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THE ORIGIN OF HUMAN MIND.

By JAMES BAUGH, M.D., HAMILTON.

Intelligence, or as the word signifies, the faculty of choosing or selecting, is peculiar to all forms of cell life. This cell-intelligence is not automatism, but distinctly thoughtful, purposive and methodical. In a word it is that in which we first discover mind *in embryo*. Molecular motion does not produce the cell-intelligence, but intelligence produces molecular motion, cell proliferation and cell differentiation. As matter and energy would seem to be always associated, the former being transformable into the latter, so life and intelligence must, in some degree, be ever associated in the production of all phenomena in the animal and vegetable world. We do not know yet how to produce a living body spontaneously from dead or inorganic matter, but when the most infinitesimal particle of matter has once been made alive, the life within it has the power and intelligence not only to reproduce itself, but to so modify the individuality of its progeny that some specific organism may be evolved. Let one such specific elementary body be known as an ovum, and another as a spermatozoon, both of them multicellular in structure and highly organized. The cell-intelligence, essential to their individual being and existence, seeks to bring them together, and to blend their lives and substance to form a new body more distinctly specific and immeasurably more complex in its organization than those bodies from which it sprang. The life and intelligence of the spermatozoon become associated

and blended with the life and intelligence of the ovum, and from the union of these two cell-intelligences or embryonic minds the individual human mind springs, unfolds and expands. The two cell-intelligences incarnated in one body generate and evolve an organism which becomes, as it assumes more perfect form, more and more susceptible to its subjective or maternal environment. The mental, nervous and other physical conditions of the female on whom the fetal body subsists *in utero*, and on whom it depends for the pabulum necessary to the growth and development of its mental and nervous system, as well as its various tissues and visceral structures, influence the evolutionary process of the mind. These ante-natal or atavistic impressions undoubtedly exert a continuously modifying influence in the development of mind until it comes in contact with the post-natal objective environment, and then the embryonic mind, evolved from cell-intelligence, becomes conscious of its being and begins to unfold and expand and play its part. This part may be either passive or active. It may yield and conform to the conditions of natural and social environment in which it finds itself, or it may seek to change those conditions. So far the subject has been dealt with only as it can be experimentally demonstrated.

We now enter the regions of metaphysics and assume that life is an immanent, transcendent and continuous force possessing intelligence, or mind, which fills all space and will fill all time. The intelligence, then, from which the human mind is derived and which constitutes man's individuality, is infinite and eternal; and as man's mind is but an infinitesimal part of the infinite mind or intelligence, it must be indissolubly and inseparably associated with the infinite. The human mind is but one, though perhaps the chief phenomenon of the infinite intelligence. The beauty and fragrance of a flower; the acrid and poisonous not less than the luscious and nectarous fruit; the blade of grass; the ear of corn; the sturdy oak and the stately pine are only in a degree less phenomenal than man and other animals. Without attempting to discuss the subject ontologically, I submit that the being, life and intelligence of all these phenomena depend on the presence of a ubiquitous intelligent life which fills all forms of life. The infinite mind manifests itself in the human mind, and the human mind only becomes conscious of its being after a varying period spent in an objective environment. It does not enjoy perfect or absolute

freedom. It may roam or fly in its own subjective realm—imagination—withersoever it would, but in the external, or objective, world its operations must meet with many obstructions, restraints and limitations. It must strive strenuously if it would dominate or sink into mediocrity, insignificance and obscurity. As a social unit in corporal form it is responsible to organized society as represented by the state. As a part of the infinite and eternal, it is in essence immortal; but whether its individuality will persist after dissolution or be lost in the infinite ocean of intelligence, I will not now venture an opinion.

When the chemico-physicist shall have succeeded in producing life spontaneously, let us hope his product will be not less intelligent and beneficent than natural life, whose methods and operations may sometimes seem imperfect and fallible because of the non-development by humanity of the mental powers with which it has been so richly endowed. This non-development, however, may be purposive and according to design—a world filled with intellectual giants and geniuses might be as disastrous to mankind as the deluge.

THE DIAGNOSIS OF THE POSITION AND PRESENTATION OF THE FETUS IN UTERO, WITH A SPECIAL REFERENCE TO ABDOMINAL PALPATION.*

BY R. G. SNYDER, M.B. (TOR.).

Mr. President and Gentlemen,—The subject for discussion to-night ranks second in importance only to obstetrical asepsis, in the list of recent important advances made in practical midwifery. When the day comes that every obstetrician makes a thorough and correct diagnosis of his cases before the onset of labor, then and only will the term "still-born" be seen less frequently upon our death certificates, and the field of the gynecological surgeon become more limited.

Although an obstetrician requires the aid of more than one method of examination before venturing an opinion upon the position of a child *in utero*, it is the object of this paper to bring more forcibly before your minds the very great importance of every practitioner striving to become more and more proficient in abdominal palpation. It is remarkable that although the value of abdominal palpation has been recognized for nearly one hundred years, it is only quite recently that obstetrical writers have insisted upon necessity for its practice, even although many writers since the observation of Semmelweise have noticed the close connection between repeated vaginal examinations and the occurrence of septic infection.

Ninety-four years ago Wigand drew the attention of the profession for the first time to this method of examination, and twenty years later, Schmidt and Hohl published very complete papers upon the subject. In spite of these writings, however, abdominal palpation was not generally recognized to be of value until the last quarter of the nineteenth century, when Crede and Leopold in Germany, Pinard in France, and Macan, Neville and Smyly in Dublin, drew the attention of obstetricians to its immense practical importance.

I think we owe no small amount of credit to the surgeons, who in their field have clearly demonstrated that no man can afford to make light of aseptic and antiseptic precautions, and still hope to get perfect results. At first there was a great controversy about disinfecting a surgeon's hands, then

* Read at meeting of the Post-Graduate Society, Toronto.

followed another as to the advisability of wearing rubber gloves, but to-day it is a rare sight to see a surgeon start an operation in Toronto hospitals without doing both these things. On their side, the obstetricians have not been slow in following these discussions, and in adopting the disinfecting of their hands, the careful preparation of the patient, and even the wearing of gloves, especially where they have been exposed to infection from pus organisms. Yet we should go one step further, as we can greatly reduce the liability to infection by depending almost entirely upon abdominal examinations instead of vaginal for diagnostic purposes. To show that recent writers are beginning to appreciate the importance of this method of examination, I quote the following from Dr. Whitridge Williams' latest book on obstetrics: "Under ordinary circumstances external or abdominal palpation is the most reliable and valuable, and I should unhesitatingly choose it were I restricted to one single method of examination. In trained hands it enables one to make a satisfactory diagnosis without danger of infection, and with the least possible discomfort to the patient, and it is not going too far to say that its popularization forms one of the greatest advances in modern obstetrics."

Before starting our examinations we should have some idea as to the relative frequency of the different presentations. According to Shroeber's statistics, based upon several thousand cases for all periods of pregnancy, vertex presentations occur in 95, breech in 3.11, transverse in .56 and face in .6 per cent. We can see from this that we must always bear in mind the great preponderance of normal presentations before giving a final opinion as to the nature of the labor, but although we are comparatively safe at any confinement, in assuring the friends that everything is progressing favorably, still, unless we have made an accurate diagnosis, some day when we least expect it, we will be caught napping. This is not such a serious affair as it might seem at first sight to the city practitioner, because he can go to the phone and in a few minutes he can have skilled assistants to help him, but not so with the country practitioner, because he must depend upon his own resources to help him through with a bad case.

PREPARATION OF THE PATIENT.

She should be lying in a horizontal position on a hard table or bed. The abdomen may be fully exposed or covered with

a thin sheet. Care should be taken to have the bladder, and, if possible, the rectum, empty. The examiner, after carefully warming his hands, to make the tactile senses more acute, and to prevent reflex contraction of the abdominal and uterine muscles, takes up his position at the patient's right side so that he can palpate with his right hand, while his left controls the fundus. It is of the greatest importance to get the confidence of your patients, so that they will aid you as much as possible by allowing their abdominal muscles to become completely relaxed. As a clinical fact you will often find that they will give the best relaxation when asked "to let their stomachs fall in." (McIlwraith.) It is also important that you should use very light pressure in palpating until she becomes accustomed to the situation, because if once she becomes alarmed her muscles will immediately go on guard, and so defeat your purpose.

Let us now imagine that we have a patient ready to be examined, and I will endeavor to describe in a clinical way the various grips used, and enumerate the different points that we may expect to demonstrate as we proceed with the examination, so that we will be in a position to make a diagnosis by the process of exclusion.

I. In making an examination we seem to instinctively fall into the habit of trying to locate the back first, and as the great majority of cases are normal, we generally expect to find it on the left side. As the most prominent part of the back is opposite the umbilicus, we always start to palpate in this locality, and hence this is known as the umbilical grip. We first place one hand on either side of the uterus. Now move them synchronously, first towards one side and then towards the other. By this means it will be found that greater resistance is offered to the hand on the side against which the back is lying. If this is not satisfactory, place one hand flat upon the abdomen so as to be over the centre of the uterus. Now press directly backwards. This will have a tendency to displace the fetus to one side of the amniotic sac, and the liquor amnii to the other. The free hand can now palpate both sides of the abdomen. On one side you will feel the firm resisting back, while on the other side you get a doughy sensation due to the fluctuations of the liquor amnii. If we are still in doubt, we grasp the upper fetal pole with the left hand, and as the lower pole of the fetus is fixed against the pelvic floor, if we press downwards towards the pelvis on the upper pole, we will produce a more marked flexion of

the back, so that the right hand in palpating can easily detect the difference in the resistance on the two sides of the abdomen. (Fig. 1.) A fourth method has recently been described by Dr. McIlwraith, which is especially useful in difficult cases where you have used the other methods and are still in doubt. As a result of palpating the central zone of the uterus by these different methods we can determine the following five points:

1. As already described we can locate the back.
2. We can usually feel one or more small irregular prominences on the opposite side of the abdomen, and the mother will probably tell you that it is in the same part of the abdomen she feels the movements of the child's limbs. Except in twins, finding the small parts in one section of the abdomen confirms the location of the back in the other. Small parts, few and hard to find, suggest an anterior position of the child, especially if they are found at some distance from the middle line. Perhaps you may chance to feel the gentle tap of the feet against the mother's abdominal wall while you are palpating. If these movements and irregular nodules are felt near the middle line, it is pretty strong evidence that the child's back must be against the opposite side of the uterus, which means that we are dealing with an occipital posterior position. (See diagrams 2 and 3 as compared with 1.)
3. In very rare cases we may find that the long axis of the child runs in a transverse direction, and then we feel either the round, hard head, or the broad, irregular breech at the side of the uterus, but this abnormality is so evident that one can usually recognize it at a glance.
4. Having determined upon which side the back is lying, we can go one step further and determine whether the occiput is probably in an anterior or posterior position. If the area of resistance corresponding to the back is followed upwards and downwards, and is found to present a uniform curve with a broad, smooth surface, which runs off smoothly on to the head, it is probable that the child is lying in the first or second position (l. o. a. or r. o. a.), but if the area of resistance is not so broad, is inclined to be straight instead of convex from end to end, and a distinct sulcus is felt where the hand passes over the anterior shoulder and on to the head, it is probable that you are feeling the side of the fetus instead of the back, and this, of course, would mean that you have either a right or left posterior occiput position. (Notice the difference between diagrams 1 and 2.)

5. Occasionally you may be able to diagnose the presence of twins by noting that the woman has an unusually large and tense abdomen. Sometimes you can demonstrate a groove running along between the two bodies, and occasionally you can palpate two heads, etc.

II. We now proceed to make use of the fundal grip to ascertain which pole of the fetus is occupying the upper zone of the uterus. Having located the back, we follow it upwards until both hands are placed over the upper pole of the fetus, but not necessarily of the uterus, and then by pressing the palms of the hands firmly against the abdominal wall we are able to keep the body of the fetus firmly fixed between them, while at the same time we can try for ballotment of the head with the tips of the fingers. If the head is occupying the upper zone of the uterus, we will be able to toss it from one side of the uterus to the other on account of the hinge movement at the neck, whereas in the case of a breech, the whole fetus will move *en bloc* when we try this test. The head is more movable than the breech, for two reasons:

1. On account of its globular shape it is not so completely invested by the uterus as the breech, but is only in contact with the uterus in certain places.

2. The articulations of the neck enable it to move from side to side independent of the trunk, while the breech being part of the trunk can only move *en bloc* with the latter. In consequence of this it is possible to ballot the head between the hands, a process which is impossible in case of a breech. If we do not get the ballotment of the head, and if the hand in following up the outline of the back seems to pass over a large, irregular, indefinite mass, and especially if we can feel the fetal small parts at the upper end of the fetus we can be pretty sure that the breech is occupying the fundus.

Note.—Jellet says that the upper pole in difficult cases has a tendency to get back behind the ribs, and that you can often facilitate your examination in these cases by pressing the lower pole upwards and backwards towards the same side on which the back lies. This will have a tendency to displace the upper pole out from its position behind the ribs, towards the centre of the uterus, and at the same time a little forward, so that the examining hand can more easily recognize its distinctive features.

