and sometimes the medical profession is too slow in recognizing and incorporating in its practice useful ideas. Massage is at times too useful to be left to an osteopath, and that irregular school, called The Bonesetters, occasionally had results which testified to something sound in their practice. Dr. Wharton Hood, a regular practitioner of note, published in the *Lancet* and afterwards in a book from the MacMillan Press, some of the means which he saw used by one Hutton, a noted bone-setter. Dr. Wharton Hood speaks at first hand, and after Hutton's death was freed from the necessity of silence. Sometimes, he says, "cases of diseased or injured joints have been compelled to unnecessary and injurious rest by qualified practitioners, and patients weary of irksome and unavailing treatment have resorted to quacks." Hood ventured into the regions of irregular practice, and brought back what was there worthy of use.

Sometimes the irregular practitioner freely or by compunction admits his method. An old woman, who was accustomed to treat many ills for the reward of a penny and a loaf of bread, was charged with witchcraft; in return for her liberty she betrayed her methods; all she did was to repeat to herself the following verse after receiving her bread and her piece of coin:—

“ My loaf in my lap,  
My penny in my purse,  
Thou art never the better,  
Nor I never the worse.”

Sometimes the appearance of great wisdom does not carry much greater substance than this.

From the days of Chaucer's "Doctor of Physike," whose dress was lined with taffeta and with sendal, even until to-day we have hardly escaped from Chaucer's description:—

"Of his diet measurable was he,  
For it was of no superfluitie,  
But of great nourishment and digestible,  
His study was but little on the Bible."

This somewhat unjust statement I fear still dogs us as does also the couplet which follows:—

"For gold in phisike is a cordial  
Therefore he lovéd gold speciall."

But I doubt not that Chaucer's "Doctor of Physike" was a thorough 'regular;' in days not much later, he would have had to be or this is what he would suffer: "A counterfeit doctor was set on horseback, his face to the horse's tail, the same tail in his hand as a bridle, a collar of jordans about his neck, a whetstone on his breast, and so led thro' London and then banished."

A quack is defined by the Century Dictionary as a knavish practitioner of medicine, *i.e.*, one who practices medicine knavishly. One may use his art foolishly, and may be self-deceived as to the power he thinks he possesses, but this no more than brands him a fool; a well-intentioned fool is often, like a drunk man or a child, under the special protection of Providence.

For the irregular practitioners of healing, I have no brief to call them quacks; some of them are, but those who are honest in their way are not; but what a way! There is no doubt of the folly of those who employ them as medical advisers; it is as if they employed a dentist who used one forceps for all the different teeth, and a blacksmith's pincers at that; most of us who desire a legal opinion do not go to the plumber for it; nor do we fetch the clergyman to fix the kitchen sink; and we rarely gather figs of thistles. And a man is at full liberty to have what medical attendant he will for himself, though I deny his right to choose for his children according to his folly.

Therefore, for the occasionally honest practitioner of irregular methods, of confined scope and of ill-furnished mind, one may have no special condemnation. For the patient who likes that sort of thing one has no special pity when he gets it, but, on the contrary, for the practitioner

who understands thoroughly his own shortcomings and makes claims which are great in the inverse ratio of his performance, polite English is inadequate. This class includes all those who make claims of curing diseases they cannot cure, and which they know they cannot cure; all those who exploit remedies for a number of different diseases, although the remedy may have a chance of benefiting one of the diseases mentioned; all those who manufacture remedies to which there is nothing but a name, a harmless substance and a pigment; all those with whom the monetary agreement is all and the treatment nil. Delicacy forbids one from describing definitely the degrees of sanguinary folly exhibited by their victims. With these last we all are more definitely concerned, inasmuch as their prosperity, nay even their existence, depends ultimately upon the good faith that exists between patient and physician. There is even a touch of heredity in this, because through long generations there has existed a bond of honour between patient and physician; so that the quack's victim like some tamed wild animal is willing to approach the thicket without seeing the gin that is concealed therein. The approach of the victim to the trap is not always so ingenuous, and, although we are told that in vain is the net spread in the sight of any bird, yet we are also told that there are certain foolish avians of the puffin and guillemot species that can be knocked over with a stick. One need not have more consideration or pity for the knowing victim of the nostrum than for the foolish puffin or the unwise guillemot. After all, does not the earth need to be fertilized?

The word "charlatan" is said to be derived from Ceretano, a town in Italy, whence the first hippocratic impostors sallied. Knowledge was not so much necessary as assurance, and opportunity had much to do with their success. But opportunity could be created. I find a story of a physician in Paris, who used to send his servant at day-break to the principal mansions to enquire for his master, who was to repair to such and such a Prince who was dying. Finding that his master was not there, the servant would say, "Is this not the house of the Duke of —? I have made a mistake." The servant would proceed from street to street awakening the neighbourhood. You will remember how exactly this parallels the method pursued by the ingenious Bob Sawyer in "Pickwick Papers," whose boy would leave a series of bottles at a series of houses, and would later in the day call for them, exclaiming "left by mistake—so much business—from Sawyer's—late Nockemorf."

I will be loathe to believe that Dickens manufactured this from the preceding story, for, as a profession, we can scarcely spare Messrs. Bob Sawyer and Ben Allen.

Another gentleman of the profession, I fear an irregular one, when he arrived in the town would send out the bellman offering fifty guineas' reward for a lost poodle belonging to Dr. —, Physician to the Royal Family, Professor of Medicine, Surgeon General, who was temporarily putting up at such and such an inn.

The quack is not an easy term to define, and to-day there are even sadly misled men of technical education whose modes of procedure lay them open to the charge of following this ancient order. Sometimes, too, the most respectable practitioner, by reason of ignorance, may come not very far short of the more impudent and not much more ignorant quack. I recall in my own acquaintance an old chap who practiced among the negroes of the Middle States, who at times seemed to come perilously near the debatable ground. I remember how he outlined the treatment of a lobar pneumonia in a man of seventy-five. With a strong nasal twang, he declared, "I give him a powder every six hours; each powder contains one grain of bromide, to allay the nervous irritation, and one grain of quinine, to keep down the fever, and one grain of bismuth to allay the irritation of the stomach." Peace to the ashes of the patient! One questions if the most arrant quack could have done much less.

Eighty years ago, if you had walked up Harley Street, you might have found the roadway blocked with carriages and a steady flow of patients in and out of the door whose plate bore the name of Mr. John St. John Long. He was an Irishman, and at this time was about thirty years of age. His medical education consisted of some months spent in coloring anatomical drawings for the professors of one of the London schools, from which knowledge he derived the invention of a liniment, which cured gout, rheumatism, palsy and consumption. It also distinguished between healthy and diseased tissues. He was accustomed to rub this preparation on the chest or on the back, and, if the patient were sound, no result occurred. In the presence of disease, however, an issue was formed, which was the sign of the disease making its way out. The issue he covered with cabbage leaves, and when the sore healed up the disease was cured. He also condescended to use inhalations which were taken by the patient from a large wooden box like a piano case; into holes in the sides of this box were fixed pipes; some mixture was burned inside the box, and the patients sat around and choked themselves with the smoke. His most successful business was not to treat the sick, but to treat the well. Having fixed upon a healthy person, whose cure would involve to him no risk, he needed only to look fixedly a few times at the victim before the latter naturally began to feel the workings of disease. A course of treatment with a good prognosis in such a patient was naturally fol-

lowed pretty frequently by good results. An eye-witness states that Long's bank book in 1830, during twelve months, showed deposits of £13,400. Socially, Long was very popular, especially with womankind. He was a good horseman, hunted regularly and was a confirmed bachelor. It must be admitted in his favour that scandal never blew its breath upon him. His Waterloo came in 1831, when his famous issue, on the back of a young Irishwoman, who was in comparatively good health, brought about gangrene, and Benjamin Brodie being finally called in, found her moribund. The autopsy report for the coroner reads a little peculiarly, although it has nothing to do with the salient features of the case:— "The lung had in its superior part, an adhesion connected with a cicatrix which had arisen from an old attack of bronchitis. The lungs appeared of a dark greenish-blue exteriorly, and of a port wine hue interiorly." When one thinks of post-mortems, one seems to recall having seen that appearance before. As usual, the medical experts were very contradictory. The judge showed strong bias towards the prisoner, but the jury brought in a verdict of manslaughter. Some of the evidence in favour of the prisoner's character is almost amusing. One lady had been cured of consumption by him, because before she had been rubbed she had had a cough, and after it the cough left her. One gentleman had had gout for twelve years and had attacks every four to twelve weeks. Long had cured him, for now he had had no attack for five weeks. The Marchioness of Ormond stated on oath that she knew the victim's back was rubbed with the fluid she and her daughters used. A cruel lawyer made her admit that she neither saw the back rubbed nor yet the fluid taken from the bottle. Sir Francis Brodie had asked Long if his lotion could give the Marquis of Anglesey a new leg in place of the one that that gallant soldier had lost at Waterloo. Long thought he could; the liniment was applied and succeeded in producing a big toe. But to return to the case, Long blamed the victim's death upon Brodie, who, he said, had killed her by a saline draught, which contained twenty grains of potassium carbonate, and one drop of tincture opii. The good Benjamin himself evidently was a little homeopathic in those days. Long was sentenced to £250 fine and to be imprisoned until it was paid. It was paid at once, and so he lived to fight another day and killed an old lady a few months later. In the case of the righteous man, his works follow him, but Long followed his works at the age of thirty-seven, of consumption, which he declined to have treated by his own methods. A costly monument holds him down in Kensal Green cemetery.

The most finished quack that ever lived in modern times was that man whose name is almost a household word in eighteenth century history,

Count Cagliostro. Probably no man ever succeeded in "doing the world so consistently, so continuously and so thoroughly." Fiction has dealt with him again and again. Alexander Dumas, in "Joseph Balsamo," has depicted him. He appears in succession in several of the later works of the Three Musketeers series, and even sober Thomas Carlyle has counted him worthy of note in the "Diamond Necklace." His medical education we can quickly dispose of, for he had none whatever. He was a Sicilian named Balsamo, and from his childhood was a thief and when he became sufficiently old he forged. With another youth of the same kidney he travelled through Greece, Egypt and Asia Minor, giving exhibitions of magic. Pope Clement XIII favoured him, as did many great potentates later. He married an Italian, and by 1771 they had made Barcelona, Madrid and Lisbon too hot to hold them, and came to England. England did not prove sufficiently easy, and the police were rather troublesome, so our friend Joseph appeared in Paris as the Marquis de Balsamo. Here he rejuvenated the aged, concocted poison, made gold, softened marble, improved beauty, made pearls and diamonds grow larger, and made also the philosopher's stone. Six years later, he was back to England, where he was imprisoned, but on his release he once more played the great lord. In 1777, he was made a Free Mason, and the Free Masons he certainly "worked" to his heart's content. It was thought that the subsequent splendor in which he often lived was financed by that long-suffering Order. One can judge to what an extent he fooled people when one realizes that in Courland the people wished to dethrone the reigning Duke and put Cagliostro in his place. I cannot find what streak of modesty prevented his accepting this offer. The Russian Empress Catherine II looked favorably upon him, but he had some very bad luck in Russia, for he successively failed to cure blindness, baldness and deafness. Calling himself a colonel in the Spanish army the Count did not succeed in hoodwinking the Spanish ambassador, and betook himself to Warsaw, thence to Strassburg, and finally he caught his biggest fish, Cardinal de Rohan, who was victimized for many million francs. In 1785, he was once more in Paris, and although extremely unpopular with the Faculty of Medicine, he had the rest of the city beneath his feet. Rumour says two medical students played a trick upon him at the instigation of some of their seniors. One of them described a very strange set of symptoms, but, unfortunately, did not take care to use the language of the laity. Cagliostro speaking to his companion said, "I will cure your friend in sixteen days; I will keep him isolated and in that time I will give him sixteen ounces of food in sixteen separate meals." This being rather more than he had bargained for, the student asked for the name of his disease; Cagliostro wrote on a piece of paper, "Superabundance of

hile in a gentleman of the Faculty." About this time came the international affair of the Diamond Necklace, and although one may read a good deal about it, it is hard to tell who stole the Diamond Necklace from whom? At any rate, the King excused the Count from further residence in Paris, and the Count excused himself from paying his rent. He offered to light the town of London by sea water, which he could render inflammable as oil, but that cock would not fight, and in 1787 he left London for the last time, on this occasion forgetting his wife, who immediately made public his entire career. In spite of this they were again reconciled and both fell into the hands of the Inquisition in 1789. One night Cagliostro was taken to the fortress of San Leo in the Duchy of Urbino, at which moment he disappears absolutely from human ken. One must admit that he did things stylishly. He called himself Grand Kophta of Egyptian Masonry, inventor of the Elixir of Life, the Elixir of Youth, of the Wine of Egypt (active principle cantharides), inventor of the Pentagon, which regenerated man and restored him to his primal innocence, and finally the Raiser of the Dead.

