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ON

SOME PRACTICAL DIFFICULTIES IN OBSTETRICS
AND GYNAECOLOGY.*

BY

COMYNS BERKELEY, M.D., M.Ch., M.A.CANTAB.,
F.R.C.P.LOND.,OBSTETRIC AND GYNAECOLOGICAL SURGEON TO THE MIDDLESEX HOSPITAL;
SURGEON, CHELSEA HOSPITAL FOR WOMEN; SENIOR OBSTETRIC
SURGEON, THE CITY OF LONDON MATERNITY HOSPITAL.

RUPTURE OF THE PERINEUM.

If sufficient care is not taken, particularly when attending a woman in her first labour, to ensure that the occiput has escaped under the pubic arch before the birth of the head by extension is allowed to occur, a tear of the perineum will almost certainly result, and this is not infrequently fairly severe. Now tears of the perineum should always be sutured, and, although it may seem superfluous to say this, yet one has often heard a doctor state that he never inserts any sutures unless the laceration is a bad one. A wound in such a position, however, increases the risk of bacterial infection; it may slough, with resulting septic intoxication, and, inasmuch as it is an indication that some part of the pelvic floor has been injured, it is partly responsible for prolapse of the uterus should this occur later on.

Not only should all tears be sutured, but they should be efficiently sutured, and this entails a thorough examination of the injury. I do not think I shall exaggerate if I say that many doctors are satisfied with an inspection of the base of the perineum as it stretches between the vulval orifice and anus, and, if the skin in this situation is intact, assume that the perineum is not ruptured; or, if a laceration in this situation can be seen, are satisfied that this is the only part that requires attention.

Now, apart from the risk of sepsis, a mere laceration of the skin and immediately subjacent tissues between the vaginal orifice and the anus is not of great moment. If, however, in all cases the patient be properly examined it will be found that in certain of them the anterior face of the perineum, covered by the lower inch or so of the posterior vaginal wall, is torn, and it is this injury that plays a part in prolapse of the uterus, meaning, as it does, that the levatores ani are torn or unduly stretched. After labour, therefore, every patient should be placed in the lithotomy position across the bed and the labia separated; with the aid of a good light the practitioner will then be able to determine accurately the extent of an injury should it be present, and if so to treat it efficiently by inserting deep sutures. It is impossible to make a proper examination with the patient in the left lateral position. That this is often deemed to be sufficient is evident by the fact that one is not infrequently called upon to perform plastic operations on the vagina in cases of prolapse in which the skin between the vulval orifice and anus is perfect, but in which a proper examination will disclose that the perineal body has been badly torn and has not been repaired.

OCCIPITO-POSTERIOR PRESENTATIONS.

The most severe ruptures of the pelvic floor are due to the use of the forceps, as a first choice in treatment, in those third or fourth vertex presentations in which the birth of the head is delayed because the occiput has rotated backwards. What is the reason for such unscientific treatment? My experience tells me that either the doctor does not recognize this complication, or, if he does, is usually unacquainted with the correct way to treat it.

At the commencement of labour there should not often be much difficulty in detecting an occipito-posterior presentation if a routine abdominal examination is made. This diagnosis can be confirmed by vaginal examination when the cervix is dilated sufficiently to allow the presenting part to be palpated easily. Unfortunately such routine examinations are not by any means universal. If, as rarely happens, such examinations are postponed until there is an obvious delay in the birth of the head, it must at once be admitted that a correct diagnosis is not at all an easy matter, even for one with special experience. When the membranes have ruptured and

the uterus is strongly contracting an abdominal diagnosis is very difficult, whilst the large caput succedaneum prevents efficient palpation of the presenting part by vaginal examination.

I think it is a fair statement to make that in very many of these cases the doctor rightly comes to the conclusion that the delay in the birth of the child is due to disproportion between its head and the pelvis of the mother, but that he remains ignorant of the cause of this disproportion until, having applied the forceps more than once and finding that they keep slipping, he at last does what he should have done hours before—that is, make a thorough examination.

If the head is presenting as a third or fourth vertex one should be able to feel in front, early in labour, knobs due to the arms and legs, instead of the usual broad back. The head has not entered the pelvis as far as it should have done, the foetal heart, if heard at all, is heard out towards the flank, and there is often a history, which is very suspicious, of premature rupture of the membranes. Later, when the cervix is sufficiently dilated, the sagittal suture can be felt in one or other oblique diameter and the anterior fontanelle can be felt, showing that the head is not properly flexed. With such information, if it is found that as time goes on the head is not descending so rapidly as it should do in spite of good uterine contractions, it is at once possible to visualize the cause and the appropriate treatment can then easily be applied. But supposing the doctor is not called in until the second stage of labour has become prolonged, or has allowed it to be prolonged before making his examination, he can, in spite of the large caput succedaneum obliterating the sutures and anterior fontanelle, still arrive at a correct diagnosis by passing his hand up the side of the head and feeling in which direction the pinna of an ear is pointing. In first labours an anaesthetic must be given for this examination.