III. Having ascertained upon which side the back is lying, and which pole of the fetus is occupying the fundus of the

uterus, we can now turn our attention to the lower pole of the fetus, and in studying its position we will first make use of the superficial pudic, or pawlic's grip. It is made by the fingers of the right hand. Place the thumb over the right Poupart's ligament, and the fingers over the left. Now gently sink them down and approximate them so as to grasp the lower pole of the fetus. Sometimes the layer of fat in the abdominal wall will obscure what you are feeling, and in these cases you can often improve the condition, by trying to insert your fingers in the interval between the fat and the ligament so as to lift the pad of fat up out of the way. (McIlwraith.) In this locality you would either grasp the head or the breech. The breech is much larger, more indefinite, much softer, less movable and presents no sulcus as one would feel between the head and the anterior shoulder, while the head is much smaller, is more movable, and presents the characteristic cannon-ball feeling which is so easily learned and is so impossible to mistake for any other part of the fetus. By using this grip we can determine thirteen diagnostic points:

1. Whether it is a breech or head presentation, as already described.

2. It is especially useful to distinguish a normal from an abnormal head presentation, because by this means you can diagnose between vertex, brow and face presentations, by observing the relative position of the chin and the occiput above Poupart's ligament. By occiput is meant the prominence of the occipital protuberance. In a normal case the head being well flexed, the fingers will naturally sink deeper on the side of the occiput than they will on the side of the flexed chin. (See diagram 1.) However, if the chin becomes extended you will get a brow presentation, the occiput will be thrown back, and it will be equally easy for you to sink your fingers on either side. Exaggerate this a little more and you get a face presentation, and this time the chin being fully extended, the fingers sink more easily on its side than they do upon the side which is now mostly occupied by the occiput (Diagram 3), or, according to Jewett, "If the chin lies higher than the occiput it is a vertex (Diagram 1): if both are at the same level, it is a brow, and if the chin is lower than the occiput it is a face presentation." (By "higher" Jewett means nearer to the fundus uteri.) (Diagram 3.)

3. If the chin can be felt anteriorly the case must be an occipital posterior, because the back of the head is against the posterior wall of the uterus.

4. If the patient is not in labor, and if the presenting part fills the brim, it can only be a vertex. (Pinard.) Normal primiparæ are generally engaged for three or four weeks before labor, while multiparæ are sometimes not engaged until the membranes rupture.

5. If the patient is in labor, and the head is past the brim, the resistance experienced by the fingers may also be due to some portion of the fetal trunk, which has become, or is becoming impacted within the pelvis. In such a case, the part of the fetus which is most usually felt is formed by the shoulder and a part of the back, and the head, or presenting part, would be on or near the perineum.

6. As a general rule, we may say that in primiparæ the head is generally fixed during the last three or four weeks of pregnancy, while in multiparæ it may not be fixed until the beginning of labor, owing to the greater relaxation in the bladder of the abdominal muscles. "So that, if we meet a case in which the head ballots freely above the brim at a time at which it should be fixed, pelvic contraction is the first condition to be thought of." (Jellett.) Other conditions which tend to prevent fixation of the head are: Pendulous abdomen, placenta previa, face or brow presentation, occipital posterior presentation, or a hydrocephalic head.

7. In using the superficial pelvic grip the most prominent part of the head is on the same side as the small part in a normal case (Diagram 1), and on the same side as the back in abnormal or face presentation. (Diagram III.)

8. The degree of ease with which the prominence is felt indicates the extent to which descent has occurred, but only an abnormal or face presentation. (Diagram 3.)

9. Sometimes the relative size of the child and its head can be roughly estimated, *e.g.*, hydrocephalic head.

10. You can often locate the anterior shoulder while using this grip, the shoulder on the left side of the median line indicating a left position of the fetus, and on the right side of the median line a right position of the fetus. The anterior shoulder, when near the median line, indicates an anterior position, and a distance from the median line an occipital posterior position.

11. During uterine contractions, on careful palpation in the region of the internal abdominal ring, one can often distinguish a round cord on either side (the round ligament), from which important information may be obtained. In the first place the intensity of the contraction gives us some idea as

to the manner in which the uterus is acting, and secondly, by noting their course as pointed out by Palm and Leopold, we are enabled to diagnose the position of the placenta in about eighty-eight per cent. of all cases. When the round ligaments are found converging towards the fundus of the uterus, the placenta is usually situated in its normal position upon the posterior wall, whereas, when they are parallel or diverging, the placenta is situated between them on the anterior wall.

12. During labor palpation also gives us valuable information concerning the lower uterine segment, when there exists some obstruction to the passage of the child, or some malposition of the fetus. You can sometimes notice in these cases that the retraction ring (the junction of the lower dilating part and the upper retracting part of the uterus) will be felt as a transverse ridge extending across the lower portion of the uterus. When it rises one and one-half inches above the symphysis it constitutes one of the signs of threatened rupture of the uterus, but here we must always exclude an extended bladder.

13. The location of the placenta, when implanted anteriorly, can sometimes be determined in external examination. The convex margin can occasionally be felt as a resisting ring, or you may notice that within the placental area the fetal parts are obscured to the touch.

Just here I might mention that I do not assume that the beginner will make out all these points, nor even that an expert can make them *all* out in *every* case, but if one will only take the trouble to examine every case that comes under his observation, he will soon become very expert, and by summing up all the points that he can demonstrate in each particular case under observation, he will rarely fail to make a correct diagnosis.

Deep Pubic.—To make this grip the examiner must turn around and face the patient's feet. He then places his hands over the abdomen so that the finger tips are just above Poupart's ligament. Wait for a moment or two, to catch the muscles off their guard; in the meantime ask the patient to take a full breath and then let it out. As the diaphragm ascends and the abdominal muscles relax, gently but firmly sink your fingers downwards and backwards under the pubic arch. This grip is only to be used after the presenting part has engaged, so your fingers will either come in contact with a large, soft, irregular mass corresponding to the breech, or the tips of your fingers will come in contact with a smooth,

round, globular mass corresponding to the head. In my small experience, when once I could feel that hard cannon-ball with the tips of my fingers, I felt as if I had progressed a long way in the diagnosis, because you are sure that you have a head presentation, and if it is engaged so well that you require the deep pelvic grip to feel it, you may be comparatively safe in thinking that you either have a normal presentation, or else you have a sufficiently roomy pelvis to accommodate the head in its malposition. The same rule applies here as in the superficial pelvic grip as regards the relative position of the occiput and chin, and is concisely stated in the following phrase: "That side on which the hand descends furthest is the side to which the back is directed, in a normal presentation, because the chin will be flexed and the hand will go down further on the side of the occiput."

Auscultation.—Auscultation of the uterus as a means of diagnosis is entirely a product of the nineteenth century. In 1818, Mayor, of Geneva, announced that the pulsations of the fetal heart could be heard in advanced pregnancy, by the ear applied to the abdomen of the mother. His discovery did not at first attract any great attention, and it was not until 1847 that Depaul described the practice of auscultation as a means of diagnosing the presentation of the fetus.

From the time of Depaul onwards the practice of auscultation has steadily increased in popularity, as a means of diagnosing, first, the *existence*; second, the *life*; third, the *presentation and position* of the fetus; fourth, the *probable situation of the placenta*, and fifth, *twin pregnancy*. It can be carried out in three ways:

1. By placing the ear upon the abdomen. This sometimes enables you to hear heart sounds that you would not be able to catch with the stethoscope, but I have always found that I could not localize them very satisfactorily by this method.

2. By using a stethoscope. This I have always found to be the most satisfactory, especially if you press rather firmly against the abdominal wall, as it then makes a solid medium which is better for conduction. With this method you can localize the sounds, and this is very important in diagnosing the position of the fetus.

3. I believe that Dr. Fenton prefers the phonendoscope, and that it should only be placed lightly upon the surface of the abdomen. He claims that he can hear sounds by employing this method that would not be detected by the other methods.

Fetal Heart Sounds.—These are sounds exactly similar to

the maternal heart sounds, with the exception that the rate is twice as fast and the sound is not so loud. They very closely resemble the ticking of a watch. Their average rate is 140, and the highest and lowest rate in the case of infants who have been healthy at birth is, respectively, 160 and 120 (Depaul), but in pathological cases they may be much lower, or so high that they can scarcely be counted. Some men claim that a slow heart count indicates a male child, while a rapid count indicates a female child.

I do not know just how much reliance most men put upon heart sounds for diagnostic purposes, but in the cases that I have seen during this year I have placed great reliance upon them, and have rarely seen them fail if their significance is properly appreciated. One should always remember the following rules:

1. In a normal primipara, if the case is a head presentation the heart sounds will be below the umbilicus, on the left side in an l.o.a. and on the right side in an r.o.a. (Diagram 1.)

2. If the case is an occipito anterior the heart sounds will have their site of maximum intensity close to the middle line—that is to say, about one to two inches from the middle line; while if it is an occipito posterior position the site of maximum intensity will be away out in the flank.

3. In breech cases, before the lower pole has started its descent the heart sounds will be heard at the level of or above the umbilicus on the right or left side according to the position.

Exceptions to these Rules.—1. In multiparae the head may not engage until after dilatation has taken place, so you cannot put much dependence upon their position as regards their height in the abdomen; but, of course, their significance as to right and left is unchanged.

2. On account of the rectum being on the left side it is only natural that there is more room in the right oblique diameter, hence the great majority of cases start in this diameter, either as a left occipito anterior, or as a right occipito posterior. It is this right occipito posterior position of the fetus that is the stumbling-block to so many men, especially as the great majority of these cases turn to the second position as they descend into the pelvis. While the occiput is posterior the head will have a tendency to be in an extended position. This throws the chest forward so that the heart sounds are heard in front near the middle line, because the chest is in close contact with the abdominal wall. Therefore, when we locate the heart sounds in the site for the

second position, we must always consider the possibility of it being an occipito posterior position with the head extended.

3. In any face presentation, if the occiput is posterior, the head will be extended, and the baby's chest being thrown against the mother's abdominal wall the heart sounds will be heard near the middle line. (Diagram 3.)

The funic souffle is a blowing sound which is heard in certain cases on listening over the fetus, and which is synchronous with the fetal heart. It, as well as a very rapid or a very slow fetal pulse rate, is supposed to indicate a bad condition of the fetus.

4. Heart sounds heard in more than one position, especially if there is an interval between them where they are very indistinct or die away altogether, is the most important diagnostic sign we possess of the existence of twin pregnancy.

Vaginal Examination.—Internal examination is advisable in all cases as a part of the preliminary examination in women pregnant for the first time, and in others whose obstetrical history leads to a suspicion of pelvic deformity it is imperative. For my own part I think that we should depend almost entirely upon abdominal examinations for our diagnosis. The obstetrician must make one vaginal examination to guard against such an accident as a prolapsed cord or limb, and at the same time to secure confirmatory evidence of the correctness of his diagnosis by external palpation. By it can be determined:

1. The size and condition of the vulva and perineum. If you are examining a primipara try to estimate the probability of having a tear, and the amount of time it will require to prevent it. In multiparæ notice whether you have a relaxed outlet, or perhaps the presence of scar tissue indicating old tears. Perhaps you may chance to notice muconium upon your examining finger, or it may be noticed upon the aseptic pads covering the vulva. As a rule when we see muconium in the discharge we at once conclude that we have a breech, but this is not always the case. We may get muconium in vertex presentations, but it is always a sign for rapid delivery, as there must be some undue pressure upon the fetus.

2. As your hand enters the vagina you can estimate the size and condition of it, also the presence of a prolapsed cord or limb if such a condition should happen to exist in the case under examination.

3. Now hunt with your examining finger for the cervix. If it is readily found you can, as a rule, assume that you have a normal position, but if the cervix is placed far back in the

vagina so that it is hard to find with the examining finger, beware, as you will often meet this condition in malpositions of the fetus, especially occipito posterior positions. Having found your cervix, notice the amount of dilatation that exists, and whether the cervix itself is soft and dilatable, or hard and rigid. At the same time run your finger around the edge to see if there are any old tears in it. Another point to be noticed is the presence of a placenta previa, either marginal, partial, or complete. Always be prepared for trouble when the head begins to descend through the canal and pushes the undilated cervix before it.

4. If the cervix is dilated, notice the condition of the membranes. Does the probable stage of the labor, the amount of dilatation of the cervix, and pouching of the membranes seem to correspond, or does there seem to be something irregular about them? In a primipara, in a breech case, or, in fact, in any malposition, the presenting part will not fit accurately into the cervix. This allows the whole force of the uterine contraction to come upon the liquor amnii, and it, of course, tries to escape at the point of least resistance, which is the cervix. If the one is rigid you will notice that the membranes will protrude like the finger of a glove, and they will break early, but if the case is a multipara the cervix dilates easily, and you may find a large, wide pouch of membranes, which sometimes descends to the external os before it breaks. In any case, if you have the waters coming away with a rush in the early part of labor, suspect a breech or a malposition of the fetus.

5. Having ascertained the condition of the cervix and the membranes we have yet to determine which pole of the fetus is occupying the cervix, the amount of advance that it has made, and if there is sufficient room for it to pass through the bony pelvis. If the presenting part is not fixed, we endeavor to touch the promontory of the sacrum with our middle finger, while the base of the thumb is pressed against the subpubic ligament. If we cannot touch the promontory of the sacrum, we are pretty sure that we have plenty of room. If we can touch it, we mark the position of the subpubic ligament upon our first finger, and then measure the distance between this point and the end of the second finger. A measurement of four inches indicates a dangerously contracted pelvis, while three and one-half inches is generally taken to be too small for delivery of a live child per vaginam.