A contemporary of Cagliostro in England was one Graham, who became the rage of his time in London; he built at an expense of £10,000 a Temple of Health, which was lavishly decorated, and in which orchestras dispensed music and Graham dispensed salve. A well-built damsel personated the Goddess of Health, and it is said that Emma Hamilton, of Nelson notoriety, at one time filled this high position. The proprietor delivered a lecture, at the end of which the audience got a mild electric shock transmitted from their chairs. From all one can learn, I am afraid that under the laws of to-day Graham's Temple of Health would probably come under police notice.

One sees how difficult it is to draw the line between quackery and ordinary professional ignorance if one goes back to the time of Queen Anne, when medical works of the time would suggest the use of medicines made from "live hog lice," "new gathered earth worms," "sea-horse tooth rasped," and so on, or when a black powder was used for smallpox, which black powder consisted of the final remains of thirty or forty live toads burned in a new pot. In one place I find that this remedy is ordered to be taken in doses of half a dram, and the author states, "It is a certain help for such as are ready to die." At this time, too, epilepsy was sometimes treated by a powder made of dried ravens' flesh, dried viper and cinnamon. At the same time, of course, one must remember that even then the Jesuits' bark, as quinine was called, was used for the ague, and the standard remedies of bleeding and purging did bring about oftener good effects than bad; but when the Royal College of Physicians was almost ready to celebrate its two hundredth anniversary, and the

great Radcliffe, Sloane (the founder of the British Museum), and Mead walked the streets of London, yet their good mistress, Queen Anne, still practiced touching for the King's evil, as scrofula was then called. The Royal touch was supposed to cure, but one notes that after the touching, the sick cases were given into the hands of the physicians and the well cases did not need it, so that perhaps there was some excuse for the people's belief in that peculiarly sovereign remedy. It appears that everyone so touched was presented with a medal, and one suspects from contemporary evidence that patients were occasionally detected coming to the royal presence for a second or third time. Queen Anne, however, does not seem to have had a very exact eye for a real physician, for she knighted one William Reed, an oculist, for his great services in curing a great number of sailors and soldiers. This same Reed, who, when he became very prosperous, had Lady Reed attend some of his patients, appears to have been an utter impostor. His life shows how far, in Dr. Johnson's words, "impudence will carry ignorance." It is said that he could not read; he began his life as a tailor and later became an itinerant quack. He advertised most consistently, and published, in 1706, a book, which, as he could not write, must have been written for him. When he died, his widow, "obedient to the heavenly will," kept on the business in the Strand. Shortly before this, one named Joshua Ward, of a good family, had attained a wonderful degree of popularity by the efficacy of his famous drops and pills. His drops and his pills, the latter in three varieties, blue, red and purple, contained antimony and arsenic. Notwithstanding the unlawful trend of his practice, he built a hospital in Pimlico for the poor, and also a kind of dispensary in Threadneedle Street. In speaking of dispensaries, it may be recollected that in the last decade of the seventeenth century the College of Physicians made a strong fight against the apothecaries. All medical men were at this time physicians, surgeons and apothecaries, and the last named thrived so well that the College set up a dispensary to sell medicines to the poor at cost price. It may be recalled that Sir Samuel Garth, in 1699, wrote a very long and dreary poem, entitled "The Dispensary," in connection with this movement. You will probably remember that Garth was responsible for the proper burial of the poet Dryden, which took place from the Royal College of Physicians to Westminster Abbey. Had it not been for the College and its authorities, the poet would have been buried in utter obscurity.

The world does not change. I have before me an extract from the "patter" of a quack in 1700. Here are the same sounding names that mean nothing; here is the same disquisition upon the various forms of disease that one remedy can influence; here is the same outward applica-

tion which will not lose its virtue by time; here is the same high price for the same valueless commodity that one can find too often in our own drug-stores to-day, and doubtless the same fool to listen to it and use it then as now.

LeSage has described in *Gil Blas* the experiences of his hero, who, at a tender age, became assistant to a physician of Valladolid. Dr. Sangrado I suspect to be a fairly true picture of many physicians of his time in Spain, if not elsewhere. He wore long flowing robes, and all the medicine that *Gil Blas* learned was that bleeding and drinking hot water were sovereign remedies for anything. "In my first few weeks' apprenticeship, I was deputed to take down the names of those upon whom the doctor was to call. It was a kind of mortuary register, wherein I, like a booking agent, would reserve places for those who were about to travel to the next world. After six weeks, when I was thinking of running away, I was promoted to visit the doctor's poorer patients. I had but indifferent success, and once fell to blows with another practitioner, who was retained on the case while I was dismissed. My devoted tutor never ceased to extol the virtues of water as a beverage, and one day when I returned home unmistakably drunk on the proceeds of my half day's practice, I had, by reason of the wine I had consumed, a great thirst. My master would never be done commending me for the huge draughts of water I took, and when I said I would exchange a barrel of wine for a pint of water he applauded and rewarded me. I decided I would repeat the process every day, so that my unnaturally stimulated thirst for water might not abate.

"Then came the plague and the smallpox. Never a day but Dr. Sangrado and I saw eight or ten patients each. Rarely did we see our patients thrice. On the first occasion we treated them; on the second we learned that they had just been buried, or were at that moment in the agony. Devil take it, such a city for funerals. In a few weeks we had caused as many deaths as the siege of Troy, and I was as yet but a young practitioner comparatively unaccustomed to murder. Almost every day our house was visited by a father from whom we had taken a son, or an uncle seeking revenge for a nephew. Not many husbands came to complain of the loss of wives."

All this makes one think that the Harley Street of the nether world will be a long one!

I have spoken of a few of the pirates of medicine, and though the ships that carry the black flag are at times prosperous, the keels that carry the regular flag win ultimately. We are not all line-of-battle ships, but a little one gun sloop with the ensign is more honourable than a 40-gun frigate that is a buccaneer.

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## THE CANADIAN MEDICAL ASSOCIATION AT WINNIPEG.

Elsewhere in this number will be found information relative to the meeting of the Canadian Medical Association at Winnipeg on August the 23rd, 24th and 25th. The meeting promises to be a very successful one, for the committees have been very active in their exertions, and are sparing no pains to further it. The meeting of the British Association will immediately succeed it, and while comparatively few are members of both, it may be borne in mind that local associate members are every year welcomed into the ranks of the latter organization. More than usual interest belongs to Winnipeg as the place at which the meeting is to be held; its rapid growth, its great importance in the financial world, its position at the threshold of great Western Canada, and its natural characteristics should prove an attraction to every member of the Canadian Medical Association. The fact that exceptionally cheap travelling rates can be obtained, not only to Winnipeg, but even to the Coast, and to the Seattle exhibition, should determine many in favour of attending the meeting. We predict that medically and otherwise, a most profitable journey can be made to Winnipeg for this meeting.

## SANE TREATMENT OF THE INSANE.

Every practitioner of experience has found how limited is his knowledge in diagnosis, treatment or in prophylaxis of the cases of mental disease which are grouped under such headings as hysteria, obsessions, phobias, and so on; and whether these have been considered as forms of

insanity or not, he has perhaps found that the subsequent history of the case has proved that, if curable, it was not cured. Nor has the practitioner in his mental armamentarium any weapon upon which he can place reliance.

The training requisite for a physician before he is really fitted to deal with such cases successfully, can be acquired, but its demands are so great that we cannot hope that many physicians are willing to undergo it. The bright side of the picture is shown, however, by the fact that clinics do exist in which these forms of disease are rationally dealt with; such in this country are the Psychiatric Department in the General Hospital, Toronto, and the elaborate institution which is being added to the Johns Hopkins' Hospital at Baltimore. In this issue, Dr. Ernest Jones, of Toronto, gives a brief outline of the psychological methods that underlie psycho-analysis; this method aims at putting the cure in a sense in the patient's own power, or at least in making him work out that degree of salvation which he is to find. The physician by constant and close analysis of the patient's ideas seeks to lead him in directions of mental rectitude. On the face of it, it seems a more rational procedure than that of suggestion, which covers up rather than removes the errant ideas. The reader will gather from this paper some idea of the untiring patience and expense of time involved; for example, a case is cited upon which an hour daily for three years was spent. The stake played for is large, and reckoned even monetarily, the outlay is small compared with the loss to the world of the value of a human mind, plus the cost of hospital-refuge for the long remnant of a lifetime. It seems undoubted that the spread of sane and reasonable methods in the treatment of "border-line cases" will come about only by the multiplication of institutions and the education thereby of a constantly increasing number of physicians qualified to attempt the mending of the most intricate mechanism in the animal world.

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#### CENTRALIZATION IN PUBLIC HEALTH.

The provincial health officer of Ontario contributes this month a paper dealing with the need of control or oversight of local boards of health by a central power. Possibly Dr. Hodgetts' position prevented him from speaking as strongly as he might in favour of control such as he exercises in Ontario; it is of our own knowledge that we say that Dr. Hodgetts has at times seen strong cause to exercise his authority over local boards; a striking example was the scandalous falsification of small-pox returns last year in some counties of Eastern Ontario. On a larger scale, who that is interested in hygiene can fail to remember the

fact that the United States Government had to take by the throat the State of California, when the latter not only failed to deal with plague, but openly denied the existence of the cases?

We have in these columns frequently advocated the principle that many questions of health, such as the tuberculosis question, are of such immense importance that they demand national handling. Why should we not have a Minister of Public Health? There are ministers at Ottawa, whose departments in all their widest relations do not concern one-half as great an expenditure as is involved in the questions that would be governed by such a minister. How many lives, how much money, think you, could be saved to Canada if, for the coming month of August, pure milk could be secured to the cities?

We are far from saying that the institution of a federal control of health affairs would begin the millenium. Such a bureau would have numberless difficulties, would make endless mistakes, without doubt, but it would be in the hands of men whose business these things are; as it is, our health officers are physicians with other interests, and their civil relationships are such that at times they dare not exert their power upon the individual for the sake of the community. Yet this is one thing that is required; the interest of the one must yield to that of the many; and if the one object, the central department has as a duty to see that the one yields all the same. This is apart from the question that medical health officers are often not enthusiastic hygienists, and very often are not trained ones.

But one might multiply arguments in favour of this view. The main reason in Canada why a central department of public health has never been formed is that people are too busy doing other things; and strange as it may seem, in the mass we are much more careful to prevent attacks upon our pockets than upon our health.

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### Reviews and Notices of Books.

**ELEMENTARY PRACTICAL TREATISE ON DISEASES OF THE PHARYNX AND LARYNX.** By DR. E. J. MOURE, Surgeon in charge of the Nose, Ear and Throat Department of the Faculty of Medicine, Bordeaux. Translated and adapted by J. MALCOLM FARQUHARSON, M.B., F.R.C.P., Edin., Lecturer on Diseases of the Nose, Ear and Throat in the School of Medicine of the Royal Colleges, Edinburgh; Surgeon, Ear and Throat Department, Royal Infirmary; and Senior Surgeon to the Ear, Nose and Throat Department of the Eye and Ear Infirmary, Edinburgh. With 210 illustrations. Rebman and Company, 1123 Broadway, New York. Price \$4.00.

The author in his preface states that he has endeavoured above all to write a book complete enough to furnish the general practitioner with useful information regarding those affections with respect to which he is not always conversant. In this, it would seem, he has been successful, and has furnished a book valuable to both the general practitioner and specialist. The book, which is divided into two parts, consists of 403 pages, and contains very excellent plain and coloured plates helping very materially to an understanding of the subjects discussed. From the thoroughness displayed it seems almost a pity that the naso-pharynx has not been included.

Part I deals with the anatomy and physiology of the pharyngeal cavity, Chapter I being devoted to the anatomy and examination of the pharynx, Chapter II, to the pathology of the pharynx, the rarer and more common diseases being discussed impartially with their appropriate treatment. After a comprehensive description of diseases of the tonsils, the subject of tuberculous angina is taken up, acute miliary tuberculosis of the pharynx being described, nothing, however, being said of its rarity. This the author divides into (a) ulcerative and (b) vegetative forms, the latter being of a more chronic nature; he is of the opinion that it would appear to be intermediate between acute ulcerous and the lupoid variety. Under the chronic forms he places (a) The œdematous type, occurring in the tissues of the uvula, soft palate, epiglottis and sometimes the posterior pharyngeal wall. (b) Lupus. (c) Hypertrophic form. Syphilis, primary, secondary and tertiary, is discussed at length, the author then reverting to the tonsils, their hypertrophy receiving his attention. This he divides into three varieties: 1. The pedunculated. 2. The hooded. 3. The multilobular.

The treatment (a) medical; (b) surgical; tonsillotome, ignipuncture, the snare, cold or hot, and marcellément.

Tumours of the tonsils he divides into benign, malignant or mixed.

The benign including pseudo-polypoidal hypertrophy (a term with which we are unfamiliar), fibromata, papillomata and cysts.

The malignant are the sarcomata, scirrhous encephaloid and epitheliomata.

Chapter III is devoted to the pathology of the lingual tonsil, a subject which is perhaps deserving of more attention than is generally accorded it though its importance may have been exaggerated in some quarters.

Chapter IV consists of a discussion on the pathology of the soft palate. In speaking of paralysis of the soft palate, he draws attention to the fact that besides diphtheria, acute diffuse non-diphtheritic angina and peri-

tonsillar abscess may be causes, but omits to mention as another cause—over-distension or stretching by the finger clumsily introduced into the naso-pharyngeal cavity in the process of examination or in the removal of adenoids, especially in very young children.