The causes of delay can easily be understood. As the head is incompletely flexed the occiput rotates back below the sacral promontory and the fronto-occipital diameter of $4\frac{1}{2}$ in. has to pass through the vaginal orifice, whereas when the occiput has rotated forwards and the head is properly flexed a diameter of $3\frac{1}{2}$ in. distends the orifice. Again, the occiput being behind, the greatest circumference distending the vaginal orifice is 14 in., instead of 12 in. when the occiput is in front.

On the other hand, the doctor may have diagnosed correctly the misplacement but does not treat it scientifically; the result will be just the same as if he had not made a diagnosis—namely, a very badly lacerated pelvic floor, often into the rectum. This means that frequently a recto-vaginal fistula results, and in due course prolapse of the uterus is nearly certain to occur. But this is not all; the child is often born in a condition of white asphyxia or is delivered dead, or dies soon after delivery from intracranial haemorrhage due to the severe pressure of the forceps.

The treatment, therefore, is with the internal hand to flex the head by pushing up the forehead and to rotate the occiput forward. Such a procedure, with the patient anaesthetized, unless labour has been very prolonged, is not difficult if care be taken when the head is being rotated with the internal hand to turn the anterior shoulder to the front with the other hand on the abdomen. The neglect to turn this shoulder will result in the head being twisted on the neck only, and when it is released it will return to its original position. If it be found impossible to rotate the occiput forward by such means success may still be obtained by passing the internal hand above the head and then seizing the shoulders and rotating them. After the head has been rotated the child can be delivered by the forceps.

There remain those rare cases in which, owing to the strong pains and undue prolongation of labour, the head of the child has been driven down so tightly into the pelvic cavity that its rotation is impossible. If the child is dead it should, in the interest of the mother, be delivered by perforating its head. If the child is alive, there remains only delivery by the forceps. The proper forceps to use are the axis traction, because the fact that the handles are free to move in any direction will at times allow the occiput to rotate even at the last moment; serious injury to the mother will thus be averted.

THE OBSTETRIC FORCEPS.

I often think that, in the case of womankind, this additional supplication should be added to the Litany: "From the obstetric forceps and uterine curette, Good Lord, deliver us." They are the two most dangerous instruments which any doctor may legitimately employ in the practice of his

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profession. By far the most common indication for the use of the forceps is unusual delay in the birth of the child, and in the vast majority of cases when the forceps are used it is for such a purpose.

Now, strictly speaking, in such cases the forceps should only be used when it is certain that, if the uterine contractions were only strong enough, Nature would herself deliver the child. Hence it comes about that the forceps, when used legitimately, are in most cases employed when the patient is suffering from the condition known as a "sluggish uterus."

No woman with a contracted pelvis should be delivered by the forceps in whom, if only the pains had been strong enough, the head could have been moulded and pushed through the pelvis. It may be taken, therefore, as a maxim that if, in the presence of strong uterine pains and a normal presentation, allowing plenty of time, the child is not born before the condition of the mother warrants interference by the doctor, then the case is not suitable for delivery by the forceps.

It is a fact that the forceps are used much more frequently in private practice than in the labour wards of a hospital, and this in spite of the fact that the percentage of difficult cases is greater in hospital than in private practice. The reasons for this are not far to seek. In the first place the general practitioner is apt to be worried by the relatives of the patient if the child is not born as soon as they think it should be. In the second place—and here its use is if anything more reprehensible—the instrument is employed to save his time.

Delivering the child with this instrument before the os is properly dilated is responsible for a large amount of misery to many women, and every now and then is the direct cause of their death or that of their children. Now, it is an aphorism that the forceps should never be applied and the head delivered until the os is fully dilated, except in rare cases, and then only when this canal has been dilated with the gloved fingers. There are some who do not hesitate to use the forceps before the os is sufficiently dilated, relying on the forceps to do this. In not a few instances I have known the uterus by such a procedure torn right into the broad ligament, with a resulting haematoma, on occasions followed by suppuration, and twice I have known a patient bleed to death from rupture of the uterine artery. Fortunately such catastrophes are rare because the softened cervix allows itself to be stretched. Quite commonly, however, the cervix is split up to the vaginal fornix, and this is not realized at the time. Moreover, even apart from such a laceration, by the time the forceps have stretched the cervical canal sufficiently to allow the head to pass, the cervix has been pulled down so much that its attachments, especially the lateral cervical ligaments, become stretched or torn and the integrity of the pelvic floor is severely damaged, with the inevitable result of prolapse of the uterus later on. Only last week a patient with a normal pelvis, and in whom a normal vertex had presented, was admitted to hospital with the history that delivery by the forceps had failed. On examination the os was found to be only partially dilated, and the head of the child had escaped through a laceration of the uterus in its lower uterine segment into the abdominal cavity.