6. As to the nature of the presenting part and its fixity this should be determined by external examination; how-

ever, vaginal examination sometimes gives valuable aid. The first circumstance to excite suspicion on examination, even with the os undilated, is the absence of a hard, globular mass felt through the lower segment of the uterus, so characteristic of the head. Personally, I never bother with the fontanelles and sutures, except to note their presence and that marked separation of the head bones indicates a hydrocephalic head, as they are so often unreliable. In a breech case you get a much softer presenting part, offering three points of bony resistance formed by the tuberosities of the ischium and the tip of the coccyx. Its surface markings are the aperture of the anus and the external genitals. It must be diagnosed from a face presentation, but here you have the characteristic aperture of the mouth with its bony ridges for the teeth, and the fact that the anus does bite or grip your finger. (Dr. Adam Wright.) Lastly, in cases of doubt, where the cervix is well dilated, you can make sure of your diagnosis by introducing your hand into the cervix and feeling for an ear, etc. Be careful that the ear is not doubled upon itself.

The Course and Progress of Labor.—1. The progress of labor is best determined by noting the descent of the presenting part. In the early stages this can be determined by measuring in finger breadths its height above the pelvic brim.

2. After the chin has disappeared below the pelvic brim the rate of advance can then be determined by the deep pelvic grip until it has descended almost to the perineum, and by that time you can ascertain the amount of descent by noticing the amount of the bulging of the perineum until you feel the resistance of the presenting part.

Jellett says that this is a very much more reliable method of determining the advance of the head than is a vaginal examination, because in all cases of delayed labor with strong uterine contractions the caput succedaneum hourly increases in size and bulges downwards more and more; consequently we may be led when making a vaginal examination to attribute the diminished distances between the caput and the perineum to the descent of the presenting part instead of, as may be the case, to the increasing size of the caput.

In conclusion, I will briefly state the advantages of external palpation over repeated vaginal examinations:

1. It can be performed at any time before the beginning of labor without the use of an anesthetic. You can send your patient word that you will call upon her at a certain date, and request her to save a specimen of urine.

2. No patient can object to it upon the plea of indecency.

In fact it is an excellent procedure to overcome the extreme bashfulness of some patients. In these cases you can start with your hands under a thin sheet, or even an undercover, because you are intending to gradually work it off anyway.

4. It makes a good beginning for a complete physical diagnosis for the purpose of detecting heart murmurs, diseased breasts, etc.

5. Some men say that this is not practical, because, even if you do diagnose the position of the child during the last month of pregnancy, the position may be different at labor. In answer to this argument I say that it is practical because, in the first place, if you go at some convenient time and make sure that you have a normal position, you can rest assured that everything will come along in a natural way at the confinement. To be sure of this is worth something to a man if he happens to be engaged so that he cannot leave at once when he is called for the confinement. Secondly, although I do not dispute the argument that the child often changes its position during the last month of pregnancy, still on inquiry I have found out from men of large experience that although they have often noted that an abnormal may change to a normal, they have never seen a normal case change to an abnormal. So if we diagnose an abnormal position we will be prepared to deal with it, knowing that if there is any change in the position it will be towards the normal.

6. It must be acknowledged that its value is greater before than during labor. Before labor it is ten times more certain than vaginal examination, and even in labor, especially at the first of it, you can generally make a correct diagnosis by this method.

7. It practically eliminates the danger of infection through the vagina, owing to germs being carried upon your hands during some of the repeated examinations. It is now an acknowledged fact that we cannot completely sterilize our hands. Of course, we can wear gloves which can be boiled, but the great source of infection is the vulvæ, and the insurmountable barrier is that women will not consent to have *them* boiled. (McIlwraith.)

8. The progress of labor can be judged just as accurately after a little practice by this method as it can by repeated vaginal examinations.

9. It compels a man to study the different positions of the child and their relations to the birth canal before he can use this method, and thus it makes him a more intelligent obstetrician.

Selected Article.

ON THE RELIEF OF CERTAIN HEADACHES BY THE ADMINISTRATION OF ONE OF THE SALTS OF CALCIUM.

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There occurs frequently in women, and occasionally in men, a type of headache which commonly presents the following characteristics: (1) It is present and most severe on waking and tends to lessen in intensity or altogether disappear in from one to six hours. (2) It usually manifests itself as a dull, heavy ache or as a frontal or temporal throbbing. Less often it is occipital, vertical, or unilateral. Infrequently it is neuralgic. (3) In its most typical form it is exceedingly chronic, often of several years' duration, and most intractable. It also exhibits itself as the common occasional headache to which many people are subject. (4) *It is associated with a deficient coagulability of the blood.* The subjects of the chronic form of this headache are usually of the lymphatic type. The expression is heavy and listless. The face is full and the eyes are often puffy. Some anemia is the rule, and it varies in intensity from a slight paleness to an actual chlorosis. The whole bearing exhibits mental and physical lassitude. Hereinafter the term "lymphatic type of headache" will be understood to refer to the above-described cephalalgia.

It is convenient to consider at this point certain symptoms commonly met with, and of the following several or many are usually found associated with the lymphatic headache:

SYMPTOMS.	Number of cases.
Pain after food	23
Edema either in the face or extremities	21
Shortness of breath	22
Chilblains or urticaria	8
Neuralgia	4

(1) *Alimentary.*—Anorexia, nausea, pain after food ("heartburn") and constipation. The last is the rule.

(2) *Respiratory.*—Cough and shortness of breath; rarely expectoration.

(3) *Cardiac, etc.*—Palpitation and hemic murmurs. Full, soft pulse.

(4) *Genito-urinary*.—Slight albuminuria; amenorrhœa, menorrhagia, or dysmenorrhœa.

(5) *Cutaneous and Subcutaneous*.—Chilblains, urticaria, and edema. The last manifests itself more commonly as a morning fulness beneath the eyes and less frequently as an edema of the feet and ankles or legs.

(6) *Central Nervous System and Mental*.—The sleep is usually heavy, but the patient wakes less rested than before going to bed, or the sleep may be very disturbed. Irritability combined with languor is characteristic. All degrees of mental depression are found.

PATHOLOGY.

In a series of communications Professor A. E. Wright has reported his investigations into the pathology, especially of chilblains, urticaria, certain edemas, and "physiological" albuminuria. He has shown that the pathological basis of these conditions is a lowered coagulability of the blood, dependent as a rule upon a deficiency of the salts of calcium in the blood. He conceives that such altered properties of the circulating medium conduce to transudation of the plasma from the blood-vessels into the lymph spaces. This morbid process he terms "serous hemorrhage," and it is this serous hemorrhage which determines in the skin an urticaria; in the subcutaneous tissues certain edemas and chilblains; and in the kidney physiological albuminuria.

The association in a patient of severe chronic headaches and of a troublesome urticaria along with deficient coagulability of the blood, and further the vanishing of the headaches and the urticaria on treatment with calcium chloride, suggested to me that serous hemorrhage might also be the basis of these headaches and led me to a further investigation. The results of this investigation are that ten out of fourteen cases had a lowered coagulability of the blood and that two cases, which alone were investigated in this regard, showed a deficiency in the normal amount of calcium salts present in the blood. Further, the exhibition of a salt of calcium (which was undertaken in ten cases of lymphatic headache definitely shown to have a lowered coagulability of the blood) was followed by the exaltation of the coagulability of the blood. Concomitantly with, or closely following upon, this alteration in the blood the headaches were almost invariably relieved, even although the headaches were associated with but five cases showing such

overt symptoms as chilblains or urticaria. Moreover, the headaches and the chilblains (which were both present in each of the three cases quoted) disappeared on the administration of a salt of calcium, with the consequent exaltation of the coagulability of the blood. They reappeared on decalcification of the blood with citrate of potassium, with the consequent diminution of the coagulability of the blood, and both the headaches and the chilblains in all three cases a second time disappeared after a second time administering a salt of calcium. The coagulability of the blood was again considerably increased. In view of these facts, therefore, I feel justified in believing that the lymphatic type of headache is but another manifestation of the morbid process above described as "serous hemorrhage."

It will be seen that pain after food occurred in twenty-three out of forty-eight cases of chronic lymphatic headache. This frequent association can, I believe, be reasonably ascribed to the same pathological process which I have endeavored to show underlies the lymphatic headache—namely, serous hemorrhage. The following explanation is offered. If the walls of the stomach become the seat of serous hemorrhage due to the lowered coagulability of the blood, then the sudden accession of a considerable quantity of blood, consequent upon the act of digestion, would cause a rapid increase of pressure upon the nerves of the stomach wall, which would result either in the gastric pain or only a sense of fulness. The following facts support this view: (1) Gastric crises are common in urticaria. (2) The occurrence of gastric crises in Werlhoff's disease. (3) The pain after food usually disappears when control of serous hemorrhage has been established by the exhibition of a salt of calcium.

TREATMENT.

The investigation of headaches of the lymphatic type elicited the fact of a deficient coagulability of the blood. It then occurred to me that the adoption of a form of treatment capable of exalting this deficient coagulability would control the symptoms. To this end I administered one of the salts of calcium. In almost all cases complete relief has followed this form of treatment not only of the headache but of many of the associated symptoms. It is, however, important to estimate the coagulability of the blood before beginning treatment, because, as a general rule (to which there is an

occasional exception), unless there be a deficient coagulability of the blood, no benefit from the administration of a salt of calcium need be expected. The following embodies the principles of the treatment:

(a) *Medicinal*.—(1) The administration of one of the salts of calcium. Of the two which have been used the lactate of calcium is to be preferred to the chloride because the latter is unpalatable, often nauseating, and occasionally not absorbed, whilst the lactate is much less open to any of these objections. The following has proved a satisfactory mixture: 15 grains of lactate of calcium, half a minim of tincture of capsicum, and 1 ounce of chloroform water; to be taken three times a day before meals. If more convenient one may prescribe as a powder 15 grains of lactate of calcium, which should be dissolved in one-third of a tumbler of water and taken before meals. If the lactate of calcium be not available, the chloride may be administered: 15 grains of chloride of calcium and 1 ounce of camphor water; to be taken three times a day before meals (if nauseating it may be given after meals). (Calcium lactate may be combined with the bitters, with iron, with strychnine, etc., but may not be combined with the alkalies or their carbonates.) (2) Regulation of the bowels. Constipation is a common accompaniment and must be controlled. Mild aperients, such as salines or liquid extract of cascara, are usually sufficient.

(b) *Dietetic*.—The ingestion of one or two pints of milk a day is advisable though not essential. The patient should be counselled against eating oysters, crabs, strawberries, etc., which seem to contain certain lymphagocic agents. It is best to avoid malt liquors and wines. The medicinal treatment of the constipation should be supplemented by a suitable dietary. Such a regimen in chronic cases is almost invariably successful.

In a number of cases, usually of the less severe type, considerable relief is felt in from a half to one and a half hours after the exhibition of the calcium salts. In others the relief comes during the first twenty-four hours of treatment, whilst in almost all the headaches disappear after the fourth day. Very occasionally a severe chronic headache of long duration is but little affected in less than ten days' treatment. It is advisable to continue the administration of one of the salts of calcium for a period of three weeks in the milder types of the lymphatic headache and for six weeks in the severer types. For the relief of the occasional lymphatic headache,

which is very commonly met with, the exhibition of half a drachm of calcium lactate is usually successful in from half an hour to one hour.

It is convenient to set forth in tabular form certain clinical data and the results of the various blood examinations in fourteen cases of lymphatic headache. In addition to the fourteen cases tabulated I have treated thirty-four more, making forty-eight in all. The following is a synopsis of the forty-eight cases:

(1) All definitely conformed to the lymphatic type of headache above described, and of these forty obtained complete relief and eight considerable, though not complete, relief.

(2) In four cases neuralgia occurred, two facial and two of the nerves of the lower extremities. In all relief was coincident with the disappearance of the headache and the edema.

(3) In twenty-three cases there were pain after food. Of these, sixteen found complete and seven partial relief. Further, the rapidity with which this result was obtained appears to me to be strong evidence in favor of the above-mentioned theory as to the causation of the gastric pain.

(4) In twenty-two cases dyspnea occurred. Twelve were completely relieved, nine partially, and one not at all. Shortness of breath has proved the most intractable of all symptoms.

(5) Edema of the eyes or of the extremities occurred in twenty-one cases, and of these seventeen were completely and quickly relieved. Puffiness of the eyes is readily controlled, but edema of the feet usually requires several weeks' treatment.

(6) Chilblains occurred in six cases and urticaria in two. All eight cases obtained complete relief of pain and swelling. A glossy erythema sometimes persisted for a considerable period after the chilblain had disappeared, but it caused no discomfort whatever.

(7) In the majority of cases some anemia was apparent, though usually not pronounced. In about 25 per cent. of the above cases there was slight or severe chlorosis, and of the latter there were several in whom the anemia was greatly lessened or controlled during treatment. The evidence, however, is insufficient to speak positively on this point.

(8) Languor was practically always an accompaniment of this condition, and one of the most astonishing results was the almost invariable improvement in mental and physical

tone which followed the control of the morbid process conducive to serous hemorrhage.