In Chapter V is an interesting section on retro-pharyngeal abscess with four excellent coloured diagrams. Tumours of the pharynx and constriction of the inferior pharynx conclude Part I.

Part II deals with the larynx. Chapter I consists of a description of the examination of the larynx and trachea, including the method of Killian, with illustrations, superior bronchoscopy and lastly stroboscopy. The remaining chapters are devoted to diseases and traumatism of the larynx. Besides the acute and chronic catarrhs, syphilitic laryngitis is fully considered with appropriate treatment.

Tuberculosis of the larynx in its various forms comes in for a lengthy and comprehensive discussion, occupying 36 pages.

Though the author furnishes us with nothing specially new in the treatment of laryngeal tuberculosis, he covers the ground pretty well up to date from a general and local (including surgical) standpoint, but in this tends rather to conservatism and rightly, we think.

A section on leprosy is introduced, but this in our opinion would be more a matter of interest to the general practitioner than likely to require treatment at his hands.

An excellent section on neuro-muscular affections of the larynx with illustrations occupies 49 pages.

Tumours of the larynx with their treatment, including laryngectomy and foreign bodies in the larynx with a section on laryngitis associated with eruptive fevers brings this complete and interesting volume to a close. The book contains a large amount of information, is well printed and illustrated and should fulfil the object for which it is intended.

W. H. J.

**AID TO FORENSIC MEDICINE AND TOXICOLOGY.** By WILLIAM MURRELL, M.D., F.R.C.P. Baillière, Tindall and Cox, London, 1909.

This small book contains an excellent synopsis of the subjects usually found in text-books of forensic medicine and toxicology, but as in the great majority of medico-legal books so here no space is given to civil cases arising from accidents. It is desirable that writers of text-books of this nature should deal with wounds and injuries in their non-criminal aspect.

D. D. MACT.

VACCINE AND SERUM THERAPY. By EDWIN HENRY SCHORER, B.S., M.D., Assistant Professor of Parasitology and Hygiene, University of Missouri. Illustrated. Publishers: C. V. Mosby and Co., St. Louis, 1909. \$2.00.

This book of one hundred and thirty pages gives a brief summary of the theories and practical application of vaccine and serum therapy. The greater portion of the book is devoted to opsonins, and the treatment by vaccines, as indicated by Wright and Douglas.

A short summary of the various theories of immunity is given, but this is almost too brief to be of any value. The technique for the determination of the opsonic index, and the methods in vogue for the inoculation of vaccines are well described, and give the reader a good idea of the difficulties in carrying out this treatment under scientific principles. The author admits that vaccine therapy may be carried on without the determination of the opsonic index in each individual case. A discussion of the nature of opsonins is also given, but we find that there is considerable repetition throughout the volume. Besides this, the author gives a brief review of the use of different antitoxic and antibacterial sera.

The book forms a good introductory study for those wishing to gain insight into the recent work on immunity, and more particularly opsonins.

O. K.

A THEORY REGARDING THE ORIGIN OF CANCER. By C. E. GREEN. Second edition. William Green & Sons, Edinburgh and London.

The book represents a most delightful jumble of facts, hearsay and opinion. As facts, the "mortality figures in some trades and professions, shown by the Registrar-General's returns," are cited. Hearsay evidence of agriculturists, respecting malignant tumours in plants, of cancer statistics among the aborigines, and of the blastomycotic nature of Russel's fuchsin bodies, etc., form much of the uncertain framework upon which the general theory is built.

The evidence and line of thought brought forward by the author to establish his contention often appear childish. The author holds to the parasitic theory, but believes that sulphuric acid plays an important role in altering conditions in the animal cell which favour the growth of the parasites. For this reason our chimneys (soot contains ammonium sulphate), beer (containing sulphite of lime and sulphurous acid), harness polish, and a great many substances of our domestic environment are blamed for the initial changes inducing cancer. The London air, too, containing "enormous" quantities of acid is conducive to cancer.

The reasoning is frequently difficult to follow. Outside of dealing in generalities the author appears to have no knowledge of cancerous growths.

O. K.

**THE PSYCHOLOGY OF DEMENTIA PRAECOX.** By DR. C. G. JUNG. Privatdocent in Psychiatry, University of Zürich. Authorized translation with an introduction by Frederick Peterson, M.D., Professor of Psychiatry, Columbia University, New York; and A. A. Brill, Ph.B., M.D., Assistant in Psychiatry, Columbia University, New York. Nervous and Mental Disease, Monograph Series, No. 3. Journal of Nervous and Mental Disease Publishing Co., 1909. \$2.00.

This monograph on dementia praecox maintains the high standard of excellence set by its two predecessors; it is a work of 153 pages with an introduction by the translators. It is a study of the individual psychology and the influence of the individual on the picture of the mental disease. It shows how the complex still has its influence and the repressed wishes of life tend to become actualized. The chapter entitled "Dementia Praecox as a Paradigm," is a careful analysis of the association processes in a typical case and is most interesting and suggestive—showing the author's method of studying such cases. The translation is well worthy of the original.

C. K. R.

**A POCKET FORMULARY.** By E. QUIN THORNTON, M.D., Associate Professor of Materia Medica, Jefferson Medical College, Philadelphia. Lea & Febiger, 1909.

The appearance of the 9th edition of this work would seem to indicate that it is appreciated by at least a fair proportion of medical practitioners. As a collection of prescriptions it undoubtedly is excellent. The arrangement is good, and the addition of "Indications for Use" adds much to its value. But while such a work may be of service to a certain number, it is impossible to recommend it to the average young man who is just beginning the practice of medicine. The aim of the modern medical school is to teach the student to think for himself, and in no branch is it more necessary that he should do so intelligently than in the drug treatment of disease. This work, excellent though it may be in some respects, cannot do other than foster a disinclination for the thorough investigation necessary for intelligent prescribing.

J. W. S.

**RATIONAL IMMUNIZATION IN THE TREATMENT OF PULMONARY TUBERCULOSIS AND OTHER DISEASES.** By E. C. HORT, B.A., B.Sc., M.R.C.P. William Wood & Co., New York, 1909.

In this book the author discusses the various forces exerted by the body against bacterial invasion. The author attacks the subject of immunity in tuberculosis from a new point of view, which, although not entirely original with him, is original as far as the practical application of the subject is concerned. Although the author suggests a practical and theoretical application of diverse immune forces, he gives little or no clue how these are to be carried out.

The author finds the opsonic index unreliable, and points out that the estimation of the immune substances in the body, as regards a certain infection, cannot be gauged by the antibacterial bodies alone, but that consideration must be given to autolytic and other cell enzymes, liberated during an infection. The author, too, does not appear enthusiastic in the treatment with bacterial vaccines, but believes that well regulated auto-inoculations are of more value. How such auto-inoculations are to be regulated, he does not explain. The last chapter of the book on autolysis and anti-autolytic defence is a very good summary of the subject.

O. K.

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### Medical News.

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We reprint from the *Quebec Daily Telegraph*, of July 14th, 1909, a clipping reinserted from their columns of 1859. Dr. Hall's name is familiar to the medical men of the older generation:—

Dr. Archibald Hall was elected at this time fifty years ago to be the president of the College of Physicians and Surgeons of Lower Canada. Dr. Hall, who was one of the most prominent members of the medical profession in Canada, and who was a licentiate of the Royal College of Surgeons of Edinburgh, was born in Montreal in 1812, and educated chiefly at the Royal Grammar School of that city. He was indentured to the late Dr. W. Robertson, and studied his profession first at McGill University and then at Edinburgh. As a collateral branch of medical study, Dr. Hall devoted himself very much to the natural sciences, attaching himself particularly to botany, zoology and meteorology. Bringing with him from Edinburgh a fine collection of the plants indigenous to the neighbourhood of that city, he began, soon after his return, the foundation of an herbarium of the plants growing about Montreal, and sent home to his Alma Mater, in the course of a few years, a very large and carefully prepared collection. Zoology appears to have been, however, his chief delight, and in 1839 he had received the silver medal of the Natural History Society of Montreal as the successful competitor for a prize offered by that society for the best essay "On the Zoology of the

District of Montreal." The work is a voluminous one, but in consequence of the limited time allowed for its preparation, its contents were limited to birds and mammals. So complete is it that only one or two other varieties could now be added to the list, and those of considerable rarity. Some twenty years later the essay was printed in the *Canadian Naturalist*, its publication running through several years of that useful and now rare publication. For some years Dr. Hall was the editor of *The British American Journal of Medical and Physical Science*, which was in existence from 1845 to 1852, and from 1860 to 1862. In 1842, Dr. Hall had written "Letters on Medical Education addressed to the members of the Provincial Legislature of Canada," and in 1860 appeared his "Biographical sketch of the late A. F. Holmes, M.D., LL.D., including a history of the medical department of McGill College." Not only did he hold several professorships in the Medical Faculty of McGill, but he was also for sixteen years one of the attending physicians at the Montreal General Hospital, and was also for twelve years physician to the Ladies' Benevolent Society and to the old House of Industry.

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#### MANITOBA MEDICAL ASSOCIATION.

At the annual meeting of this Association held June 22nd and 23rd, the following officers were elected for the ensuing year:—

President—Dr. W. Harvey Smith, Winnipeg.

First Vice-President—Dr. H. E. Hicks, Griswold.

Second Vice-President—Dr. J. S. Matheson, Brandon.

Honorary Secretary—Dr. J. Halpenny, Winnipeg.

Honorary Treasurer—Dr. Robt. F. Rorke, Winnipeg.

Executive Committee—Dr. H. A. Wright, Oak Lake; Dr. F. S. Keele, Portage la Prairie; Dr. D. G. Ross, Selkirk; Dr. H. M. Speechly, Pilot Mound; Dr. W. J. Harrington, Dauphin.

Auditors—Dr. R. J. Blanchard, Winnipeg; Dr. A. W. Moody, Winnipeg.

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#### CANADIAN MEDICAL ASSOCIATION, 42nd ANNUAL MEETING

WINNIPEG, AUGUST 23RD, 24TH AND 25TH, 1909.

The Standard Certificate Plan prevails in every province, no one requiring any certificate from the General Secretary. This means that all delegates on purchasing single first class tickets to Winnipeg for themselves, their wives and their daughters, should ask for, and get at the same time, a Standard Convention Certificate from the Ticket Agent for each, paying single fare, plus 25c. These should be immediately

placed in the hands of Dr. C. H. Vrooman, Winnipeg, at the Transportation Office. When signed by him they will entitle the holder thereof to reduced transportation on return journey. East of Port Arthur, if fifty are present with certificates, return will be free; as far west as Laggan and Coleman, single fare if a hundred are present with certificates. British Columbia points single fare.

*Railways and Steamboats.*—The Canadian Pacific Railway, the Grand Trunk Railway, the Intercolonial Railway, the Canadian Northern Railway, the Richelieu and Ontario Navigation Company, the Northern Navigation Company and the C.P.R. Steamboat Service are included in the transportation arrangements. On upper lakes \$4.25 additional each way.

*Tickets Going and Returning via Chicago.*—Arrangements have been made for tickets routed via Chicago and Northwestern Railway for ten days' stop-over on return journey at Rochester, Minn., on payment of \$1.75 extra—fare St. Paul to Rochester. Coupons of tickets reading, St. Paul to Chicago will then be honoured from Rochester to Chicago.

Comparative schedule of transportation rates to Winnipeg:—

Windsor . . . . .	\$26 05
Chatham . . . . .	26 05
London . . . . .	26 05
St. Thomas . . . . .	26 05
Woodstock . . . . .	26 05
Galt . . . . .	26 05
Toronto . . . . .	26 05
Guelph . . . . .	26 05
Hamilton . . . . .	26 05
Peterboro . . . . .	27 95
Ottawa . . . . .	32 60
Montreal . . . . .	36 00
Kingston . . . . .	30 95
Quebec . . . . .	40 00
St. John, N.B. . . . .	44 45
Halifax, N.S., via Digby . . . . .	47 95
Sydney, C.B. . . . .	52 95

*Dates of Sale of Tickets, Side Trips, Time Limits, Etc.*—Tickets will be on sale, Halifax to Fort William, August 14th to August 21st; British Columbia points, August 16th to 19th. Final return limit, September 25th. Eastern delegates may arrange side trips for lowest one way first-class fare for round trip to points in Manitoba, Alberta and Sask., and to points in B.C. (except B.C. coast points, when Alaska-

Yukon-Pacific Exposition will apply) from August 24th to September 25th.

*Place of Meeting in Winnipeg.*—General meetings will be held in the Sunday School of the Broadway Methodist Church; and the Sectional Meetings in the Science Building of the University of Manitoba. Clinics will be held in the Winnipeg General Hospital and in St. Boniface Hospital. Registration Offices, etc., exhibitions in tents at entrance to University Grounds.

*Hotel Accommodation.*—Delegates should apply immediately for hotel accommodation to the following hotels or to Dr. W. Rogers, Canadian Northern Building, Winnipeg.