(9) Relapses occurred in eight cases, as a rule apparently due to the return to a careless mode of living or to dietetic indiscretion. The symptoms in all the cases were a second time easily controlled by treatment.

CONCLUSION.

That we have in the salts of calcium a therapeutically rational and effectual means of relieving headaches which are due to a deficient coagulability of the blood.

Possible Further Applications.--(1) In the treatment of those neuralgias accompanied by a deficient coagulability of the blood, four cases have been treated with success. (2) In the treatment of migraine. In two typical cases the paroxysms have practically ceased during treatment with calcium lactate.

Note on the Relief of Headaches and the Edema of Chronic Nephritis.—Six cases of chronic nephritis have been treated according to the principles enunciated above. In five the headaches and the edema were greatly lessened by the administration of a salt of calcium. One case obtained only partial relief. The details of this investigation will appear in another communication.

I wish to acknowledge my indebtedness to the honorary and resident staff of the City of London Hospital for Diseases of the Chest for allowing me to investigate cases which were under their care at the hospital.—Abstract, *The Lancet*, Jan. 20th. 1906.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP
AND F. A. CLARKSON.

Landry's Paralysis.—R. MCGREGOR (*Jour. Amer. Med. Assn.*).

The writer discusses a case of Landry's paralysis in view of the pathology and etiology of the affection. He believes that it is a toxemia especially affecting the anterior horns of the gray matter of the spinal cord. In the more virulent intoxications the peripheral nerves may also be implicated. These are the cases which give the most trouble in making a diagnosis. The high mortality of this affection is in striking contrast to multiple neuritis and anterior poliomyelitis, with which it is most liable to be confounded. In the case described the attack followed vaccination. It was preceded by chilly sensations, fever, sweating, and vertigo. The rapidly ascending paralysis within the first week involved all four extremities, including speech and deglutition and the ocular muscles. There was cardiac irregularity and dyspnea, but there was no pain or nerve tenderness and no fever after the stage of onset. The patient slept well and took a fair amount of nourishment. At the end of two months the bulbar symptoms improved, but recovery was not approximately complete until two years. The patient has not attained his former weight. There is a slight foot-drop, most marked in the right leg, and the knee-jerks have not returned. In the treatment the best results seem to follow the use of a simple solution of the glycerophosphate of iron with small doses of strychnine.—*Medicine.*

A New Hysterical Stigma.

In the October number of the *Journal of Nervous and Mental Disease* W. W. Graves offers a comment upon a new and apparently constant stigma in hysteria; this he has confirmed in a number of cases. Of the subjective symptoms, pain and paresthesia, and of the objective, anesthesia and analgesia are the most constant. In a recent series of forty cases sensation was found normal in only five per cent. This particular sensory disturbance which he here relates he discovered while examining a patient who had had frequent hysterical fits and other hysterical manifestations. This was consistent

in anesthesia associated with hyperalgesia sharply confined to the areola-nipple area. He was so impressed with his findings that he has since made it a rule in private and clinic work to note especially the state of sensation of the areola-nipple areas in every individual coming under his observation. These observations have shown that the disturbance was found in no normal case; that it was not present in any organic disease, neurosis, or psychosis unless hysteria was a complication; and that in every case of hysteria, thirty in all, six males and twenty-four females, this phenomenon was invariably present. Some of his colleagues have confirmed his observations, and his own experience compelled him to consider the areola-nipple anesthesia associated with hyperalgesia as a pathognomonic and apparently constant stigma in hysteria, and that it may be of assistance in helping to differentiate between the so-called functional disorders, and between the hysterical and the organic.—*Medical Age*.

Fever during Menstruation as an Early Sign of Tuberculosis

Franck (*Berl. Klin. Woch.*) believes that a rise in temperature preceding or during menstruation is a strong presumptive sign of a morbid process somewhere in the body—usually tuberculosis. If the woman be anemic and thin, with a tendency to sweat and to take cold readily, antituberculosis treatment should at once be inaugurated. Sabourin and Kraus have also recently pointed out the likelihood of tuberculosis in cases where there was fever during menstruation.—*Medical Times*.

Post-mortem Examinations which do not Reveal the Cause of Death.—F. J. SMITH (*Brit. Med. Jour.*).

It is a common belief in the laity and not rare in the medical profession that all that is necessary to ascertain the cause of death is to make a post-mortem examination. In 2123 post-mortem examinations performed carefully and recorded with exactness at the London Hospital, no less than 102 presented no naked-eye changes to which death could be attributed. In the period covered by the report there were 115 cases of death ascribed to wasting without obvious clinical cause and diarrhea and vomiting. Of these no fewer than 83 showed nothing in any of the internal organs to which death could be ascribed. In all these cases it would have been impossible for autopsy alone to explain the death. Where there is extensive injury and laceration of tissues with severe

hemorrhage the cause of death may be stated, but where disease is found in the heart, lungs, stomach, or kidneys without clinical history the most that the pathologist can say is: "I found gross disease of such and such organ, and it would be sufficient to account for death sooner or later and may have caused it now." In concluding the writer says that a verdict arrived at based on the pathological evidence alone is often valueless. It is absolutely essential in arriving at a correct conclusion that the clinical history should be coordinated with the pathological findings. The latter are important and valuable, but the two should be associated in order to arrive at a correct conclusion.—*Medicine.*

Should the Youth of this Country be Instructed in a Knowledge of Sexual Physiology and Hygiene?

Prince A. Morrow (*American Medicine*) says the general principle is laid down that the education of the public is the most valuable of all measures for the prevention of communicable diseases. Its importance is emphasized in the case of diseases the communication of which lies entirely within the control of the individual. The object of the proposed education is to give the youth of this country a clear comprehension of certain physiologic truths which have a direct bearing upon the regulation of their sexual lives, and of the serious consequences in the shape of disease and death which follow a breach of hygienic laws. In other words, it is to teach them how to live according to the laws of a healthy nature. This instruction in the physiology and hygiene of the sex function should form an essential integral part of the education of youth.

Dr. Morrow criticizes our present educational system, the policy of which is to launch the young into the world in complete ignorance of everything pertaining to the laws of life reproduction. In seeking this knowledge the youth is but obeying a law of his mental evolution. Since this knowledge cannot be had from legitimate sources—from parents and instructors—it is gained surreptitiously, and usually from depraved sources, dissolute companions or erotic or quackish literature. To be salutary as a safeguard, therefore, this hygienic education should be given in youth, for it is during this period that the foundations of what may be termed the "sexual character" are laid, and habits of mind and practices are formed which in a great measure determine the future sexual life of the individual.

Action and Uses of Digitalis in Cardiac Failure.—J. M. BRUCE
(*Brit. Med. Jour.*).

An analysis of a case is given which illustrates the importance of studying the amount of urine when administering this drug. A patient was admitted to the hospital with marked cardiac incompetence. He was placed on the ordinary dry diet. The amount of the drug was gradually increased for several days, and when the dose of the tincture of digitalis was raised to 15 minims every four hours the amount of urine was raised from 23 to 70 fluidounces, subsequently going up to 180 ounces. If good results would be obtained from digitalis in cardiac failure it should not be given in moderate doses. Ten minims of the tincture every four hours will suffice in the majority of cases, but there are instances in which it is required in larger doses. The discredit into which digitalis has fallen may be in part due to the fact that it is given in too small doses. Digitalis has what may be called a cumulative action. No matter what the size of the dose it will take a considerable time to develop its diuretic effect. After compensation has been restored, then the non-medical measures for sustaining cardiac efficiency must be employed. In using digitalis in cardiac insufficiency emphasis is to be laid on the importance of measuring the urine. The volume of the urine is a sufficient index of the patient's condition and progress. There may be doubt as to the character of the pulse or of the physical signs and symptoms, but the quantity of the urine can be accurately measured, and its variations are a delicate index of the progress of the case and afford the most striking indications for the administration of digitalis.—*Medicine.*

Pathology and Bacteriology of Serous and Purulent Pleural Effusions in Children.—J. G. EMANUEL (*Lancet*).

Purulent effusions are far more common before the tenth year than they are afterward. Under three years of age it is almost certain that the accumulated fluid is purulent. About 75 per cent. of empyemata in children are due to the pneumococcus. They may be divided into two groups—those associated with pneumonia and those which are primary; 17.6 per cent. of the empyemata of children are caused by the streptococcus. This infection may occur alone or be associated with the pneumococcus or the tubercle bacillus. The streptococcus is not infrequently found in empyemata secondary to suppurations in other parts of the body. About 25 per cent.

of the empyemata in adults and children are due to the tubercle bacillus. It is rare to find the bacillus in purulent effusions. The virulence of these different infecting agents varies very much. From the standpoint of bacterial involvement there is no difference between purulent and serous effusions. Both varieties may be produced by the same infecting agent. Netter's observations show that many cases which are supposed to be due to traumatism or cold were often found tuberculous, and those in which there was a simple serous effusion were found in a considerable proportion to be tuberculous. He concludes that 40 per cent. of all primary exudates are tuberculous, and that in serofibrinous pleurisy the tubercle bacillus is the most common agent.—*Medicine.*

Congenital Tuberculosis.

Friedmann relates the results of two years' experimental research with the aid of the Bose endowment. It was noted that week-old embryos of rabbits almost invariably contained tubercle bacilli when such bacilli had been injected into the vas deferens of the parent rabbit a few weeks before coupling. If the coupling took place after an interval of more than four weeks, conception did not follow. When animals had been infected by way of the lungs, and the process had passed into a latent stage, no tubercle bacilli could be discovered in the embryos and they developed into healthy animals. Infection by way of the peritoneum became generalized so quickly that conception seldom followed coupling. A few tubercle bacilli could always be found in week-old embryos when, immediately after coupling, tubercle bacilli had been injected into the mother rabbit's vagina. Intraperitoneal and intravenous infection always prevented conception later when the infectious process was in progress. Subcutaneous infection of the mother animal immediately preceding coupling generally resulted in the finding of isolated tubercle bacilli in the liver of the fetus. They had evidently passed through the placenta. They always proved to be avirulent, and the embryos developed into healthy animals. Examination of sections of six pairs of testicles from cadavers of consumptives failed to reveal tubercle bacilli in any quantity. Only two bacilli were found. Similar sections of testicles from lepers showed swarms of lepra bacilli in the sections of the testicles. Friedmann adds that in 983 tuberculous patients with a parental history the father had been tuberculous in 51.2 per cent., the mother in 32.8 per cent. and both parents in 15.9 per cent., showing the

preponderance of paternal tuberculous records. In all his experiments the embryos, although harboring tubercle bacilli, yet developed normally and were not to be distinguished from normal animals.—*Virch. Arch. and J. A. M. A.*

Trauma in Relation to Affections of the Pancreas.

Hilgermann reports a case of carcinoma of the head of the pancreas developing in a healthy man of fifty at the point where he had been injured in an accident eight months before death. The case suggests the possibility that malignant disease may follow trauma of the apparently most inaccessible organs. The development of the symptoms suggested an intimate connection between the injury and the cancer.—*Virch. Arch. and J. A. M. A.*

Calcification of Aorta in Rabbits after Injections of Adrenalin

Scheidemantel's experiments have confirmed those of Josué and others, who found that long continued intravenous injections of adrenalin induced marked changes in the aorta. The changes were very pronounced in some of the rabbits, while in others they were insignificant. The changes resembled more the calcification of the media in the arteries of the extremities in man rather than arteriosclerosis. In order to approximate the conditions of the development of arteriosclerosis in man, the animals should be kept permanently under the influence of blood-pressure-raising substances, not the mere brief and intense experimental work yet done in this line.—*Virch. Arch. and J. A. M. A.*

Arteriosclerosis in Children.

Oppenheimer reports two cases of arteriosclerosis in boys of nine and ten. In the first the child succumbed to a spontaneous rupture of the aorta. High blood pressure and a possible congenital weakness of the wall of the artery were the cause of the affection in the first boy, but in the second it was undoubtedly of toxic origin. The pathologic anatomic findings in each case were those of typical arteriosclerosis.—*Virch. Arch. and J. A. M. A.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. MCLWRAITH, FRED. FENTON AND
HELEN MACMURCHY.

The Methods of Artificially Dilating the Cervix during Pregnancy.

Sir Wm. J. Sinclair (*Jour. of Obst. and Gynecol. Brit. Emp.*, Sept., p. 149) reviews the conflicting views expressed at the recent Congress of the German Gynecol. Soc. In advising the course to be adopted in general practice he condemns the various rapid dilators which have been constructed on the Bossi principle. They have inflicted ghastly injuries on the cervix, as extensive as those which may result from the premature application of the forceps. Incision of the cervix he also condemns. Digital or manual dilatation he thinks the most dangerous method of all, even when the os is dilatable. The effects to be expected are laceration, hemorrhage and sepsis. The method to be adopted depends on the object in view and the stage of the pregnancy or labor.

In the early stages of pregnancy, if abortion has to be induced because of threatened death from hyperemesis, the best treatment is to use a laminaria tent. It both dilates the cervix and stimulates the uterus to contract. Its slowness of action is one of its chief advantages. The objection is made that it may produce sepsis. But laminaria tents might be saturated with antiseptic fluids and rendered not only aseptic but bactericidal. A good deal remains to be done to improve them.