Royal Alexandra Hotel—350 rooms, \$4.00 to \$10.00 a day—European plan only.

Empire Hotel—60 rooms, \$2.50 a day—American plan only.

Clarendon Hotel—130 rooms, \$2.00 to \$6.00 American, \$1.00 European.

Grange Hotel—22 rooms, \$2.00 to \$3.50—European only.

Mariaggi Hotel—80 rooms, \$2.00 to \$3.00—American only.

Leland Hotel—80 rooms, \$2.00 to \$3.00—American only.

Corona Hotel—60 rooms, \$2.50 American, \$1.50 European.

Strathcona Hotel—90 rooms, \$1.50 to \$2.50—American only.

Winnipeg Hotel—60 rooms, \$1.50 to \$2.00—American only.

Deer Lodge Hotel (one mile out of city)—25 rooms, \$1.00—European only.

*Membership.*—The fee for membership is \$5.00. Pay to treasurer, Dr. H. B. Small, Ottawa, at any time. New members should apply at meeting to General Secretary for membership blanks and instructions as to becoming members. The transportation arrangements apply to them as to members.

*The Social Side at Winnipeg.*—Visiting ladies will be entertained by Mrs. H. H. Chown at afternoon tea at St. Charles Country Club at 5 p.m. Monday, August 23rd. Mayor Evans will welcome the members of the Association at the evening meeting in the Royal Alexandra Hotel, Monday. Dr. Blanchard will deliver the Presidential Address. Members and ladies will be entertained at a conversazione at 9 p.m. in the Royal Alexandra. On Tuesday, August 24th, there will be a Garden Party at 5 p.m. Wednesday at 5 p.m. automobile ride for visiting ladies. At 8.30 p.m. there will be a Smoker in the Royal Alexandra, preceded by an address.

*Additional Information.*—Additional information of a local character may be obtained from Dr. Harvey Smith, 26 Canada Life Building, Winnipeg. Any general information from the General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto.

*Canadian Medical Protective Association.*—The annual meeting of the Canadian Medical Protective Association will be held in the afternoon of Wednesday, when the President, Dr. R. W. Powell, Ottawa, will submit his annual report.

*Provisional Programme.*—Presidential Address—Dr. R. J. Blanchard, Winnipeg.

Address in Medicine—Prof. J. George Adami, Montreal.

Address in Surgery—Dr. James Bell, Montreal.

General Meeting—Symposium on the Kidney.

Dr. John McCrae, Montreal; Dr. J. T. Fotheringham, Toronto; Prof. J. J. Mackenzie, Toronto; Dr. R. P. Campbell, Montreal; Dr. S. Cummings, Toronto; Dr. Walter McKeown, Toronto; Dr. Geo. E. Armstrong, Montreal.

*Medical Section*—

Title to be announced—Dr. R. G. Brett, Banff.

The Functions and Relations of the Ovary—Dr. A. T. Musson, Montreal.

Primary Anæmia—Dr. E. W. Montgomery, Winnipeg.

The Home Treatment of Pulmonary Tuberculosis—Dr. J. H. Elliott, Toronto.

Out-Patient Clinics for Tuberculous Poor—Dr. H. C. Parsons, Toronto.

Recent Methods for the Diagnosis of General Paresis—Dr. Charles Clarke, Toronto.

The Pathology of General Paralysis—Dr. Ernest Jones, Toronto.

Duodenal Ulcer—Dr. Charles F. Martin, Montreal.

Sources of Infection in Tuberculosis—Dr. Geo. D. Porter, Toronto.

A Report on the Results of Operations in Nine Cases of Cerebral Tumour—Dr. D. A. Shirres, Montreal.

Prairie Dietetics in Relation to Health and Disease—Dr. H. M. Speechly, Pilot Mound.

The Value of Preventive Medicine to the State—Dr. John Ferguson, Toronto.

Stokes-Adams Syndrome—Dr. John Macdonell, Winnipeg.

On some Neurological Subject—Dr. D. Campbell Meyers, Toronto.

The Occurrence of Adventitious Sounds in Normal Chests—Dr. R. D. Rudolf, Toronto.

Beri Beri—Dr. A. P. Proctor, Vancouver.

The Rights of our Children—Dr. C. J. C. O. Hastings, Toronto.

The Effects of Drugs on Bronchial Secretion—Dr. V. E. Henderson, Toronto.

- Dietetics—Dr. E. S. Moorhead, Winnipeg.
- Serum Therapy—Dr. Geo. W. Ross, Toronto.
- Vaccine Therapy—Dr. Campbell Laidlaw, Toronto.
- Pericarditis—Dr. J. S. Graham, Toronto.
- The Relation of General Hospitals to the Community—Dr. R. W. Bruce Smith, Toronto.
- Hospitals—Dr. Charles O'Reilly, Toronto.
- Title to be announced—Dr. John A. Amyot, Toronto.
- Suprarenal Glands—Dr. Swale Vincent, Winnipeg.
- Movable Hypertrophied Spleen, with Report of Case—Dr. Paul, Fort William.
- The Thyroid Gland—Dr. John Hunter, Toronto.
- Title to be announced—Dr. James Third, Kingston.
- Title to be announced—Dr. Graham Chambers, Toronto.
- The Stomach—Dr. Hunter, Winnipeg.
- Title to be announced—Dr. Clements, Toronto.
- What is Certified Milk?—How may it be secured for our patients?—Dr. H. T. Machell, Toronto.
- Surgical Section—*
- A Generation of Change—Dr. John Stewart, Halifax.
- The Removal of Sigmoid Tumours—Dr. Wm. J. Mayo, Rochester, Minn.
- Hydatids, with an Analysis of 103 cases treated in the Winnipeg General Hospital—Dr. Brandson, Winnipeg.
- Stiff and Painful Shoulders—Dr. H. P. H. Galloway, Winnipeg.
- General Peritonitis following Rupture of the Appendix—Dr. T. Shaw Webster, Toronto.
- Some Practical Points in the Treatment of Appendicitis—Dr. Cecil A. Parr, Morden, Man.
- Shall we Remove the Appendix when the Abdomen is Opened for Other Reasons?—Dr. A. Laphorn Smith, Montreal.
- The Use of Commercial Gasoline in the Surgery of Traumatism—Dr. B. L. Riordan, Toronto.
- Rectal Anæsthesia—Dr. W. Webster, Winnipeg.
- Methods of Inducing Local Anæsthesia—Dr. T. E. Lehman, Winnipeg.
- Exhibition of Chloroform Apparatus, with Observations—Prof. N. H. Alcock, London, Eng.
- Anæsthesia—Dr. Samuel Johnston, Toronto.
- Title to be announced—Dr. Henry Howitt, Guelph, Ont.
- Lantern Demonstration of Fractures of the Femur—Dr. J. Alex. Hutchison, Montreal.

- Fractures and their Treatment—Dr. F. N. G. Starr, Toronto.  
 Fractures—Dr. Clarence Starr, Toronto.  
 Decapsulation of the Kidneys in Puerperal Eclampsia—Dr. Andrew Croll, Saskatoon.  
 Gall Stones—Dr. N. J. McLean, Winnipeg.  
 Title to be announced—Dr. John Gunn, Winnipeg.  
 Title to be announced—Dr. Hadley Williams, London, Ont.  
 Foreign Body in the Bronchus—Dr. Ingersoll Olmsted, Hamilton.  
 Experiences in Intestinal Surgery—Dr. J. F. W. Ross, Toronto.  
 Prostatic Obstruction—Dr. C. F. Gordon, Vancouver.  
 Title to be announced—Dr. Geo. A. Bingham, Toronto.  
 Title to be announced—Dr. H. A. Bruce, Toronto.  
 Title to be announced—Dr. A. Primrose, Toronto.  
 Title to be announced—Dr. F. LeM. Grasset, Toronto.  
 Title to be announced—Dr. E. B. O'Reilly, Hamilton.
- Obstetrics and Gynecology Section—*  
 Address—Dr. Adam H. Wright, Toronto.  
 Immediate *versus* Delayed Operation in Ruptured Tubal Pregnancy—  
 Dr. R. M. Simpson, Winnipeg.  
 Pathology of Uterine Hæmorrhage—Dr. F. Burnham, Winnipeg.  
 No More Craniotomies, or Accouchements Forcés—Dr. A. Laphorn Smith, Montreal.  
 The Advantage of Vaginal Cæsarean Section where it is necessary to Empty the Uterus Rapidly, with Report of Cases—Dr. Cleland, Toronto.  
 Report of a Case of Abdominal Pregnancy Past Term; Operation; Recovery—Dr. W. J. Hunter Emory, Toronto.
- Eye, Ear, Nose and Throat Section—*  
 Address: Progress of Ophthalmology—Dr. R. A. Reeve, Toronto.  
 Address—Progress of Oto-Laryngology—Dr. Prowse, Winnipeg.  
 The Condition under which the Lachrymal Sac should be Excised, and the Best Method of its Performance—Dr. Good, Winnipeg.  
 Mastoid Disease—Dr. D. J. Gibb Wishart, Toronto.  
 Title to be announced—Dr. G. R. McDonagh, Toronto.  
 Title to be announced—Dr. Hunt, Fort William.  
 Retinal Affections of Renal Origin—Dr. Crosby, Toronto.  
 On the Injection of Serum in Ocular Trouble, with Report of Cases—  
 Dr. Beaupre, Quebec.  
 Demonstration in Bronchoscopy—Dr. Chas. M. Stewart, Toronto.  
 Removal of Tonsils and Adenoids—Dr. Chas. M. Stewart, Toronto.  
 Sarcoma of the Nose, with History of Some Cases—Dr. Price Brown, Toronto.

Some Observations on the Surgical Treatment of Chronic Purulent Otitis Media—Dr. C. C. McCullough, Fort William.

Snow Blindness—Dr. V. E. Latimer, Brandon, Man.

Treatment, Lachrymal Sac—Dr. W. M. Brown, Neustadt, Ont.

New Forceps for the Removal of the Anterior Capsule Lens—Dr. F. Tooke, Montreal.

Case Report: Tumour of the Optic Nerve, with Specimen—Dr. W. Harvey Smith, Winnipeg.

*Pathology—*

Demonstration of Spirochaete in Congenital and Acquired Syphilis—Dr. Fletcher McPhedran, Toronto.

Methods of Detection of Typhoid Carriers—Dr. Black Leslie, —  
Title to be announced—Dr. O. R. Mabee, Toronto.

Paratyphoid—Dr. McWeeney, Dublin.

The Bacteriological Factor of Hemorrhage in Pulmonary Tuberculosis—Dr. Caulfeild, Gravenhurst.

A Serum Diagnosis of Syphilis in Connection with Pulmonary Tuberculosis—Dr. Caulfeild, Gravenhurst.

The Hospital Laboratory, with Special Reference to Diagnosis in Surgical Cases—Dr. Wilson, Rochester, Minn.

Parasites—Dr. Todd, Montreal.

Title to be announced—Dr. Gordon Bell, Winnipeg.

*Papers from the Laboratories of the Royal Victoria Hospital, Montreal—*

(1) The Distribution of Fat in the Liver—Dr. J. McCrae, Dr. Oskar Klotz.

(2) The Von Pirquet Tuberculin Reaction—Dr. A. C. Rankin.

(3) On the Demonstration of the Glands of the Ciliary Body—Dr. F. T. Tooke.

(4) Some Cultural Features of the Bacillus Mucosus Capsulatus—Dr. W. L. Holman.

(5) Concerning Compensating Hyperplasia of the Intima—Dr. Oskar Klotz.

(6) The Value of Aesculin Media in the Diagnosis of Bacillus Coli—Dr. Oskar Klotz, Dr. A. C. Rankin.

(7) Cyst of the Wall of the Carotid Artery—Dr. A. Freedman.

N.B.—The reading of all papers will be strictly limited to fifteen minutes; discussions, five minutes. Abstracts of papers should be in by August 1st. Address same to Dr. Harvey Smith, Canada Life Building, Winnipeg. Intending delegates will confer a favour by kindly notifying either Dr. Smith or the General Secretary at once of their intention to be present.

The Committee on Pathology are arranging for a special demonstration of the methods employed in the examination of excreta, stomach contents, blood, etc.

A large collection of pathological specimens from Toronto, Montreal and Winnipeg will be on exhibition in connection with the Section on Pathology.

Surgical clinics are being arranged in connection with hydatids.

#### OFFICERS.

R. J. Blanchard, M.B., C.M., President; Dr. Geo. Elliott, 203 Beverley Street, Toronto, Secretary.

*Committee of Arrangements*—Dr. H. H. Chown, Winnipeg; Dr. W. Harvey Smith, Canada Life Building, Winnipeg; Dr. J. Halpenny, Assistant Secretary, McIntyre Block, Winnipeg.

*Committee on Pathology*—Dr. Gordon Bell, Chairman; Dr. S. Pierce, Secretary.

*Exhibit and Accommodation Committee*—Dr. J. G. Munroe, Chairman; Dr. J. E. Coulter, Secretary.

*Committee on Obstetrics and Gynæcology*—Dr. J. S. Gray, Chairman; Dr. McCalman, Secretary.