In later pregnancy, for example, in the induction of premature labor for slightly contracted pelvis, the practice most in vogue is dangerous and uncertain. The practitioner after more or less perfunctory cleansing of the vagina and os uteri pushes a bougie into the uterus. It would be a great improvement to begin dilatation and stimulation to contraction by means of laminaria tents of suitable length and calibre, and to continue if necessary the process of induction by sausage shaped silk bags or balloons. The non-elastic bag is a great improvement on the old india-rubber article, which could be used with comparative safety only once. The silk bag can be readily made aseptic, and by gentle patient manipulation the danger of laceration can be reduced to the vanishing point.—*Med. Review.*

The Treatment of Abortion.

H. J. Boldt, New York (*Journal A. M. A.*, March 17th), divides the treatment of abortion into four parts: 1. Imminent or threatening abortion. 2. Progressing inevitable abortion.

3. Incomplete abortion (retention of some of the products of conception). 4. Complete abortion. As regards imminent abortion, there is a practical unanimity of opinion of the objects to be attained. In the other forms there is a wide variance of opinion. Boldt would restrict active intervention in the conditions to cases in which it is absolutely indicated, and if retained conception products have to be removed, it is better, he thinks, to use the finger, if possible, than the curette. He has not observed that patients treated by aggressive methods were better off later than those treated without such intervention. This does not mean absolute non-intervention in all cases, but that the expectant plan of treatment should be preferred and adopted so far as possible. He gives detailed instructions as to the special treatment of the different conditions of imminent, progressing, incomplete and complete abortion, including the use of the tampon, the curette and other methods. When the curette is used he prefers a broad, sharp instrument to a dull one as more efficient and less likely to perforate than a small one. Particular directions are given as to the introduction of the intrauterine tampon, which should be done under the strictest aseptic precautions, and not after simple washing of the vulva, with the patient in bed. In cases of typical bleeding after supposed complete abortion, where it is advisable to examine the uterine cavity, he finds dissection of the posterior cervical wall a more satisfactory method of reaching it than the use of dilators. It is quicker, and makes a clean wound that can be closed by a few interrupted chromicized catgut sutures after examination. In case of infection the uterus should be emptied as soon as possible, the cervix being dilated if necessary. The article is full of instructive details. In conclusion, he reports two cases; one illustrating the sometimes puzzling conditions met with in the severer cases of sepsis after criminal abortion, and the other showing the absence of detectable pathogenic micro-organisms sometimes observed even with the most virulent uterine sepsis.

Acetone and Diacetic Acid in the Urine in the Pernicious Vomiting of Pregnancy.—BY HELEN BALDWIN, (*American Journal of Med. Sciences*)

The degeneration of the liver noted by Ewing in pernicious vomiting of pregnancy, as well as in eclampsia, suggested to the writer that in these conditions there might be found urinary changes due to the hepatic disorganization. In the similar condition of phosphorus poisoning the urine is known to contain pathological organic acids and acetone. The follow-

ing case shows that in the pernicious vomiting of pregnancy acetone and diacetic acid may be excreted in the urine:

A woman, aged 26, was married in November, 1904. The last menstrual period occurred on January 8th, 1905. About February 5th she began to have nausea, but vomiting did not begin until the 20th, at which time she was very constipated. The vomiting was relieved by ordinary treatment, rest and restricted diet, but on March 4th a violent attack occurred. From the 8th to the 30th she was kept in bed and fed almost entirely by nutrient enemata. Any attempt to feed by the mouth was followed by severe headache, nausea, and vomiting. There was great restlessness, twitching in the limbs, blurred vision, pain in the back, and intestinal colic. Four small hemorrhages took place from the bowels, the source of which appeared to be the rectum. On March 20th she vomited fourteen times during the day. She became progressively worse, and each attack of vomiting was more alarming than the previous one. Abortion was induced on the 30th and uninterrupted recovery ensued.

The following observations on the urine were made: On March 25th 600 c.c. were passed in the twenty-four hours with a s.g. of 1,028. There were a trace of albumin and a marked reaction of acetone and diacetic acid. No sugar was present. The amount of organic acids present was equivalent to 12.2 c.c. of a decinormal solution of sodium hydrate. The urea amounted to 8.86 gr. On the 29th 640 c.c. were passed containing 8.812 gr. of urea. The amount of nitrogen present as ammonia was 4.75 per cent. of the total nitrogen. Marked reactions for acetone, diacetic acid, indican, and phenol were obtained. Twenty-four hours before the operation the reaction for diacetic acid was more marked than on the previous day. On the 31st, the day after abortion, the amount of urine rose to 1,260 c.c., there was a distinct reaction for albumin, and granular casts were present. The amount of diacetic acid and acetone was considerable, but less than before the operation. On April 1st there was a distinct reaction for acetone, but only a trace of diacetic acid was present. After this the amount of these bodies diminished, but not in a regular fashion. On the 3rd, 4th, and 5th they were absent, but on the 8th there was a marked reaction for diacetic acid and a trace of acetone was present. It is noteworthy that on this day there were severe headache, nausea, and vomiting. A high degree of intestinal putrefaction was indicated by large quantities of indican and phenol in the urine by a high ratio of the combined sulphates to the pre-formed sulphates (1 to 1.9).—*Med. Review.*

Editorials.

MIDWIFERY AS THEY HAVE IT IN BRITAIN.

Two articles, one by Dr. Horrocks, Senior Obstetric Physician to Guy's Hospital, and one by a less known writer in Aberdeen, appeared in the *British Medical Journal* for March 10th. These articles would seem to show that the art of midwifery has not advanced much in the Old Land during the past sixty years or so. Dr. Horrocks' article is on "Midwifery of the Present Day." He says: "One must never use the forceps to shorten the sufferings of labor (of course I am speaking of normal cases). You cannot terminate labor before the parts are ready without doing some damage." Dr. Horrocks gives us no idea of what he considers a normal labor. The parts are often ready for delivery long before the child is born, and the skilful use of the forceps preserves rather than injures them. Furthermore, we consider the relief of pain to be one of the greatest privileges, as well as a duty of the physician. Again, "My advice to you is not to give it, *i.e.*, chloroform, at all if you can possibly help it. It is unnatural for a woman to be unconscious when the child is born. The reflex stimuli, or afferent impulses, are interfered with, and the resulting parturient forces are, to some degree, at all events, impaired." The old prejudices, which Sir James Young Simpson fought so hard to overcome in his day, are not dead yet, it seems. Must we repeat the argument that on the occasion of the first birth the Lord threw Adam into a deep sleep?

We are not to follow down the uterus with the hand. We are not to express the placenta—leave it all to nature. We must not use Crede's method for the prevention of ophthalmia. We are not to examine our patients before labor, unless they be sufficiently well informed to ask us to do so. Surely Dr. Horrocks must be an anti-vaccinationist also! Again, "At Guy's Hospital, for many years the women whom we attend—more than 3000 per annum—are not examined at all when

they obtain their cards entitling them to send for the extern attendant. The distribution of the cards is carried out by a clerk, who is not even a medical student, and, so far as I am aware, no harm has resulted from this practice." We suppose that, in the truly British fashion, they have "blundered through." It seems to us a criminal neglect that so excellent an opportunity to do good obstetrical teaching is thrown away. The one redeeming feature about the matter is that the article has excited much adverse and no favorable comment from correspondents. Perusal of the correspondence leads us to suspect that in the London hospitals there are some leaders who do not lead.

The second paper is on "Occipito-Posterior Presentation." This writer seems to have noted many of the more conspicuous symptoms of labor in this position of the head, but he most ignominiously sums up his treatment thus: "The best advice seems to be, allow nature a long time in which to rotate the head. Attempts at rotation by forceps usually fail. Pressing upon the front of the head during a pain is a safe procedure, and sometimes accelerates rotation. Best of all—go away and attend to other work and upon your return you will generally find the child born. In any case, think twice before using the forceps."

Perhaps the best comment on this advice is furnished by a correspondent who wrote to the *Journal* on March 17th: "In the spring of the year I attended a young and muscular woman in her first confinement. The labor commenced, but the first stage was unduly prolonged. I waited for three days; at the end of this time it was necessary to take serious stock of the situation." This gentleman had then recourse to a specialist, who rotated the head manually and delivered with the forceps. England has produced some great obstetricians, to whom the world owes much, but the general, and in some cases, this special practice does not seem as yet to have been lifted above the level of the midwife.

UNIVERSITY COMMISSION.

We publish in this issue a synopsis of a report of the Royal Commission on the University of Toronto. The complete report shows evidence of careful preparation in every one of its sixty pages, and gives a wondrous amount of very valuable information in a very clear and concise way.

In the first place, it suggests that the Government shall appoint a board of officials, in whom shall be vested supreme power as to the control and management of the Board. This board is to consist of fifteen members, the Chancellor and the President of the University, and thirteen others to be appointed by the Government.

The Commission tells us that the Faculty of Medicine in its relation to the University reveals one of the defects in the administration system which weakens executive control of the whole institution. It is said that the efficiency of the faculty is mainly due to the personal sacrifice made by members of its teaching staff, who receive inadequate remuneration for their services. It also says that although the state thus saves at the expense of the profession, it loses in the opportunity to help build up a great school of medicine. It is pointed out that state universities elsewhere have grasped more firmly and intelligently than has been realized in Ontario, the public value of medical education, and its intimate relation to the health of the public. It is held, therefore, that the future relations of the Faculty and the University should be radically modified, and that some of the claims of medical science upon the University should receive immediate acknowledgment.

TORONTO GENERAL HOSPITAL.

A statement has been recently published to the effect that the trustees of the Toronto General Hospital have set aside two wards (ward 25 for female patients, and ward 13 for male patients) for the reception of any patients sent in by the profession at large or by fraternal societies. The practitioner

or society physician, whether a member of the hospital staff or not, may treat such patients, and collect his fees. The charge for patients in these wards will be \$7.00 per week. Such patients will not be used as clinical material without the approval of their own physician.

Certain wards are now being used for semi-private patients in the General Hospital, the Eye and Ear Department, the Pavilion and the Burnside. The rate of \$10.50 per week is charged for semi-private patients, who are at liberty to have their own medical advisors.

MUSKOKA COTTAGE SANITARIUM.

We are indebted to Dr. J. H. Elliott, physician-in-charge, for the Eighth Annual Report of the International Sanitarium Association for 1904-5. The number of patients under treatment for the year, 223, is greater than in any previous year. The largest number in residence at one time was 67. During the year two additional tent cottages have been built, making twelve in all. It is proposed to erect three more at once to provide for increased accommodation. These tents afford a simple means of increasing the number of beds, but do not take the place of properly constructed cottages, or other permanent buildings.

It has been supposed by many that the presence of such a sanitarium would produce evil effects, and retard the progress of the town in which it is situated. In answer to certain inquiries in this regard, Dr. Elliott quotes as follows from the *Gravenhurst Banner*: "In 1896, the year in which the sanitarium was built, the population was 1900; this year, 1905, it is 2382, showing an increase of 25 per cent. The assessment in 1896 was \$290,000; this year it is \$420,000, an increase of 44 per cent. The town's future is promising, and the people in the district prosperous. Houses are at a premium at increased rents, and there are no vacant stores in town. Business in general have directly benefited by the presence of the sanitarium, and there is more business done

in Gravenhurst to-day than ever before. There is also an unprecedented demand for skilled and unskilled labor. The public health has not suffered. No case of consumption in town can be traced to its presence. That the sanitarium is a benefit to the town and farmers is a certainty."

Dr. Elliott in giving results tells us that with growing experience it is shown that a fair proportion of the far advanced cases may be admitted with great benefit to themselves and without prejudice to the earlier cases under treatment if a careful selection be made. Of course, these cases can never be admitted to the exclusion of the more favorable ones, and it is only possible to accept them when they have a number of vacant beds, the aim being, as much as possible, to maintain the sanitarium as a curative and educative institution, and not palliative.

The records of the sanitarium show that at least 75 per cent. of incipient cases may be cured, while less than 15 per cent. of advanced cases, and barely 1 per cent. of far advanced cases, can be benefited to any extent.

EUTHANASIA.

Considerable interest has been taken in the subject of Euthanasia during the last few months in the United States, especially by the non-professional public. The *New York Medical Journal*, in its issue of February 17th, refers especially to the introduction of a certain bill into the Ohio Legislature, which would allow physicians to put an end to the lives of their patients under certain circumstances. It is said the bill was introduced at the behest of some cracked-brained sentimentalist.

The writer goes on to say: "The use of the word euthanasia in connection with such a barbarous and gruesome proposal is clearly a misnomer. Its correct designation would be 'legalized homicide,' and carried into effect it would constitute a reversion to the inhuman practices of savagery and the Draconian laws of the Spartans, which the civilized world has long since

outgrown. It is difficult to conceive of any physician so lost to the best traditions and plain teachings of his profession as to exercise such a repulsive privilege, even if there were any chance of a revolting measure of the kind becoming law.

“Euthanasia, rightly understood, however, has from time immemorial been practiced by the best physicians, and it is often the doctor’s last merciful duty to his patient. It is right to alleviate with all the resources of our art the agony of a moribund sufferer, and in so doing the wise physician only follows the course of nature herself, who is generally kind enough to envelop in grateful oblivion the grand climacteric of death.”