*Committee on Credentials*—Dr. S. Campbell, Chairman; Dr. R. W. Kenny, Secretary.

*Advertising and Publication Committee*—Dr. Hugh McHay, Chairman; Dr. Geo. Hughes, Secretary.

*Committee on Medicine*—Dr. J. R. Jones, Chairman; Dr. Chas. Hunter, Secretary.

*Committee on Surgery*—Dr. W. R. Nichols, Chairman; Dr. N. J. Maclean, Secretary.

*Committee on Transportation*—Dr. R. J. Blanchard, Chairman; Dr. C. H. Vrooman, Secretary.

*Committee on Ophthalmology and Otology*—Dr. S. W. Prowse, Chairman; Dr. T. Turnbull, Secretary.

*Committee on Entertainment*—Dr. Wm. Rogers, Chairman; Dr. C. C. Field, Secretary.

*Committee on Finance*—Dr. Brandson, Chairman; Dr. R. M. Simpson, Secretary.

# Retrospect of Current Literature.

## SURGERY.

UNDER THE CHARGE OF DRS. ARMSTRONG, BARLOW, ARCHIBALD, AND CAMPBELL.

DR. ERNST. "The Newer Treatment of Gonorrhoeal Epididymitis with Personal Experience of the Puncture Method." *Berliner Kl. Woch.*, 1909, No. 10 and 11.

Regarding the treatment and prophylaxis of epididymitis, there are at present two schools. The one holds that as the infection is caused largely through irritation of the colliculus seminalis and a consequent reversed peristalsis along the vas deferens, it therefore should desist from all active measures so soon as an epididymitis declares itself and should be especially careful of any interference with the posterior urethra. Neisser's school, on the other hand, considers that active treatment is always necessary. The author commits himself to neither view, but in severe cases of urethritis desists from all treatment and in milder advocates mild irrigation and prostatic massage. Once the epididymitis has developed he stops all treatment, puts the patient to bed, if possible, applies ice, to be followed by heat or applications of ichthyol.

The compression method, "strapping," he considers of only historical interest. Biers' treatment has not been satisfactory in his hands, but on the other hand, on the basis of 52 cases, he warmly recommends "puncture." This he performs with a small syringe and needle, puncturing the cauda of the epididymis 1 to 2 c.m., and aspirating a drop or two of blood-stained serum. Anæsthesia is not necessary. Within 24 hours the swelling has appreciably decreased (though in some cases a repetition was necessary). Fever and pain disappear with the swelling. He has never seen any bad effects, and considers that the puncture allows a slight tear in the capsule which by relieving tension enables a better circulation to affect improvement.

ARTHUR JORDAN, Moscow. "Statistics of Arthritic Gonorrhoea." Moscow, *St. Petersburger Med. Woch.*, No. 5, 1909. *Zentralbl. f. Urolog.*, Bd. III, Ht. VII.

Among the complications of gonorrhoeal urethritis "rheumatism" stands third, prostatitis and epididymitis being both more frequent, the latter occurring, according to the author, in 11.7 per cent. Fournier considers that arthritis occurs as a complication in but 1.6 per cent., and most statistics range from this to the 3.6 per cent. of Held. Bond, however, and the Copenhagen statistics for 1904 put its occurrence as

high as 10 and 11 per cent. These latter figures probably represent hospital cases only, and apparently cases which are admitted to the wards. For the percentage of cases in the Berlin polyclinic, out of 1,315 cases but 2 cases of arthritis occurred.

In private practice from 820 cases of arthritis in men, 18 or 2.1 per cent. developed urethritis.

The great majority (11) developed during the chronic stage, five developed between the 7th and 11th day, and the others during the first two months. As the chief causes, he considers trauma and cold as lowering resistance in the affected joints, perhaps also trauma to the urethra.

As to the prognosis—of the author's 18 cases, two disappeared, two developed ankylosis, five recovered with some slight stiffness and limitation of movement, and nine recovered completely.

JOHN W. H. EYRE, M.D., and BERNARD H. STEWART, M.A., M.B. "The Treatment of Gonorrhœal Infections by Vaccines." *Lancet*, July 10, 1909.

A short *resumé* of the literature dealing with the vaccine method as applied to gonorrhœa introduces this subject, which has occupied the authors during a period of three years, and includes 53 cases from Guy's Hospital, The Lock Hospital and St. Paul's, chiefly ambulatory, but also in-door patients. Half of the cases showed some form of arthritis; iritis and septicæmia were also present. The remainder were cases of acute and chronic urethritis.

The diagnosis was made either by the finding of the gonococcus in smears or culture or by a persistent low opsonic index of the individual to the gonococcus. The treatment was controlled throughout by taking the index. All cases were treated by vaccine alone, with a few minor exceptions. The vaccine was prepared from fresh 24-hour blood agar cultures. The authors preferred an autogenous vaccine, but claim to have obtained almost as satisfactory results from a mixture of several strains which thus formed a polyvalent stock vaccine. In the earlier cases, doses of 100,000,000 to 500,000,000 were not infrequent, but were in authors' opinion too potent, especially if the vaccine was fresh. They never exceeded 25,000,000 in their later cases and could give such a dose at shorter intervals with greater benefit.

In acute urethritis the discharge could be diminished in every case and with rest in bed and perhaps an injection or two towards the end; they consider this the ideal treatment. In chronic urethritis a very definite value is ascribed to the vaccine. In orchitis and epididymitis and iritis, relief of pain followed very shortly. In arthritis they conclude

that vaccine has shown itself of very considerable value, though there are cases which do not appear to be much influenced.

DR. A. BUSCHKE and DR. HARDER. "Provocative Action of Sublimate Injections in Syphilis and their Relation to the Wassermann Reaction." *Deut. Med. Woch.*, July 1, 1909.

In 1902, Herxheimer and Krausel showed that, when the roseola of secondary syphilis showed but poorly, an injection of mercury caused it to suddenly declare itself. Welander tried a similar test during the primary stage and succeeded in 1 or 2 cases in causing the rash to appear.

The authors have tried the reaction in a large number of hospital cases and have succeeded in so many that they consider the test to be of value, as they are thus enabled to shorten the secondary incubation period and therefore to complete their diagnosis and begin treatment. They make use of sublimate injections in large doses (.04). Generally within 24 hours the exanthem appears. By excising a piece of skin and rash they convinced themselves that the rash was syphilitic, rather than mercurial, in so much as there were characteristic vascular changes.

No definite relationship between the reaction and the Wassermann reaction could be proven.

R. P. C.

## OPHTHALMOLOGY.

UNDER THE CHARGE OF DRs. STIRLING, BYERS, MATHEWSON, MCKEE, TOOKE.

B. E. FRYER, M.D., and JOS. S. LICHTENBERG, M.D. "A Case of Amaurotic Family Idiocy." *Ophthalmology*, Vol. 5, No. 3.

Samuel B., aged 21 months, of Jewish parents. The birth was normal and there was apparently nothing unusual with the child until the third or fourth month. At this time the mother noticed a change in the infant's actions. From the twelfth to the fifteenth month, convulsive attacks were frequent. These were severe, at times with opisthotonos. There is no history of syphilis nor is there any blood relationship between the parents. The child is now quite blind, the eyes are divergent, pupils small and do not react to light or very sluggishly. The head rolls about and cannot be held erect. The child cannot walk, talk, or sit up. The body is well nourished, the muscles are flaccid. The neck muscles are especially weak, and have been so from the first. The cranial measurements are below the average.

Ophthalmic examination shows an atrophic nerve head with excavation atrophy in both eyes. The retinal vessels are small and few in number. At the macula the characteristic changes are absent, there being no cen-

tral cherry red spot with a white area around it. The absence of the macula changes makes this case somewhat unusual. The other child of the family is quite normal. This is also out of the ordinary. The author reviews shortly the other cases reported. The etiology is unknown. All reported cases have belonged to the Jewish race. Treatment in this case as in the other cases has been of no benefit.

F. H. VERHOEFF, A.M., M.D. " Amaurotic Family Idiocy: Histological Examination of a Case in which the Eyes were Removed Immediately after Death." *Archives of Ophthalmology*, Vol. 38, No. 2.

Although a number of pathological examinations have been made of the eyes in cases of amaurotic family idiocy, there still remains some doubt in regard to the histology of the retinal changes. In this case the eyes were removed fifteen minutes after death. The only demonstrable changes in the retina were confined to the ganglion cells which were markedly degenerated. It is evident that the ophthalmic picture of this disease is due to degeneration of the retinal ganglion cells about the fovea and to the contrast thereby produced, as originally maintained by Holden. The child was of Jewish parentage, 18 months old, family history negative. Development went on properly up to the third or fourth month, but at the eighth month the child was not considered bright mentally. Examination of the eyes revealed a grayish-white patch with a brownish centre in the macula region of each eye. Optic atrophy was present, pupils were large and active. He was now fed by means of a stomach pump, and while his bodily condition improved, mentally he became progressively worse. He died at the age of three years of pneumonia. Two more children have since been born to the parents, the second of which shows the characteristic markings of the disease. On microscopic examination of the eyes, the pathological changes were found confined to the retina and optic nerve. With the exception of the ganglion cells, the retinae were perfectly normal, but not a single normal ganglion cell was to be seen. The optic nerve entrance presented the asymmetrical appearance characteristic of myopia. There was complete degeneration of the temporal portion of the nerve, and degenerative changes throughout the nerve.

S. H. M.

LESLIE PATON. "Optic Neuritis in Cerebral Tumours." *Transactions of the Ophthalmological Society of the United Kingdom*, 1908.

The substance of this paper was obtained from a careful and systematic inquiry into the records of the National Hospital, Queen Square. The two hundred and fifty-two cases investigated and upon which the sub-

stance of the paper is based were diagnosed as cerebral tumour. In forty-five of these cases the symptoms were not definite enough to allow of accurate localisation. Five cases simulated tumour of the brain but the symptoms were discovered post mortem to be due to other lesions. Of the remaining two hundred and two cases, with a definite localisation, one hundred and forty-eight were confirmed by operation or autopsy.

In an appended analytical table the writer shows that every case of temporo-sphenoidal tumour showed an optic neuritis of a comparatively high degree, 4.72 D., as compared with the general average of all cases of tumour examined which was 4.34 D. In none of the temporo-sphenoidal cases was the degree of swelling mild, the disc was completely blurred in each case, and of the fourteen cases eight were of the hæmorrhagic type.

Forty-one cases of cerebellar tumour showed optic neuritis to be present in each case, the average degree of swelling being 4.41 D., almost as high an average as in the temporo-sphenoidal cases. Twelve of these cases showed hæmorrhages, and in five of these cases marked changes about the macula could be made out.

Of the thirteen cases of extra-cerebellar tumours, two showed no neuritis; the remainder, however, showed a high average of swelling, 5.03 D. Seven of the remaining cases manifested hæmorrhages, a macular fan being present in one case.

Frontal and parietal tumours have about the same percentage where optic neuritis is absent, 12.5 per cent. as contrasted with 14.28 per cent. In frontal tumours the average degree of swelling was determined as 4.27 D., in twelve cases hæmorrhages were present, and one case a macular fan. In parietal tumours where the neuritis was marked it only averaged 3.56 D. In twenty-eight of these cases hæmorrhages were seen only in six.

Of twenty-nine cases of sub-cortical tumour nearly 38 per cent. showed no evidence of optic neuritis; in the cases where a definite neuritis occurred the average swelling was 4.22 D. Hæmorrhages and macular changes seldom occurred.

In tumours of the optic thalamus and mid brain, neuritis is again fairly frequent, being absent in four cases out of sixteen. The average height of swelling recorded was 4.00 D. The occurrence of five cases with hæmorrhages would indicate the degree of swelling as being rather intense.

Tumours of the pons showed non-evidence of neuritis in 43 per cent. of the twenty-three cases examined, but when it did occur the degree of swelling was very intense, the average being 5.25 D., the majority of these being hæmorrhagic in nature.

In three cases of extra-basal tumour primary atrophy of the optic nerve was noted in two instances from direct pressure upon the chiasm; one a tumour of the pituitary body, the other a cyst of the floor of the third ventricle.

A review of the cases as a whole shows that there are two main localities in which we are likely to find tumours without optic neuritis, the deeper portions of the cerebral hemispheres and the pons. In tumours involving the cerebral cortex, liability to optic neuritis and the intensity of its development varies with the distance of the site of the tumour from the origins of the optic tract and nerves. One also remarks that every case of cerebellar tumour has optic neuritis.

F. T. T.

PROF. W. UHTHOFF. "Zur Katarakt-Operation bei Diabetikern."  
*Bericht über die XXXV. Versammlung der Ophthalmologischen  
Gesellschaft. Heidelberg, 1908.*

After describing the characteristic asbestos or silky sheen noted in the cortex of the lens in diabetics suffering with cataract, Professor Uthoff states that 5 per cent. of his cataract patients have suffered with diabetes as a complication. His results in the extraction of the lens in 115 of such cases has caused him to have a great deal of encouragement in the outcome of the majority of cases and to repel the "noli me tangere" which a large number of ophthalmologists have applied to this condition of affairs in the past.