THE UNIVERSITY COMMISSION.

The following is a synopsis of the report of the commission respecting the University of Toronto, which was presented to the Government, April 6th, 1906.

The chief features of the report of the commission are briefly summarized by the commissioners themselves in the following conclusions:

“ (1) The powers of the Crown in respect to the control and management of the university should be vested in a board of governors, chosen by the Lieutenant-Governor-in-Council, and subject by their method of appointment and by the regulation of their proceedings to the perpetual authority of the State.

“ (2) The Senate, with its legislative and executive powers, and based upon the principle of representation of the federated and affiliated institutions and the faculties and graduates, should direct the academic interests of the university.

“ (3) The School of Practical Science should be united with the university as its faculty of applied science and engineering, and the same intimate connection should, as far as practicable, apply to the relations of the faculty of medicine to the university.

“ (4) University College should continue, as now con-

stituted, with a principal, faculty, council and registrar of its own, its administration being under the direction of its faculty council, subject to the control of the Governors, and appointments to the staff being made on the recommendation of the President of the university.

“(5) There should be created a council of the faculty of arts, composed of the faculties of all the arts colleges and representatives of the federated colleges, and a council for each faculty.

“(6) There should be created a caput, or advisory committee, having authority in certain matters of university discipline, which may act as advisory to the President.

“(7) The office of Chancellor should be retained, its occupant to be elected by the graduates, and to preside over convocation and confer degrees.

“(8) The office of Vice-Chancellor should no longer exist, its functions and duties being transferred, in certain respects, to the President.

“(9) The office of President should be clothed with additional powers, making its occupant, in fact as well as in name, the chief executive officer of the university.”

DIRECT STATE CONTROL REJECTED.

After discussing the defects of the system of administration, as revealed in its history and present working, the commissioners assert that their object has not been to sever the university from the State, “with which it is inseparably associated, to the welfare and honor of both,” but to change the administrative machinery, with a view to greater harmony and vitality. The situation now, they assert, is full of anomalies owing to the constitution having been drawn partly on British and partly on American models.

“We have no doubt that one of the principal contributory causes of this condition is the exceptional and unsatisfactory method by which the powers of the Crown in relation to the university have been exercised. No parallel to this method exists either in Great Britain or in North America. The State-owned and State-supported universities of Michigan, Wisconsin and other States of the American Union offer the closest examples for comparison. In these cases the State invariably delegates its power to trustees or regents. These trustees are either appointed by the Governor of the State or are elected by the people. To administer the affairs of a State

university by a political Government, occupied with different matters, constantly changing its party character, and gifted with no special talent for the management of universities, has not commended itself to a practical and progressive people. We see no ground for the belief that this plan of direct State control, rejected abroad and in ill-repute at home, can be made a success in this Province."

BOARD OF GOVERNORS.

A board of fifteen governors is recommended, two of them, the Chancellor and President, being *ex-officio*, the others being appointed by the Government periodically so as to keep the personnel of the board in close touch with the Ministry of the day. The Chancellor, as at present, should be elected by the graduates. The proposal to have a number of the governors elected by the graduate body was given "long and careful consideration." It was rejected so as not to interfere with the responsibility of the Legislature.

The authority of the Crown should be provided for in three ways: "First, by the provision that of the fifteen governors all except the two *ex-officio* members should be appointed by and be removable at the pleasure of the Lieutenant-Governor-in-Council; second, that detailed statements of the expenditures and the investments should be annually furnished to the Government; and, third, by the provision that no expenditure involving any encroachment on the endowment should be made without the sanction of the Lieutenant-Governor-in-Council."

The commissioners recommend that the governors appoint the President, he being amenable in all respects to their supervision, and all his executive acts being ratified by them. He should be relieved of teaching duties. He should be *ex-officio* a member of the Board of Governors, but not the Chairman of the board. That officer ought to be named by the Government. He should, however, be Chairman of the Senate and a member, *ex-officio*, of every faculty in the university.

POWER OF APPOINTMENT.

The right to recommend should rest with the President, who as the academic head is the natural adviser of the governing body. Without his recommendation the responsibility of action would be divided. Appointments, therefore,

should be conditional upon his nomination. The President, under such circumstances, would necessarily consult with those distinctly qualified to give him advice. The fact that the Governors would hold him responsible for the character and fitness of the appointment would render him careful to exhaust every possible avenue of information. It would entail a constant search for promising men in every department of university work, and compel the President to have a knowledge of the standard of ability required in other universities which he would be free to apply at home. The spirit in which this duty would be discharged and the measure of success attending it would go far to indicate his own fitness. The highly important, and at times delicate, task of insuring the maintenance of the quality of the work done by the individual members of the staff is also best performed by the President.

FACULTY COUNCILS.

The report recommends that much of the business now done by the Senate be handed over to faculty councils, which would be the working bodies in academic matters, each faculty thus practically controlling its own affairs.

The creation of a caput or advisory committee consisting of the President and the heads of University College, Victoria, Trinity, Knox, St. Michael's and Wycliffe is suggested. It would have certain powers of discipline, and the President could, if he wished, consult it in matters of general university concern.

THE FEDERATED BODIES.

The commissioners say: "Our instructions enjoin us to have regard to those provisions of the Act of 1887, as recast by the Act of 1901, which affect the affiliated and federated bodies. Even in the absence of such instructions the obligation to regard these arrangements with an intelligent sympathy would naturally occur to anybody anxious to reach a conclusion just to all concerned."

SCHOOL OF PRACTICAL SCIENCE.

The union of the school and the university is recommended as of distinct advantage to both.

THE FACULTY OF MEDICINE.

The report pays a high tribute to the members of the medical faculty for their self-sacrifice and zeal in medical teaching. The ultimate incorporation of the faculty into the university with the same relations as the other faculties to the governing body is recommended. In the meantime it is recommended that the university should at once pay the salaries of one professor of pathology and one professor of anatomy, as is common in the case of other universities, and should create chairs in hygiene and pharmacology. The President of the university should be *ex-officio* a member of the faculty, so that in future his recommendations as to medical appointments can be made after consultation with those best qualified to advise him.

WOMEN MEDICAL STUDENTS.

The commissioners announce that an arrangement has been reached by which in future women shall be admitted as students in the faculty of medicine. This is in lieu of the request made to them by the authorities of the Ontario Medical College for Women that a separate medical faculty should be created.

ONTARIO AGRICULTURAL COLLEGE.

The commissioners, having visited the Guelph College, report upon the relations of that institution to the university. The success and efficiency of the college are referred to in warm terms. No change that would interfere with the control and responsibility of the Minister of Agriculture for the college is deemed necessary.

A STATE VETERINARY COLLEGE.

The commissioners recommend the purchase by the Province of the charter and rights of the Ontario Veterinary College and the setting up of a Provincial Veterinary College, affiliated to the university, but managed in the same way as the Guelph College, with the Minister of Agriculture as the supreme authority responsible to the Legislature.

NEW DEPARTMENTS OF WORK.

The report urges the appointment of a staff of at least three for instruction in forestry, and recommends that this course in the university be made to co-operate with the work done by

the Government for reforestation and preservation of the Crown's timber domain. The creation of a department of pedagogy is recommended. A faculty of law should be established without conflicting with the instruction now given by the Law Society. The household science department, which is to be given a handsome building by Mrs. Massey-Treble's generosity, should be adequately maintained. In art, music, research work and museum facilities the report recommends extension.

POINTS FOR THE STUDENTS.

The commissioners make no reference to any past difficulties between the authorities and the students, but refer generally to the advisability of the relations between staff and students being "as close and friendly as possible." A system by which each professor would become the adviser of a certain number of students is approved of. Residences are warmly endorsed for their good influence, when rightly conducted, on the characters of the students. The appointment of a physical director, who is a graduate in medicine, is recommended. He would advise students in respect to sports and healthy exercise.

TRINITY FOR QUEEN'S PARK.

The commissioners say that the relations between Trinity College and the university entailed special inquiry and consideration. The present arrangement, by which the Province pays the cost of duplicating lectures, and the advisability of Trinity removing to Queen's Park, are discussed. The commission came to no conclusion as to a basis of agreement, but, the report says, "though we were unable to reach a conclusion which would enable us to make a specific recommendation, the subject is one deserving of further consideration, and we recommend that it be taken up by the board of governors, and that a further effort be made to arrive at a basis of agreement more satisfactory than, in our opinion, is the one now existing.

THE FINANCIAL QUESTION.

The report deals exhaustively with the financial needs of the university, and declares that an annual sum of \$275,000 is needed if the Province is to give adequate support to the claims of higher education. To provide this sum the succession duties are suggested as a source, the average annual revenue for the past six years from this tax amounting to \$395,163. An endowment of land to the extent of at least a million acres is also recommended.

SUNDRY CONSIDERATIONS.

Research work in the university is specially dealt with, and the success of former students like Dr. Osler and Dr. Barker referred to. There has been a steady but moderate increase in the number of research students, but in medicine especially more could have been done with greater facilities. Want of equipment has been the primary obstacle in the field of applied science.

BRITISH MEDICAL ASSOCIATION.

SEVENTY-FOURTH ANNUAL MEETING, TORONTO, AUGUST, 1906

Abstract of Memorandum for Officers of Sections.

Meetings of Sections.—The Sections will meet on Tuesday, Wednesday, Thursday and Friday, August 21st, 22nd, 23rd and 24th, at 9.30 a.m., adjourning at 12.30 noon each day.

Sectional Committee of Reference.—The President, Vice-Presidents and Secretaries of each Section will form a Committee of Reference, and shall exercise the power of inviting, accepting, declining, or postponing any paper, and of arranging the order in which accepted papers shall be read.

Guests.—Papers by guests will be presented upon invitation. If the Committee of Reference desires to invite persons to read papers in the Section who are not eligible to become members of the Association, their names should be submitted for the approval of the Council. If it is desired to ask any such persons to attend the meetings of the Section and take part in the discussions a general permission to issue such invitation should be obtained.

All papers read are the property of the British Medical Association, and may not be published elsewhere than in the "British Medical Journal" without special permission.

DISCUSSIONS.

Secretaries are requested to communicate to the General Secretary a preliminary statement of the arrangements made for the discussions in the Section to be laid before the Council at the earliest possible moment. This should consist of a statement of the subjects selected, together with the names, if possible, of the gentlemen who have undertaken to open the discussions.

PAPERS.

The offer of a paper should not be accepted on its title alone, and save under exceptional circumstances no paper should be accepted for reading until it has been sent to the secretaries.

The Secretaries are requested to communicate to the General Secretary of the Association, 429 Strand, London, W.C., not later than June 15th, a complete list of papers approved and accepted for reading.

It is suggested that the secretaries resident in the United Kingdom should collect papers from members on this side, and the secretaries in Canada should deal with all papers in the Dominion and the United States.

Only titles of papers which have been accepted, and which may be reasonably expected to be read, should be included in the programme of sectional proceedings.

Offers of papers ought not to be accepted in excess of the number likely to be read. Failure to observe this condition leads to many inconveniences, and gives rise to complaints of unfair preference.

REPORT IN THE "BRITISH MEDICAL JOURNAL."

A report of the actual proceedings of the Section will be published in the *British Medical Journal*, and in any communication addressed to persons who offer papers to be read in a Section two things should be made quite clear:

1. That papers read are the property of the British Medical Association, and cannot be published elsewhere than in the *British Medical Journal* without special permission.

2. That the authors of papers not read have no claim for the publication of their papers in the *British Medical Journal*. *Papers cannot be taken as read.* If they are not read they form no part of the proceedings of the Section.

Secretaries are requested to co-operate in preparing the report of the proceedings of their Section for publication in the *British Medical Journal* with the reporter of the *British Medical Journal* appointed to the Section, and to hand to him all matters for publication for transmission to the editor of the *British Medical Journal*, 2 Agar Street, Strand, London, W.C.

The attention of authors should be particularly directed to the time-limit (see below), and the text of papers submitted for publication in the *British Medical Journal* as part of the report of the Section should represent what is actually read to the Section.

It is important that each author should hand the text of his paper in proper form for publication to one of the secretaries of the Section immediately after it is read. It should be made clear that neglect to comply with this request may result in the omission of the paper in question from the proceedings of the Section subsequently published in the *British Medical Journal*.

Time Limit.—The attention of the Council of the Association has been called to the non-observance by readers of papers of the rule as to the time limit, which is as follows: "No paper must exceed fifteen minutes in reading, and no subsequent speech must exceed ten minutes." The attention of Presidents and Secretaries of Sections is particularly requested to this rule.

Honorary Local Secretaries,

DR. F. N. G. STARR,

DR. D. J. GIBB WISHART,

PROFESSOR J. J. MACKENZIE,

} The Medical Laboratories,
} University of Toronto,
} Toronto, Ont.

NOTES.

Queen's Graduates.