Of the 115 cases operated upon not one single case was lost from a resultant panophthalmitis. In two cases, however, a minimum of vision was obtained: in one case fingers at one meter, from post operative glaucoma following retinal hæmorrhages; in the second, light perception only, from recurrent vitreous hæmorrhages, complications which might ordinarily follow the extraction of a cataract when diabetes was not present. This last case had arteriosclerosis, diabetic gangrene of one leg, and albumen in the urine. One patient who was running a very good course five days after the operation died of diabetic coma. Certain cases made sufficient progress to enable them to return to their daily avocation.

The only observances which the author makes are to render the operation as aseptic in every detail as possible and to enforce the regime of diet for some time before the extraction is undertaken.

The complications occurring in these 115 cases are recorded as follows:—

Marked iritis (three times with hypopion), 6%; mild inflammatory appearances at the side of the iris, 5.4%; post operative glaucoma in

healing with retinal hæmorrhages, 0.9% ; transient increase of tension, 1.8% ; amotio choroideæ, 0.9% ; hæmorrhages in the anterior chamber, 8.9% ; death from diabetic coma, 0.9% ; retarded reformation of the anterior chamber, 1.8% ; retinal hæmorrhages, 4.5% ; vitreous hæmorrhages, 1.8% ; retinitis diabetica, 2.6% ; retinitis albuminurica, 0.9% ; choroidal changes in myopia, 1.8% .

The subsequent visual results in these 115 cases of diabetic cataract were as follows:—

Good vision, 1—1-3, 68% ; useful vision, 1-4—1-10, 18% ; defective vision, under 1-10, 14% ; total blindness without perception of light, 0% .

F. T. T.

GEORGE S. DERBY. "The Increasing Importance of Tuberculosis as a Cause of Ocular Disease. The Newer Methods of Diagnosis and the Treatment." *Transactions of the American Ophthalmological Society*, 1908.

The writer discusses the statistics of Horner, Groenouw, Hirschberg, Eyre and Stephenson, comparing them with the statement made by Helbron comparatively recently after an examination of 15,000 cases observed in the Berlin eye clinics, that one in every two hundred was tubercular. In 59 cases of chronic uveitis tested subcutaneously with tuberculin by Stock, 61% gave a positive reaction, while in 23 cases of scrofulous disease, 87% reacted. Hess reports over 50% of positive reactions to tuberculin in 100 cases of ocular disease. Stock's contribution on experimental inoculation in animals is a piece of work of the greatest importance in this respect.

The introduction of tuberculin has assisted us greatly in establishing new data, but owing to unfortunate accidents which occurred before its dangers were appreciated it has been taken up rather slowly. The subcutaneous test has been inconvenient when one has had to deal with a large number of patients, and the writer has based his observations in consequence mostly on the ophtho-reaction of Wolff-Eisner and Calmette, and to the cutaneous reaction of von Pirquet. In cases where the eye disease was binocular the writer employed von Pirquet's vaccination. One hundred and fifty cases have been examined of which 103 are reported in the contribution. Of these 83 reacted positively, 18 were negative and 2 were doubtful. The conjunctival test was performed 61 times, 45 positive, 14 negative, and 2 doubtful. The cutaneous test of von Pirquet was performed 58 times, 52 positive, 4 negative, and 2 doubtful. On 16 patients both tests were tried; on 14 both were positive; once the skin test was positive and the conjunctival negative and once

both were doubtful. Ninety-three cases are subdivided clinically as follows:—43 cases of phlyctenular disease, 38 reacted and 5 did not; 16 cases of relapsing sclero-keratitis, all positive; 16 cases of scleritis, 13 positive, 2 negative, 1 doubtful; 9 cases of anterior uveitis, all reacted positively. Of 3 cases of interstitial keratitis 2 were positive; the third case had previously reacted to tuberculin for pulmonary tuberculosis. In 4 cases with vitreous opacities and cloudiness in the lens, 1 was positive, 2 negative, and 1 doubtful. A case of tuberculosis of the conjunctiva gave positive result. The ophthalmo-tuberculin caused the writer some trouble and anxiety in more than one instance. In his hands the cutaneous test has been the more sensitive and no untoward results have followed its use.

In regard to treatment of tuberculous eye lesions Derby is most emphatic in recommending the strictest regimen regarding general hygiene. The patient should be placed in the best possible surroundings and encouraged to the utmost in assisting in his own recovery. The employment of tuberculin should be begun most carefully, starting with an initial dose of 1-100,000 mg. which may be gradually increased once a week until frequently several milligrammes in the author's opinion may be tolerated. Derby concludes his very carefully prepared and interesting contribution by remarking that his observations on the use of tuberculin in some 30 cases have not convinced him of its therapeutic value. Neither has it appeared to do harm when proper precautions have been observed. He is still using it and he expects to continue to do so. On the other hand, it has been evident that careful and scientific building up of the patient does good, and under it and appropriate local measures these patients get well, unless the disease has progressed too far before treatment has been instituted.

F. T. T.

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### Society Proceedings.

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#### MONTREAL MEDICO-CHIRURGICAL SOCIETY.

At the Annual Meeting of this Society the following officers were elected for the ensuing year:

President:—Dr. W. Grant Stewart.

Vice-President:—Dr. C. F. Martin.

Treasurer:—Dr. R. P. Campbell.

Secretary:—Dr. S. Hanford McKee.

Council:—Dr. W. F. Hamilton.

The fourteenth regular meeting of the Society was held Friday evening, April 15th, 1909, Dr. J. Alex. Hutchison, President, in the Chair.

#### SOME OBSERVATIONS ON THE MOVEMENT OF THE TONGUE.

A. T. MUSSEN, M.D., read this case report.

#### ULCERATIVE STOMATITIS.

H. B. CUSHING, M.D., read this case report.

A. C. P. HOWARD, M.D. While having never experienced such an epidemic as Dr. Cushing has reported, some years ago I did have an opportunity of seeing two cases of Vincent's angina. Both these cases were in adults and were sent to the infectious wards from the medical side as cases of diphtheria. The most striking features about these patients were first the unusual degree of fetor, and secondly the marked degree of ulceration on the soft palate, with a very pronounced pseudo-membrane. In one case I remember it was thought to be luetic and had every appearance of it, but smear preparations showed the typical Vincent's fusiform bacilli and spirochætæ. Cultures on blood serum and blood agar were entirely negative. These two cases quite convinced me that there is a very definite form of ulcerative angina resembling somewhat the diphtheritic angina, and that possibly there is a definite etiological relationship between the lesion and the organisms found.

R. P. CAMPBELL, M.D. As I have been working with spirochætæ of late I have been very much interested in Dr. Cushing's remarks. One case I had was referred to me as being luetic on account of having an ulcer on the tonsil; at the same time there was no history of syphilis and on taking smears from the ulcer we obtained spirochætæ in this symbiosis in great numbers. I had an opportunity of observing these in the living state, through the use of the dark stage, and the picture was most striking; there was simply a seething mass of spirochætæ, like a mass of worms; the fusiform bacillus was also present. This illustrates how difficult it is to come to a satisfactory conclusion with regard to the etiological factor of Vincent's spirochæte. Here was a case which might have been set down as luetic which presented an enormous number of these spirochætæ. The more patches in the mouth the more common it is to find the fusiform bacillus so that one hesitates to say which condition is present. At present the spirochætæ Vincenti and spirochætæ Duttoni as shown by Duval and Todd are the only spirochætæ which have been grown on artificial media.

F. M. FRY, M.D. In regard to the etiology of this, a very important factor of course is the environment. This was strikingly illustrated when visiting different hospitals in Vienna. In the outdoor department

of the large hospitals, where poverty and filth prevail, one meets a very large number of cases, while in Berlin where less poverty exists and in Montreal it is rare. The therapeutic use of potassium chlorate is well known. One trouble in watching cases in the children's clinic at the Royal Victoria Hospital is that one seldom sees the results of the treatment, for they go away after one gives the patient potassium chlorate, and when the mother does bring the child back she generally says that it got well in a day or two. This condition is seen occasionally in the Foundling hospital and it occurs also in private practice. Dr. Gordon brought forward some cases of this nature a few years ago. I think the predisposing cause of this is a dirty condition of the mouth which acts as a very favourable environment to the bacillus.

J. ALEX. HUTCHISON, M.D. It might be of some interest to you that a great many years ago I had a case of extreme noma, such as you occasionally see illustrated in textbooks; there was a large opening through the cheek from the surface to the interior of the mouth. This occurred in private practice in good hygienic surroundings. One of my seniors saw the case with me, and though I do not remember exactly we are almost certain to have given chloride of potash, as it was the custom to give this in those days. The child succumbed in a few days from the progressive gangrenous ulceration. This was before the days of the bacteriological cultures and we knew nothing about the cause.

#### LOCAL AND GAS ANÆSTHESIA: SKIN DISINFECTION.

E. W. ARCHIBALD, M.D., presented the paper, (see page 518).

G. H. MATHEWSON, M.D. It would seem that nitrous oxide gas given in the way Dr. Archibald describes would be of great use to us oculists in cases of glaucoma, and in unmanageable persons, who may require operation for the extraction of cataract, in that there is no post-anæsthetic vomiting.

R. P. CAMPBELL, M.D. I have no experience with the Benzine-Iodine method at all, but German literature has been very full of this disinfection which has apparently given excellent results. As far as alcohol disinfection is concerned I have made some experiments, but they are far from complete. Ordinary alcohol has very little bactericidal power, even at 75 per cent. The other disinfectants I worked with are the alcoholic perchloride and the ordinary carbolic and various dilutions of it. It is astonishing after how long an exposure to these one can get a growth. For example with the *B. proteus* you may expose it to the action of 5 per cent. carbolic for a week and still get a growth.

J. ALEX. HUTCHISON, M.D. Riordon wrote a paper some 12 or 15 years ago in which he strongly advocated the use of ordinary commercial

gasoline, and even to-day he practises the use of this almost to the exclusion of any other method of skin disinfection and I think he has very good results. Our own experience has varied in the Montréal General Hospital according to the fashion. We have been through the various methods as they were recognised by various experimental observers and this so-called dry method certainly has very much in its favour; as Dr. Archibald has said, it saves time and has the great advantage of not wetting the patients. Only this week I took advantage of this method in opening the abdomen in a delicate child, and I used it, not because I thought it was better than any other, but because I believed it could be done quickly without exposing the child to cold or the evaporation which always follows a moist dressing. Dr. Campbell has been rather modest in his remarks about skin disinfection: if I understand his observations correctly, we were practically sterile in the Montréal General Hospital in our methods of washing up. With reference to the use of gas, we used it a few years ago combining with ether and found it very satisfactory, but it was discontinued possibly on account of expense and the fact that we were getting more experienced anaesthetists all the time. With reference to local anaesthesia, I think its use will increase. One objection I have to its use in clinical work is that the teacher is limited in his remarks to the students on the case, as one does not feel justified in speaking too freely with the patient listening. Many local anaesthetics are on the market, indicating a demand,—Stovaine, Novocaine, etc. I practically never now pass a sound without a local anaesthetic. I use novocaine in all cases. Recently I did a supra-pubic cystotomy by the aid of this drug in a case which would not have permitted a general anaesthetic. The only pain felt was when the mucous membrane of the bladder was incised.

E. W. ARCHIBALD, M.D. With regard to Dr. Mathewson's query as to where this infection comes from, my conclusion is that with our present methods of sterilizing, rubber gloves, etc., it must come from the skin itself, chiefly the staphylococcus albus. We must expect the possibility of some bacteria being still present after we have finished cleaning up, and it seems to me that all methods are fairly equal in value: they all obtain a relative freedom from germs and the results are strictly in proportion to the care taken. Certainly in some cases this "dry" method gives excellent results. The gas anaesthesia is chiefly indicated in the toxic cases, the serious cases, cases that cannot stand much more. There is no doubt that ether anaesthesia is an intoxication, and if you are going to add one toxæmia to another one that is already present you increase the danger to the patient. Gas toxæmia is almost immediately eliminated from the lungs and adds nothing to that danger. With re-

gard to Dr. Riordon's use of gas-ether, it reminds me of Dr. Lawson Taft's decision that he never used carbolic acid but always turpentine. The gas-ether combination was not exactly what I meant. We use this at the Royal Victoria Hospital very frequently but that means a very short use of the gas. What I wished to call attention to was that the gas can be used for a long time. Dr. Nagle secured a very satisfactory anaesthesia by combining the two right along.

**CEREBRAL AND EPIDURAL ABSCESES OF OTITIC ORIGIN, WITH  
REPORT OF A CASE.**

G. T. ROSS, M.D., read the paper of the evening which appeared in the May number of this JOURNAL.

G. H. MATHEWSON, M.D. It is often difficult in the early stages to make a diagnosis of cerebral or cerebellar abscess because there may be no symptoms. If in the temporo-sphenoidal lobe one may get some disturbance in speech, whereas if the abscess be in the cerebellum you get disturbance of equilibrium, and from this you can sometimes make a diagnosis as to where the abscess is. It seems to me in Dr. Ross's own special case if he had taken off some more bone he might have got better results from the free drainage. As far as exposing the dura goes there is practically no danger at all.