The results of the Medical Department examinations at Queen's College, Kingston, are as follows: There are forty-seven graduates: A. E. Baker, Black Falls, Sask.; W. H. Ballantyne, Kingston; J. A. Barnes, Kingston, Jamaica; A. M. Bell, Moscow; E. Bolton, Phillippsville; F. J. Braddock, Northport, N.S.; H. Cochrane, Sudbury; G. L. Cockburn, Sturgeon Falls; C. B. Dean, Bridgetown, Barbadoes; D. G. Dingwall, W. F. Gavin, Lancaster; G. D. Gordon, C. W. Graham, B.A., Kingston; J. Johnston, B.A., Combermere; W. G. Leadley, C. A. Lawlor, Kingston; S. L. Lucas, Kingston, Jamaica; F. E. Lowe, Adelphi, Jamaica; S. McCallum, M.A., Brewer's Mills; J. P. McCormick, Ottawa; D. J. McDonald, Whycocomagh, N.S.; A. G. McKinley, Chapelton, Jamaica; D. McLellan, Forrester's Falls; F. R. Nicoll, B.A., Kingston; F. J. O'Connor, Long Point; W. M. R. Palmer, Northcote; R. K. Paterson, Renfrew; W. E. Patterson, Newburgh; W. R. Patterson, L. L. Plafair, C. A. Publow, Kingston; H. O. Reddan, Ernestown; J. Reid, Renfrew; A. D. C. Robb, Nashville, Tenn.; B. A. Sandwith, Whitestable, Eng.; F. F. Saunders, Rhinebeck, N.Y.; S. S. Shannon, Kingston; S. H. Smith, Chambers; J. B. Snyder,

Lancaster; W. E. Spankie, Wolfe Island; J. R. Stewart, B.A., Waba; E. M. Sutherland, B.Sc., B. C. Sutherland, Montreal; W. J. Taigher, Beachburg; C. P. Templeton, Napanee; J. J. Wade, Balderson; D. M. Young, Bristol, Que.

House Surgeons of Toronto General Hospital.

The former and present resident physicians and surgeons of the Toronto General Hospital have formed an association, which it is expected will meet annually. A few weeks ago a temporary committee was formed, having Dr. P. E. Doolittle as Chairman, and Dr. F. Winnett, Secretary, to frame the constitution and by-laws, and arrange for an early meeting. The first meeting was held on the evening of May 9th, when a banquet was given in the King Edward Hotel, Toronto. The following officers were elected: Honorary President, Dr. C. O'Reilly; President, Dr. R. B. Nevitt; Vice-Presidents, Drs. W. P. Caven, Jno. McAlpine, James Third, R. M. Hilary, A. Ardagh, T. Middlebro, J. H. Mullin, Geo. Acheson, Don. Armour, and L. Barker; Secretary, Dr. J. N. E. Brown; Council, Drs. J. F. W. Ross, H. A. Bruce, P. E. Doolittle, W. N. Barnhart, and W. B. Hendry.

Dr. Nevitt, the newly-elected President, acted as Chairman at the banquet. Among others present were: Drs. H. J. Hamilton, C. Trow, M. McFarlane, G. B. Smith, C. Campbell, E. D. Carder, S. Johnston, G. Cleland, H. Parsons, C. Temple, F. Winnett, F. Fenton, G. Boyd, D. W. Anderson, A. B. Wright, and several others.

It is expected that the next meeting of the association will be held on the 25th of August next, immediately after the meeting of the British Medical Association.

An International Committee composed of the following surgeons: W. W. Keen, Philadelphia; W. S. Halsted, Baltimore; J. B. Murphy, Chicago; F. Kammerer, New York, has been formed to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes Von Mukulicz-Radecki, of Breslau, Germany, from the profession of the United States and Canada. The committee in appealing tells us that "an opportunity is afforded, not merely to testify of our sympathy and affection for Prof. Von Mukulicz-Radecki, but also to express our appreciation of Germany's great achievements in surgery." Contributions may be sent to any member of the committee.

New Physics Building.

The Trustees of the University of Toronto have decided to erect a fine modern physics laboratory, equipped with the latest appliances. The building will go on the west side of the oval, south of Convocation Hall, and back from the avenue line a sufficient distance to give the appearance of a wide sweep to the oval.

We desire to congratulate the *Maritime Medical News*, which is now published by the Imperial Publishing Company, on its improved appearance in its new dress.

We learn from the *Montreal Medical Journal* that Dr. J. W. Stirling has been appointed Professor of Ophthalmology in the Medical Faculty of McGill University, and Ophthalmic Surgeon to the Royal Victoria Hospital, in the place of the late Dr. Buller. As a result the position of Ophthalmologist at the Montreal General Hospital, previously held by Dr. Stirling, became vacant.

The *Montreal Journal* tells us that there were three candidates for this position. Dr. Kerry had served the hospital faithfully for eight years. Dr. McKee had a brilliant record as a student of scientific work under Dr. Buller, and had further qualified himself by post-graduate study abroad. Dr. Geo. H. Mathewson had years of faithful service to his credit in the Western Hospital, Montreal. He is a graduate in Medicine and Arts at McGill; he was assistant for four years in the Royal Victoria Hospital; he has just returned from a period of study in Vienna. Dr. Mathewson received the appointment.

Personals.

Dr. L. A. C. Pantou (Tor. '04) is practicing in Chicago.

Sir William Hickson, of Montreal, visited Toronto early in April.

Dr. Thomas Cullen, of Baltimore, sailed for Holland, March 15th.

Dr. J. J. Hamilton (Tor. '05) is now at the Lakeside Hospital, Chicago.

Dr. George D. Porter, after a visit to Italy, returned to Toronto, April 19th.

Dr. W. Harley Smith has removed from Spadina Avenue to 57 Harbord Street.

Dr. Edmund E. King, of Toronto, sails from New York for Liverpool, May 4th.

Dr. A. H. Garratt, of Toronto, will sail from Montreal for Liverpool, June 2nd.

Dr. F. A. Clarkson, of Toronto, sailed from Portland for Liverpool, April 8th.

Dr. J. Orlando Orr sailed for England, March 20th, and returned to Toronto, April 22nd.

Dr. J. H. C. Willoughby, of Saskatoon, spent a portion of the winter and spring in Toronto.

Dr. Jas. A. Robertson, of Stratford, and Dr. A. H. Wright, of Toronto, will sail from New York for Naples, May 10th.

Dr. Colin A. Campbell has opened an office for ophthalmic and aural practice at 55 College Street, Toronto.

Dr. Sam. Johnston, of Toronto, went to New York, April 12th, to spend the Easter holidays and visit certain hospitals.

Dr. A. M. Rosebrugh has removed his office from Shuter Street to his residence, 76 Prince Arthur Avenue, near St. George Street, Toronto.

Dr. W. Beattie Nesbitt, formerly M.P.P. for North Toronto, has resigned his seat in the Provincial Legislature, and is now Registrar for West Toronto.

Dr. Geo. McDonagh, after a trip to California and the Sandwich Islands, returned to his home in Toronto, and resumed practice, April 10th.

Dr. Charles O'Reilly, after a visit of nine months to England, returned to Toronto, March 27, and is now living in his new residence, 52 College Street.

Dr. E. B. O'Reilly, of Hamilton, went to Johns Hopkins, Baltimore, March 1st. After devoting himself to surgery and pathology for one month, he went to the Continent and is now working with Dr. Kocher in Berne, Switzerland.

Major Francis L. Vaux, M.D. (Trin. '85) has gone into the Medical Army Service. He left his home in Ottawa for Toronto, and spent some time at the Stanley Barracks. He is likely to be permanently located at either Toronto or Halifax.

Dr. Clarence W. Field (Tor. '05), who has been pursuing a post-graduate course in Great Britain, recently obtained the triple qualification of Edinburgh and Glasgow. He is now engaged at work in London, and will shortly go to Paris and Vienna.

Dr. E. D. Carder (Tor. '99), after spending some years on a C. P. R. steamship, went to London, and engaged in post-graduate work for about two years. He visited his home in Toronto in the latter part of March, and left April 22nd for Vancouver, B.C., where he expects to practice.

The following have been appointed coroners: Dr. Frederick Winnett, for Toronto; Dr. James I. Cassidy, of Moorefield, for Wellington County; Dr. Robt. J. Gardiner, of Seely's Bay, for Frontenac, Leeds and Grenville Counties; Dr. W. J. M. Armstrong, of Mitchell, for Perth; Dr. Jos. M. Tweedale, of Port Burwell, for Elgin; Dr. Hugh Lang, of Granton, for Middlesex; Dr. Alex. Hamilton, for Toronto; Dr. Jas. H. McGarry, of Niagara Falls, for Welland; Dr. Alf. E. Morgan, of Adelaide, for Middlesex; Dr. Geo. W. Harcourt, of Powassan, for Parry Sound.

Dr. Allen Baines, of Toronto, spent the greater part of the month of March in Jamaica. On returning from New York to Toronto, March 31st, he suffered from hepatic colic, which was followed by a serious cholecystitis. On the evening of April 4th he had a severe rigor, followed by a high temperature and rapid pulse. For four days his condition was considered somewhat serious. On April 7th his condition was improved, and he steadily gained from day to day until complete recovery took place about April 14th.

Obituary.

W. H. KYLE, M.D.

Dr. Kyle, who for a time practiced in Detroit, died at Chesley, Ont., April 7th, aged 30. He was a graduate of Trinity Medical College, Toronto.

JOHN BRUCE MacCALLUM B.A., M.D.

Dr. J. B. MacCallum, one of the brightest of our young Canadians in the United States, died in San Francisco, April 6th, of tuberculosis. He was born in Dunville, Ont., in 1876, graduated B.A., University of Toronto, in 1896, and M.D., Johns Hopkins University, Baltimore, in 1900. He did post-graduate work in Leipzig in 1901; was appointed Assistant in Anatomy, Johns Hopkins, in 1902, and became Associate Professor of Physiology in the University of California in 1903.

JOHN COPLIN STINSON, M.D.

Dr. J. C. Stinson, a very successful young practitioner of San Francisco, was killed in the earthquake catastrophe on the morning of April 18th. He was born in Brantford, Ont.; received his early education in that city; his medical education in Trinity Medical College, Toronto, and his degree in medicine from the University of Trinity College in 1893.

ALEX. THOMPSON, M.D.

The many friends of Dr. A. Thompson, of Strathroy, were greatly shocked on hearing of his sudden death, March 31st. Although not feeling well he went his usual rounds during the day attending to his practice. During the night he was suddenly seized with a "sinking spell" and died in a short time. He graduated, M.D., from the University of New York in 1861. He was sixty-nine years of age, and was for many years one of the best known and most highly respected physicians in Western Ontario.

JOHN WESLEY MOKE, M.B.

We have to announce with deep regret the death of Dr. J. W. Moke, which occurred April 10th. Dr. Moke was 31 years of age and unmarried. He was graduated from University of Toronto in 1901.

MARK DUGALD STARK, M.D., M.R.C.S.E., L.R.C.P. Edin.

Dr. M. D. Stark, of Oxford, England, died at Torquay, Devonshire, March 6th. He received his preliminary education at Dundas and Galt, and graduated from Trinity University in 1875. After he received his British qualifications he was appointed a surgeon on a steamer going from London to Egypt, India and China. On retiring from the steamship service he practiced for a short time in Berkshire, and then went to Oxford, where he formed a partnership with Mr. Sankey, surgeon.

WILLIAM JOHN DOUGLAS, M.D.

Dr. W. J. Douglas, a prominent physician of Cobourg, died March 29th, aged fifty-three years. His health had been failing for some years, but he was able to attend to a large portion of his practice.

He left his office about midday to visit a patient in the country, and, contrary to his usual custom, was driving alone. Shortly after leaving his residence he was seen to lean out of his buggy, and then fall to the ground. Two men at once went to his assistance. He spoke once in answer to a question, but died in a very few minutes thereafter.

Mr. Howard Primrose, father of Dr. Alexander Primrose, of Toronto, died at his home in Pictou, Nova Scotia, April 11th, aged 74.

We join Dr. H. H. Moorhouse's many friends in expressing our sympathy for him in his sad bereavement. His son, Mr. A. C. Moorhouse, a third year student of Trinity University, was drowned in Lake Ontario, near Mimico Point, while canoeing, April 7th.

Selections.

Influence of Light in the Production of Cancer. J. N. HYDE,
(*American Journal Medical Sciences*, January, 1906).

The skin of the human body, in a certain proportion of individuals, and in those only, is hypersensitive to the action of the actinic rays of the spectrum. This hypersensitiveness may be exhibited in the production of either hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis, or cancerosis of the skin; or by all, at times, in a determined order of succession. In the form of childhood cancerosis known as xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life, instances of this disorder being exceedingly rare. Pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin occur in adults much more frequently than in childhood, reaction to the play of actinic rays of light upon the surface being chiefly determined after the middle periods of life have been reached. Physiological pigmentation of the skin in the colored races seems to furnish relative immunity against cancerosis of that organ. The colored races apparently suffer less than the whites from cancer of other organs than the skin. This relative immunity may be due to the protection from actinic rays of light furnished by the pigment of the integument.—*Monthly Cyclopedia of Practical Medicine*.

Arteriosclerosis: Treatment. MANFRED FRANKEL (*Wiener klinische Rundschau*, Nos. 29 and 30, 1905; *American Journal of Medical Sciences*, January, 1906).

The writer considers that iodine is not indicated in this condition, since its only effect is to lessen the tension on the vascular walls. A rational treatment must be one which acts favorably on the metabolism of the vessel walls, strengthens the vasomotor system and lessens the blood pressure. Trunccek's serum has given excellent results, which are due to the action of the salts contained in it; the dyspnea becomes less, owing to the increased alkalinity of the blood, and the sodium salts act directly upon the heart and the vascular epithelium. The use of this serum, however, is painful and the daily injections are wearing upon both physician and patient; as a prophylactic it has the disadvantage that the patient objects to a painful and tedious treatment for an in-

ipient disease. It has been found that the serum acts as well when given by mouth as when administered subcutaneously, consequently the author advises the use of antisclerosin, which consists of the salts contained in the serum. The first group of twenty-five patients treated by the author with this compound included advanced cases. In many the vessels were distinctly hardened and elongated. The observations extended over about one year. In nineteen cases the subjective and objective symptoms were relieved for different periods or disappeared for months; in the six others the symptoms were relieved slowly, disappeared for a short time only, and recurred when the drug was stopped.

The author concludes that the chief field for antisclerosin is prophylaxis at the earliest appearance of the symptoms which indicate arteriosclerosis. Among these may be included a peculiar indefinable sensation in the precordium, slight dyspnea, especially on walking, dizziness, temporal throbbing, going to sleep of the extremities, tinnitus, visual disturbances without ocular lesion and indigestion. The patient's age, somewhat tense and hard pulse, plethora, gout, or rheumatism substantiate the diagnosis. Such symptoms may be removed by the use of antisclerosin. The drug should be given until the symptoms disappear, and intermitted for two or three weeks before resuming. If the symptoms recur, a renewal of the treatment is indicated. No unpleasant effects have been observed from the administration of this substance.—*Monthly Cyclopedia of Practical Medicine*.

Cancer of the Breast. W. OSLER (*British Medical Journal*, January 6, 1906).

It must be borne in mind that extensive general lesions may be associated with a small latent carcinoma. In two-thirds of the cases both breasts are involved. Direct extension through the chest-walls to the pleura, with secondary involvement of the lymphatic glands, more rarely disease of the lung itself, is one of the most common of the sequelæ of carcinoma of the breast. Pleurisy, with effusion, may come on insidiously with the only symptom an increasing shortness of breath. In other instances there are severe pains, with signs of involvement of the pleura itself by extension. It is not always easy to say whether the pleurisy is of a cancerous nature or not. Glandular metastases within the thorax are very common and associated with all the distressing pressure symptoms of tumor.

There may be no local recurrence and no physical signs, though, as a rule, the mediastinal tissues are involved and there is flatness on percussion, and not infrequently disease of the sternum itself. The glands above the clavicle may be enlarged. Even a mediastinal growth, with penetration of the manubrium, may undergo involution. Carcinoma of the lungs secondary to that of the breast is very infrequent. The peritoneum may be involved by direct extension, and recurring carcinomatous ascites is not uncommon. The breast tumor may be latent in these cases, or concealed by the patient. Metastasis to the liver is more frequent than to any other organ, but it is more commonly of post-mortem than of clinical interest. The liver becomes enlarged, irregular, nodular and the patient is deeply jaundiced, with all the features of secondary carcinoma. Cerebral symptoms may be caused either by metastasis to the bones of the skull or the brain itself. The most common and the most serious, as entailing a maximum of suffering, are the lesions of the spine. Such metastases occur with great frequency, and they are more common in the atrophic form of scirrhus of the breast. Kyphosis is rare, and any part of the spine may be involved. The secondary growths may become sclerotic and shrink with a diminution in the pressure symptoms. The symptoms usually occur in two stages. In the first or neuralgic stage, definite pains in the back begin to appear from two months to two years after the removal of the cancer. There is general anesthesia, and the patients are often thought to be neurasthenic. An attack of shingles is a distressing and not uncommon complication of this stage. The pains gradually become more severe and may occur in the most agonizing crisis. In most cases the second or paralytic stage is reached, pressure paraplegia, usually of the spastic type. Cramps in the muscles are common, and finally there is the well-known picture of paraplegia dolorosa. Spontaneous involution of the secondary tumors is one of the most remarkable features of carcinoma. Metastases to the bones are not infrequent. The bones of the hands and feet are often involved. And, finally, the author urges that in the hopeless cases morphine, enough morphine, affords the only possible relief.—*Monthly Cyclopædia of Practical Medicine.*

Treatment of Shock.

In the treatment of shock, Keen has practically given up the use of strychnine, and has substituted adrenalin for it.

Montgomery does not believe strychnine to be the best drug for continued use. He says that after the preliminary dose of strychnine better results can be secured from the administration of some preparation of aseptic ergot. Next to intravenous injection of salt solution, he has learned to rely on ergot as the most effective agent in shock. Martin says that the only drug which seems to have a distinct action in desperate cases is adrenalin chloride. This, to be effective, must be given intravenously in extreme dilution (1 to 20,000 normal salt solution) and allowed to flow slowly into a vein. It is transitory in its effects, however, and the injection may have to be repeated. This may be done for from twelve to twenty-four hours through a canula left in the vein.

Da Costa favors adrenalin administered intravenously with salt solution, and given very slowly and gradually for a considerable time. Rodman says that in mild cases due to anesthesia and the operation combined, nothing more is required than oxygen, a decided lowering of the head, and artificial heat. In cases of moderate severity, in which the temperature is from one to two degrees below normal, but unaccompanied with great cardiac and respiratory involvement, enemata of hot coffee and whisky or enteroclysis of hot saline solution, in addition to position and artificial heat, will be all that is necessary. If in addition to a cold, clammy skin, and temperature 96 deg. F. or below, there is much pain, a hypodermic of 1-6 grain of morphine with 1-150 of atropin is added to the above. Hypodermoclysis may be substituted for, or used in conjunction with, enteroclysis. If the pulse is short, frequent, and jerky, above 130, and of poor volume, intravenous infusion, preferably with adrenalin chloride, is called for; one-half pint to a pint, frequently given, is better than three or more pints at once. Laplace thinks that strychnine as a cardiac tonic is of the utmost value, but that it fails in its purpose if the circulation be at the time too weak to have it produce a stimulating effect on the brain. It is, however, the best agent for reducing shock to a minimum during an operative procedure. —*Monthly Cyclopedia of Practical Medicine.*

Scopolamine-Morphine Anesthesia. H. J. WHITACRE (*Surgery Gynecology and Obstetrics*, February, 1906).

From observations made in forty cases of anesthesia induced by this method, upon animal experimentation, and upon a review of all deaths that have been reported in the literature up to the present time, the writer concludes that scopolamine-

morphine narcosis is not devoid of danger, and its use alone for surgical narcosis is not justifiable, and, in the writer's experience, is not practicable. A single dose two hours before operation lessens the discomforts attendant upon the operative procedure to a high degree, and may obtain a definite place in surgical practice. Four deaths have occurred in a series of 2,400 collected cases, which have been so definitely related to the use of this method of narcosis that they are probably scopolamine deaths. This, however, in the absence of autopsy demonstration. These deaths have been reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as the direct cause of death (Landeau). A fatty degeneration of the liver and kidney has been produced by repeated doses of scopolamine alone, and of the scopolamine-morphine combination, in animals. This method of producing or assisting narcosis cannot yet be recommended for use in general practice, in spite of the great advantage it seems to offer.—*Monthly Cyclopedia of Practical Medicine.*

Opium in Heart Disease. J. H. MUSSEN (*American Journal Medical Sciences*, January, 1906).

According to the author, there are sound clinical reasons for the belief that opium is a tonic in cardiac debility. In cases of weak heart after exhausting disease, after prolonged mental and physical pain, and without organic lesion of valves or muscle, opium is of advantage. In cases of failing compensation, with the onset of stasis, the heart is supported, especially if the unfortunate possessor is an impressionable subject who frets and fumes because of the ordinary irritations of life. In the gradual engorgements from myocardial dilatation, in chronic parenchymatous nephritis, and in arteriosclerosis it is of value. If the patient is hypochondriacal or hypersensitive, the second daily dose of opium invites sleep and induces a feeling of well-being. The dyspnea of myocarditis is relieved or prevented by continuous small doses of morphine for a very long time. The author has seen a form or stage of myocarditis with restlessness, Cheyne-Stokes breathing, dyspnea, and rapid pulse helped by continuous doses of opium. The tachycardia of Graves's disease is relieved, and in three of his cases it appeared to contribute to the cure of the disease. In nervous and irritable patients opium is almost necessary to induce comfort.—*Monthly Cyclopedia of Practical Medicine.*

Miscellaneous.

A Medical Reverie.

Very doubtful just how to begin it,
But think I could cover a page
If the thoughts that are crowding each minute,
Would each only one sentence engage.
The wonderful treatment of cancer
So "puffed" off by a Frenchman of late
Has failed in its trial to answer,
So hundreds are left to their fate.
The plague is found due to "Bacteria"!
And rats the Bacilli convey,
So don't let the vermin come near you,
You'll find them much better away.
The open air treatment of Phthisis
Though all very well for a time
Is no better than feeding on ices
(Of course this is meant to make rhyme).
The surgeon begins at your tonsils
"Adenoids" next call for his aid,
He'll short-circuit all your intestines,
He'll find your "Appendix" decayed.
All honor and praise for that button,
Chicago's (connect-a-gut) fame,
Though not often used by Bland Sutton
The appliance itself is not to blame.
You may part with "Appendix" and "Prostate,"
And feel you have gone through the wars,
The tatter you'll know when you've lost it,
"A vacuum nature abhors."
When you've bidden good bye to your "giblets,"
And at last have to bow to your fate!
At least there is one ray of comfort,
There won't be so much to cremate!—A. D.

Renal Growths.

The following quotation was made from Dr. Kelynaek's work on *Renal Growths*, as supporting the possibility of a gradation series of renal growths:

No very definite line can be drawn between the various forms of adenomatous growth. They shade off one into another. Some, especially the "trabecular cystomata," as they have been termed, with papillary ingrowths, are particularly prone to take on indefinite growth and to manifest malignant characters. This seems to have been recognized by several pathologists.

Delafield has pointed out that sometimes adenomata behave like malignant growths, especially those forms which are very vascular. As he well says, "The adenomata, which run a malignant course with the formation of metastatic tumors, are often called carcinomata." Ricker also met with a malignant form of trabecular cystoma. It is of very great practical importance to remember that, although from their microscopical characters they might be considered simple, yet frequently they prove malignant.—*British Med. Jour.*

Experimental Arteriosclerosis.

The subject of arteriosclerosis is being investigated from various points of view by many workers. The experimenters are endeavoring to produce changes in the arteries of the lower animals by injecting and feeding them with various substances, thus attempting to solve the problem of the pathogenesis of the disease. It must be remembered that arteriosclerosis develops slowly in the human being. Let us suppose that alcohol is the cause of it; the condition follows the repeated ingestion of various doses day after day for years. Let us suppose that high arterial pressure due to muscular exertion is the cause of it; this factor also is operative day after day for years before the pathological changes are so well advanced that they produce symptoms and morbid changes. We do not make these statements to discourage investigation, but merely to remind the investigator that he is dealing with the problem experimentally under different conditions from those that occur in human pathology.

The most recent experimental work has been done by Pearce and Stanton (*Journal of Experimental Medicine*, January). Rabbits were injected in the veins of the ear with repeated doses of a one to one thousand solution of adrenalin. Usually three minims were given every other day, although in some

experiments the dose was gradually increased. The early injections sometimes resulted in death from acute dilatation of the heart and pulmonary edema. In those animals which survived the early injections by the development of a certain amount of immunity, the doses were increased gradually, and they were killed after periods varying from a few days to eight weeks and a half. Ten animals were chloroformed, and the gross lesions were found in the aortas of six. The earliest change in the vessel wall which is apparent to the naked eye consists of a faint longitudinal or irregular grayish streaking of the intima without thickening. Later, irregular isolated or confluent areas of a pearly gray color are found, almost all of which are calcified. Still later, the aorta is more or less distorted, rigid, and nonelastic; but distinct ulceration with atheroma is not readily demonstrable. Diffuse calcification is not infrequent and small aneurysmal dilatations may be present. Microscopically, primary degenerative lesions are well advanced by the end of the third week, and one or two weeks later advanced calcification may be demonstrated. The destruction of the muscle fibres is the older and probably the primary lesion. In the late lesions, when small aneurysms are found, the elastica is so completely destroyed that only an indistinct mass of fractured granular and fused fibres remains. In two animals which died on the fifth and the ninth days of the experiments, respectively, small longitudinal or occasional irregular, finely granular foci of degeneration were seen in the media of the aorta. In these areas there were no nuclei visible, and the muscle fibres were transformed into a finely granular, almost hyaline material.

There appears to be one discrepancy in the conclusions of the authors. They distinctly state that the lesion "of the muscle fibre is the older, and therefore in all probability, the primary lesion." Later they point out "the strong support afforded Thoma's views, that the primary lesion of arteriosclerosis occurs in the media and is essentially the result of changes in the elastica, and that the alterations in the intima constitute a repair process, the object of which is to compensate for the weakened media and the widened lumen." They probably mean that physiological disturbances of the elastica result in anatomical changes in the muscle, but the inference is not clear. The experimenters have not succeeded in reproducing arteriosclerosis as seen in man, and this they freely admit. It must be allowed, however, that the resemblance is very close.—*New York Med. Jour.*