E. W. ARCHIBALD, M.D. Dr. Ross's case is one upon which we must certainly congratulate him; the only point upon which might fall some words to be said concerns the question of the technique of operation. Once you have diagnosed these cases the question is whether the otologist or the general surgeon shall do the operation. In a broad minded way the conclusion you must come to is this, that if you are in the presence of an abscess which is diagnosable as such, that is which gives signs sufficient to make a diagnosis, then it is certain that that abscess is a fairly large one and occupies usually the temporal sphenoidal lobe or cerebellum. In cases where the abscess is of otitic origin, the infection has travelled up through the various channels underneath the grey matter in the temporo-sphenoidal lobe, and under such circumstances the otologist may explore and might find the pus; but I believe, without absolutely knowing, that he is tempted to make too small an opening and to put in too small a drain, and that he is less apt, unless he is very familiar with the possibilities, to get to the root of the condition. Under such circumstances I think that the case should be turned over to the general surgeon to make a thoroughly large free opening in the temporo-sphenoidal region or the cerebellar region. In such cases, where the otologist comes down immediately upon an abscess in the course of a mastoid operation, where he is led to go beyond the mastoid, through the

tegmen by finding the pathological condition which results in the abscess, I think the results would be better if the operation were done through the temporo-mesial route or by making a large osteoplastic flap. It is better to make the opening clear through the bone and leave the bone open. The surgeon is more inclined to do such a radical operation than the otologist. If there is one place where a large drain is necessary it is in these abscesses, for the tendency is for the abscess walls to fall in and be blocked, and under such circumstances the case should be turned over to the general surgeon unless the otologist is led most naturally to the abscess through the tegmen tympani, and only then can he succeed if he is prepared to do the thing very thoroughly.

G. T. Ross, M.D. I am sorry I have not the material by me to demonstrate the extent of the opening which was made in this case, but I can say that drainage here was perfect.

The fifteenth regular meeting of the Society was held May 17th, 1909, Dr. J. Alex. Hutchison, President, in the Chair.

**LIVING CASE WITH PRIMARY BILATERAL ATROPHY OF THE MACULAR BUNDLE OF THE OPTIC NERVE, WITH SECONDARY CHANGES IN THE MACULAR AREA.**

W. GORDON M. BYERS, M.D. It will be remembered that the fibres which go to supply the macular region make up at the optic foramen a small round bundle which takes up exactly the centre of the optic nerve. These fibres, as they advance toward the globe, tend gradually to deviate to the temporal side of the nerve where, at the posterior pole of the eyeball, they form a definite triangular area. This axial bundle is particularly susceptible to the influence of certain poisons (tobacco and alcohol), and many cases of inflammation of its substance come before our notice; but it is rare to see a case in which the nerve fibres have gone on to atrophy and to the production of the white appearance seen in this man. Ophthalmoscopically one sees here on the temporal side of both optic discs the glistening white appearance pathognomonic of atrophy of the optic nerve. In addition to this one sees in the macular area on both sides, but especially the right, rarefaction and clumping of the pigment epithelium, signs of a localized retinitis which is undoubtedly consecutive to the atrophy of the nerve fibres supplying this region. The visual changes are characteristic of axial neuritis. The central sight is greatly reduced; and, while there is no narrowing of the fields, the usual central scotomata are present.

The man has been for years addicted to alcohol and tobacco in excess. As I said before, advanced cases like this are seldom met with; I have only

once before had the opportunity of seeing so marked an example of the late stages in axial neuritis. The patient was a man presented a few years ago at a meeting of the New England Ophthalmological Society in Boston.

D. A. SHIRRES, M.D. We are indebted to Dr. Byers for bringing this interesting case before us. We have had recently in the hospital three cases of tobacco amblyopia, but in none of these did we find visible changes in the optic nerve or the macular area, nothing of an atrophic condition of choked disc or neuritis. In this case of Dr. Byers, in the left eye one sees the triangular area very clear and it even can be seen by one who is not accustomed to the ophthalmoscope. I would like to ask what the prognosis is, and to ask if Dr. Byers has ever done anything in testing electrically for degeneration of the optic nerve.

DR. WILSON. I would like to ask Dr. Byers if in his experience of this kind of case the kind of tobacco has anything to do with the cause of the amblyopia. Two cases of my own and three of a friend of mine occurred after the use of Canadian tobacco, and the impression given to me was that the Canadian tobacco was more especially liable to cause this condition than the ordinary Virginian or the English-cured tobaccos.

W. GORDON M. BYERS, M.D. I am familiar with the reaction of degeneration in connection with the optic nerve, but it is, in any case, not applicable in axial neuritis, because a large number of the fibres are not implicated. In reply to Dr. Wilson, I do not think the kind of tobacco is so important as the quantity and the conditions under which it is taken.

#### IMPROVEMENT IN PROGRESSIVE MUSCULAR ATROPHY.

D. A. SHIRRES, M.D., and N. VINER, M.D.

DR. WILSON. It occurred to me in reporting a case of that kind that it would be very interesting to know the strength of the current and the polarity used. In my practice I am inclined to believe that a weak current for a longer time is very much to be preferred to a strong current applied for a short time. I am of the opinion that a strong current does harm, and perhaps it is here that some physicians have a want of faith in this treatment.

D. A. SHIRRES, M.D. Dr. Wilson has brought up a point with which I thoroughly agree. In this treatment we used the negative pole over the motor point on the muscle. As Dr. Viner just mentioned, there were no electrical changes of degeneration either with the faradic or galvanic battery, hence we used the negative pole and used about 14 milliamperes and he got his treatment twice a week, and probably if he had got it four times a week he would have been better to-day.

N. VINER, M.D. I omitted to mention the fact that in addition the patient has had spasmodic twitchings at different times, which is characteristic of the condition, also the fibrillary twitchings. Ordinarily when we do not measure the number of milliamperes we give a minimum amount of current necessary to produce a contraction.

#### NEPHRITIS IN INFANTS.

F. M. FRY, M.D., read the paper of the evening.

W. F. HAMILTON, M.D. I rise rather to commend the merits of this paper than to comment upon the matter it contains. This represents a great deal of work and careful study as well as much patience, and the conclusions which Dr. Fry has reached are practically the only conclusions that seem possible. There has been no special examination made of the bacteriology of these cases, and it has always occurred to me that many of these cases of nephritis or toxæmia may be bacterial rather than cases of chemical poison. I am interested to hear what Dr. Fry has to say on this point. Another practical point is with regard to the breast fed infants, how that they are on the down grade to the 14th day and all cases show albuminuria. Many of us who have children under our care are often at a loss to know why this loss of weight occurs, and it seems to me that Dr. Fry's observation must answer this question in many instances. I think we have here one of the best papers of the year and we have to thank Dr. Fry for bringing this study before us.

F. M. FRY, M.D. In reply to Dr. Hamilton, of course I had to consider the question of toxæmia, but I could not dwell on the findings in detail and the paper must be studied to bring out these points. However, I anticipated the question of toxæmia and bacterial infection. It is well known that in infants suffering from severe chronic intestinal catarrh one gets a nephritis. I was aware of this and at all my autopsies I examined the intestines and found them negative. The lungs, and the spleen especially, I examined macroscopically and in some cases microscopically, with the idea that if the condition were due to a toxæmia or bacteriæmia, changes would be apparent there, but there were no changes whatever in the spleen and the lungs were in most cases healthy. In all, too, the temperature charts showed a febrile condition and I concluded that I was certainly not dealing with a septic disease. I am indebted to Dr. Adams for suggestions as to the arrangements of the paper. In making the microscopical sections I quickly learned to prefer paraffin to celloidin. I am indebted to Dr. Keenan for kind assistance in preparing the sections.

## SOME NOTES ON THE USE OF RADIUM IN MEDICINE.

G. E. ARMSTRONG, M.D. This article appears in the June number of the JOURNAL. In the discussion which followed, Professor Cox and Professor Eve, of the Science Faculty of McGill University, went fully into the composition of this substance, and ended up with the hope that the physicians in this country would get together and make it possible for this substance to be manufactured here and so place on the market this remedy within the reach of all, for it is from Colorado that we get the pitch blend from which this Radium is obtained and which is sold at such an exorbitant price in Paris.

G. P. GIRDWOOD, M.D. All of us who are interested in X-Rays and Radio-therapeutics of various kinds are very much indebted to Dr. Armstrong for the paper he has brought before us and for the information he has given. It is an exceedingly interesting subject, this action of radium and the action of X-Rays. The two rays are somewhat identical though not quite so as proved by their use in various conditions. I have a case of rodent ulcer which I had six years ago healed by 17 treatments with X-Rays; it has now broken out again with an ulcer in the very centre of the cicatrix; I am treating this with radium and it is healing up. I also have a case which has been under treatment since 1905, a tubercular lupus. Though sometimes three or four months would elapse between treatments, still it has been kept in abeyance and has been getting gradually better. Lately I have been treating it with radium and it is improving much more rapidly. Two years ago was the first attempt I made at curing with radium and that was with a very weak specimen and not much benefit was obtained. In the British Medical Journal there is an article by Mackenzie Davidson, and he goes into the subject very thoroughly and completely corroborates the account Dr. Armstrong has given us to-night of the work at the Radium Institute in Paris. I think we are to be congratulated on having here to-night Professor Cox and Professor Eve, and I beg to move a vote of thanks to them for their kindness in coming here and giving us information.

A. E. GARROW, M.D. I was very much interested in the remarks made by Dr. Armstrong, and I rather got the impression that he was telling us what he saw rather than what he was inclined to believe. The statements made as to the cure of epitheliomas are, I think, on a par with the original statements made of the cure of superficial cancer by the X-Rays, and I think we must not, just at the very beginning of this form of treatment, fail to keep in mind that the cure of the superficial cancers is only one point of the probable presence of the disease at the time the treatment is begun, and until we have definite evidence that this particular method of treatment can follow up the lymphatic channels and en-

larged glands it seems to me rather a hazardous method of treatment. Especially is this so in epithelioma of the lip and above all of the tongue where, when early, eradication and removal of the gland gives the better results. There is no question that the radium treatment of naevi, warts and port wine stains, etc., has given exceptionally good results. I think, too, the best results so far as the treatment of malignant disease is concerned have been obtained in rodent ulcer where lymphatic infection is practically never seen, and in such cases radium is of great value; but to consider it in connexion with any superficial epithelioma, I think, until we know more about its penetrating powers in destroying lymphatic infection, it seems to be well to stop and think carefully over the knowledge we have of the material up to the present moment. Personally I was very much interested in the report Dr. Armstrong has brought back with him, but above all in respect to the very interesting information derived from the two professors who addressed us this evening.

DR. WILSON. In seconding the vote of thanks proposed by Dr. Girdwood I wish to add my quota of appreciation and to express my satisfaction in the information which Dr. Armstrong has given us to-night, together with the talk Professor Eve and Professor Cox have given us on this most interesting substance.

G. E. ARMSTRONG, M.D. During my visit to Paris I saw a great many interesting cases. There is no doubt about the results obtained in the angiomata. Some of these cases could probably be treated perhaps with equal success with liquid air and electricity, but some could not, particularly the pendulous and the pigmented naevi. In regard to cancer I do not think that any man with sound judgment would advise the radium treatment unless possibly in the case of the rodent ulcer. I do not know why the case of cancer of the tongue was so treated. I asked one of the doctors who had been there a month if he would treat a case of cancer with radium which could be removed by operation, and his reply was very much to the point: "Not on your life," and I think most of us would be inclined to take the same view. I remember Dr. Casey Wood telling me that he knew of a woman in Colorado who for years had made a very good living by the treatment of cancer with pitch blend; the results probably being derived from the small quantity of radium contained in this pitch blend. I wish to express my great appreciation and my thanks to Professor Cox and to Professor Eve for their kindly interest in coming here this evening, and by their presence and contribution to the discussion adding so much to the interest of the meeting.

The sixteenth regular meeting of the Society was held Friday evening, May 21st, 1909, Dr. J. Alex. Hutchison, President, in the Chair.

## TWO LIVING CASES.

1. Infected cholesteatoma with mastoiditis.
2. Removal of large piece of steel from eyeball.

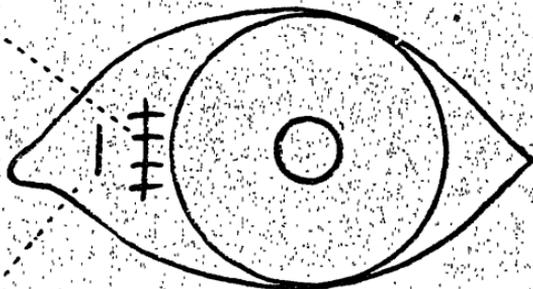
G. H. MATHEWSON, M.D. The first patient before you is eight years of age and came to my clinic at the Montreal General Hospital on the third of May, complaining of pain in the ear which had begun a week previously, and also of swelling behind the ear which had been present for one day. The father stated that the patient had had a discharge from the ear ever since early childhood, and that a year or two before coming to the clinic there had been a swelling behind the ear which had burst spontaneously, leaving a scar which can be well seen. The child was taken into the hospital and operated on the next day. On incising the skin we found that there was pus present beneath it and the gland was infected and apparently the source of this collection of pus. On opening the periosteum more pus was discovered, and on penetrating the bone a large cavity filled with pus was found; there was a cholesteatoma present. This condition of cholesteatoma is really nothing more nor less than a collection of cast-off epidermal cells from the skin which has entered the middle ear and there proliferated, forming this mass of exfoliated epithelial cells, and as succeeding layers are laid down the onion-like arrangement of the growth is produced. I took out this mass and soon found that there was a carious opening leading to the lateral sinus about which was a collection of pus, a peri-sinus abscess. I cleaned out the cavity, removed the whole of the upper part of the external wall of the posterior meatus and all of the mastoid cells, curetted the attic of the middle ear and the external auditory meatus, making the whole into one cavity. After this I sutured up the posterior wound and slit up the cartilaginous meatus, made a cross section and forced that back into the wound in the hope of causing it to become epidermised quickly. This operation was done fifteen days ago and the wound is practically healed and the cavity almost dry. The pathologist reported that the infecting organism was the streptococcus.

It is rather unusual to get so large a cholesteatoma in so young a child, and then again it is interesting to note in how serious a condition the child was and yet seemed to feel pretty well and was able to walk into the hospital.

The second case was that of a man about 29 years of age who came to the hospital on the 17th of April with a wound in his eyelid and eyeball. I saw the man within 1½ hours after the accident. On examination I found a wound towards the nasal side of the lower lid which had perforated it completely, and at a point 5 mm. from the cornea there was

a brown wound showing the choroid exposed, about 2 mm. long. On looking into the eyeball I could see a white mass occupying nearly all of the lower part of the fundus, extending to the macular region and showing many hæmorrhages. I used the large magnet (Sweet's magnet) and after one unsuccessful attempt succeeded in removing a large piece of steel 21 mm. long and 5 wide and 2 mm. thick, weighing six grains.

After having removed the piece of steel I dissected up the conjunctiva on both sides of the scleral wound and cutting off about 3 mm. of it on the side towards the cornea, drew the distal flap across by sutures so



that the line of conjunctival sutures was not over the scleral wound, but to the corneal side of the same.

Healing was perfect and he can count fingers at 10 feet and can see large objects. As a wage-earner he has two good-looking eyes, though one of course is impaired, and he does not have the discomfort of wearing an artificial eye which he would have had to do had this steel remained in or had this accident occurred before the use of the electromagnets, etc., such as we possess to-day. Had this steel been left in the eye an oxide would have been formed completely destroying the eye.

W. GORDON M. BYERS, M.D. I should like to add my word of congratulation to Dr. Mathewson, particularly in connection with the favourable outcome of his second case. I am sure the conjunctival flap here favored healing very greatly. Cases of this kind mark the progress that has been made by ophthalmology in recent years. The X-Rays and the electric magnet have made it possible to save in most instances cases which a comparatively short time ago were irremediable.

J. ALEX. HUTCHISON, M.D. I am sure we are all indebted to Dr. Mathewson for showing us these interesting cases. The general surgeon is not accustomed to see a mastoid scar looking so cleanly as in this case.

G. H. MATHEWSON, M.D. I might say that the mere fact of a man

having a cholesteatoma is not in itself a grave condition; but associated with outside influences may cause considerable trouble. For instance, I remember well a case I had of a man about 25 years old and he had such a condition for years, but going in swimming one day he developed a dizziness to such an extent that he could not stand, from infection of cholesteatoma which extended to the labyrinth. In one case of Dr. Politzer's almost the whole petrous bone became involved and yet the patient died from intercurrent disease after many years. With regard to the eye case, as Dr. Byers remarks, it is very interesting to note that since we have been able to take out these particles of steel by the magnet we are practically able to save all the eyeballs. We are not so fortunate with the sight, but it is a great thing to save the eye. A workman with two eyes that look normal even though the sight of one of them is not perfect can secure employment much more readily than one who is mutilated by the loss of one eyeball.

#### TREATMENT OF ECLAMPSIA.

H. M. LITTLE, M.D., read the paper of the evening.

A. LAPHORN SMITH, M.D. We are very much indebted to Dr. Little for this most interesting paper. The subject of eclampsia is always of interest and as discussed by Dr. Little is more so than usual. Dr. Little mentions a very interesting point that eclampsia is more frequent in winter than summer, and I can quite understand why this should be so for in this severe climate the want of oxygen is one of the things people suffer from most, and the less oxygen the more uric acid. Nitrogenous food stopping at uric acid instead of going on to urea has a great deal to do with the disease itself. I think it will be found that the atrophy of the liver is the result of this poison and not the cause of it. This poison seems to be one that has a powerful reflex action on the capillary circulation, especially of the kidneys and the brain, because the condition of the brain is exceedingly anæmic before the convulsion comes on. After the woman has been deprived of air by the convulsions the brain becomes exceedingly congested; but the spasmodic condition of the capillaries causes the convulsions. Dr. Little has said that very little result was obtained by preliminary treatment. I have had very great satisfaction personally from preliminary treatment, and a friend of mine in a large French maternity hospital told me that he had had several hundred cases in which treatment prevented convulsions, though they came in with a great quantity of albumin in the urine. I think that there is a great field for this preliminary treatment. We all know of course that it is the duty of every physician to make an examination of the urine of his pregnant patients at least twice a month during the last four

months as this is the means of saving very many from eclampsia, because we can at once put them on milk diet and alkalis, which I have found the best. I have tried the hot air baths with much success; in one case the urine was so filled with albumin that it became solid. During convulsions, next to Cæsarean section I consider morphia the best drug. In all my cases I begin with a hypodermic of a  $\frac{1}{2}$  gr. morphia. This will not affect the secretions as they are already stopped, and if you can relieve that spasm of the capillaries by morphia there is a chance of the blood getting into the kidneys and the urine getting out. Veratrum viride I used to use in every case until I came to the one of a woman who had almost no pulse when I first saw her, and I did not use it in that case. I am glad to hear of Dr. Little dropping out the chloral, which has killed more eclamptic women than even the accouchement forcé. Chloroform also I am glad to hear him say he gives as sparingly as possible. I remember hearing of women getting chloroform by relays of doctors for 12 hours steadily, when their hearts stopped. The sooner the woman is delivered the better, and that is the key-note of the whole situation; the only way I know of in which this can be done in a minute or two without hurting either the mother or child is by Cæsarean section performed by an expert abdominal surgeon.

A. G. MORPHY, M.D. I would like to ask Dr. Little what method he would advocate in dilating a narrowed, rigid cervix in a 1-para where convulsions had set in before the onset of labour. I gather that the Pomeroy bag could not be used in such a case, and I would like to know if he would advocate the Harrison method with which I have had no experience. I have also a word to say about the examination of urine in cases of pregnancy. I believe, in fact I know, that there have occurred cases of convulsions with fatal termination in which the urine although examined a number of times showed no albumin. In fact I have in mind the case of a colleague of mine who had a patient with a great deal of swelling of the legs and who refused to go to bed and be treated; here the urine was examined a number of times and no albumin found. The woman fell down suddenly in a convulsion while standing up cooking the dinner. My colleague was called and after a great deal of difficulty managed to dilate the cervix and deliver the child, but the woman died three or four hours after delivery.

H. L. REDDY, M.D. I agree with Dr. Little in practically everything he has said; he has handled the question exceedingly well. With regard to the blood letting our French confrères are very fond of it, but personally if the discharge of blood has been very free at the delivery it practically is hardly needed or called for. With regard to treatment, I

think the great point is rapid delivery, as Dr. Little has said. If I had a case, which I did not so very long ago, in which the woman was brought in convulsions, my intention was to deliver her by *accouchement forcé*. In the case I mention, however, I found it was impossible as there was a long cervix and a hard os, so we did a Cæsarean section and she made an uninterrupted recovery. With regard to veratrum viride I have never been in favour of it, and I think the methods suggested by Dr. Little in the treatment are quite sufficient to bring a case to a successful termination if anything will. In these cases it is exceedingly important to get the arterial hypertonus. It used to be called arterial tension, and it is interesting to realise that really the arterial tension is practically no greater than in health, although the contraction of the vessels themselves is in a very different condition. With the use of the sphygmomanometer you can foretell an approaching convulsion by the rapid and high increase of the hypertonus of the vessel; when it goes above 150 you can be almost certain that you are going to have a convulsion. I feel that Dr. Little's treatment of the cases is all that anybody could suggest with the exception of the blood letting, which, unless there has been no blood lost, I do not feel is as advantageous as some represent it to be. It rather leaves the woman in a worse condition than she would otherwise be. And the means such as hot pack and salines help very much better the other treatment. As regards morphia and of course all other drugs I think they are objectionable. It is apt to injure the child for one thing, but if the woman is restless after the child is born it may be indicated.

H. M. LITTLE, M.D. I should have impressed more strongly the fact that in dealing with this question I have considered only the cases of eclampsia; if I included the cases of toxæmia in which treatment was undertaken my figures would have been considerably higher. The cases reported are all cases in which convulsions had occurred.

I left out, with intent, all reference to the theory of the causation of eclampsia. Whatever the cause, we know that there is some toxin circulating in the blood causing it to coagulate more rapidly, and for this reason the blood loss at labor is usually very slight unless there is some mechanical hindrance to contraction of the vessels in the uterine wall; hence the reason for the blood letting.

In answer to Dr. Morphy I would say that in cases where the cervix is so tightly closed that it cannot be dilated by Harris's method, I think the patient should be sent to a hospital where she could be treated radically; when this is impossible treat her expectantly: you must consider the mother before the child. Personally I think vaginal section is

preferable to Cæsarean section. The simplest method of performing this operation is to draw down the closed cervix to the vulvar opening and then incise its anterior lip. When you reach the bladder insert two fingers between it and the uterus and by stretching the fingers apart you can separate them very easily; then continue the incision through the lower uterine segment practically up to the reflection of the peritoneum. In addition, you can, if you will, make a secondary incision in the posterior lip, but in the two cases I have had, it was only necessary to make the anterior incision. The advantage of this operation is that it is extra-peritoneal; that the single cut is very easy to draw together with catgut sutures and the operation from start to finish takes about 20 minutes.

With reference to Dr. Reddy's remarks on blood letting I would say that in these cases the primary blood loss was comparatively small. The administration of salines is, according to the French, absolutely contra-indicated. They say that the œdema at the time of labour is usually due to the retention in the body of the chlorides which are not excreted by the kidneys. Our experience has been that the normal salines are not contraindicated; but, acting on this theoretical objection, we have in a number of cases given a solution of lactose, isotonic with the blood, with exceptionally good diuretic results.

#### FURTHER INDICATIONS FOR CÆSAREAN SECTION.

A. LAPHORN SMITH, M.D. (See page 516).

H. L. REDDY, M.D. I have had much pleasure this evening in listening to these papers. As to Cæsarean section, I believe Kelly, of Baltimore, takes twenty minutes to perform the operation, but I doubt if any one less skilled could attain this. As to its not becoming popular, Sãnger makes the remark that "any physician practising midwifery and not able to perform Cæsarean section has not risen to the requirements of his time." I would be very far from recommending the general use of it for all cases; the death rate is 10 per cent. to 15 per cent. in large cities in ordinary cases of confinement in their own homes, but if every man performed Cæsarean section for every trifle it would probably be very much higher. It is only from 3 per cent. to 5 per cent. in the hands of careful operators. I certainly think it is a vastly superior operation to vaginal section. Certainly you have not got the peritoneum exposed in the same way with the latter operation, but now-a-days it is exposed by the majority of surgeons without fear, and I do not see why obstetricians should take this as an objection. I do not see any reason why this operation could not be done by an intelligent man in a private house, especially in the country; still I would be very slow to give up sending the patient to the hospital if it could be managed at all. It is a major

operation and never likely to become a very common one, but personally I would not hesitate to do it when it is needed. As to doing it over and over again on any woman I think that is an outrage. I consider it a duty to tie her tubes off. Of course this is out of the question with Roman Catholic patients. I think Cæsarean sections have been about 24 to 26, with four deaths: two were moribund on admittance to hospital.

J. ALEX. HUTCHISON, M.D. I think that Dr. Reddy is very wise in stating that the operation is at all times a major one, and I cannot entirely agree with Dr. Smith that it can be done in two minutes and that there is no danger. I consider that every time the abdominal cavity is opened there is danger. In the hands of Dr. Smith and Dr. Reddy such an operation may be very simple, but what may be very easy to them may not be to a general practitioner, obstetrician or surgeon.

A. LAPHORN SMITH, M.D. I am very grateful to those who have so generously discussed my paper to-night. I know that Dr. Little is under the influence of the European School, but I want to point out to him that the European School is following the American School and that American Gynæcology is leading the world to-day. For instance, the vaginal removal of pus tubes which originated in Europe is going out completely. Abdominal section is a very serious thing, but if there is one case more than any other where the ideal conditions exist for such section, it is in these cases, where the child must be removed from the mother as quickly as possible and with the smallest possible risk of injury to both. It must not be forgotten, however, that it requires an expert and quick operator if we would obtain a low or no death rate, and the services of such a one should be obtained whenever possible.

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