Now let us turn to the use of the forceps when there is a disproportion between the head of the child and the pelvis of the mother. I will pass by the cases due to malpresentation, since these should be rectified, and also those in which the head of the child is larger than normal, since these are quite rare, and, moreover, the treatment is the same as when the pelvis is smaller than normal. From time to time I meet one of my old students at the hospital, and every now and then one of them will tell me with pride how, after a tremendous struggle and with the aid of one of his feet against the side of the bedstead, he has been able, by pulling with all his might, to deliver the child. Not much of a testimonial to my teaching, you will say! Inquiry as to the child's health will elicit the information that unfortunately it was born dead or died a few hours after delivery—the death being due, of course, to intracranial haemorrhage. The unscientific use of the forceps in this connexion is responsible every year for a large number of foetal deaths, some maternal deaths, and much maternal morbidity.

In such cases of disproportion, however, it frequently happens that the pains are not very strong, and it will be asked in what circumstances can the practitioner justifiably use the forceps. The head may be arrested above the brim, in the brim, or in the pelvic cavity. If the head is movable above the brim the forceps are absolutely contraindicated.

If the head is delayed in the brim a most careful examination should be made, under anaesthesia, of the relative sizes of the head and the pelvis. If no malpresentation is present, and if, in the case of a flattened pelvis, the biparietal diameter has passed through the brim, it is evident that the disparity in size is not great; if in the case of a generally contracted pelvis the head is held fast, additional time should be given to Nature for the head to mould, when as a rule Nature's efforts will suffice. The general condition of the patient should be treated and the forceps only applied when the condition of the mother—as shown by the pulse rate and the fact that she is not sleeping between the pains—demands interference. The necessity for such a warning is evidenced by the fact that a strong pull will be necessary, and, however careful the practitioner may be, lacerations of the perineum are likely to result, and certainly the head of the child will be unduly compressed, and very likely for some time. If the head is delayed in the pelvic cavity and does not advance with the pains or recede in the interval, and if the vagina is oedematous and hot and dry, the forceps again are contraindicated. I need not further discuss the care that should be exercised in the application of the forceps. It seems superfluous to mention that the blades should be applied inside the uterus if the head has not yet passed through the cervical canal, and they should be in contact with the head. And yet I know of two cases in which the forceps were forced into the broad ligament, the lower uterine segment grasped as it was in contact with the head, and by strong traction torn right off the upper uterine segment.

CURETTING.

The operation of curetting is extremely common, and is constantly being abused, employed as it is from time to time for most of the conditions which may be attributed, without any adequate reason, to local disease of the uterus. In a large number of cases the operation does no good, whilst in some, from time to time, it is followed by such disasters as intra-peritoneal haemorrhage, pelvic haematoma, pelvic cellulitis, salpingitis, and even death. The operation of curetting, as too often practised, consists in removing the mucous membrane lining the body of the uterus. Such a procedure presupposes that this lining is diseased, but in many cases it is quite healthy.

Let us review the sort of cases for which curetting is most frequently employed. In the first place we will take leucorrhoea, because this is the commonest symptom for the relief of which the operation is performed. The normal discharge escaping from the vagina is sticky, from the mucous secretion of the cervical and Bartholin's glands. Just before menstruation and during pregnancy there may be such an excess of discharge as to cause a certain amount of vulval discomfort and to soil the underlinen. A leucorrhoeal discharge in excess of this, and at other times sufficient in quantity to necessitate the use of a diaper, is abnormal and should be treated. Curetting the body of the uterus, however, in such cases will do no good at all, and the doctor may well be disappointed. The discharge from the corporeal mucous membrane is clear and watery, and, although women suffering from chronic endometritis may have severe leucorrhoea as well, most of the discharge is due to a chronic inflammation of the cervical mucous membrane, and as this is seldom treated efficiently disappointment results.

The cause of excessive leucorrhoea is a chronic inflammatory condition of the cervical mucous membrane. Such a condition is often found in women who have had children, but unmarried women who have not had children not infrequently suffer from it. The endometrium of the body is not as a rule affected, the only symptom being leucorrhoea. When a vaginal examination is made quite commonly an erosion is detected.

Now, the operation of curetting for leucorrhoea, as generally performed, consists in removing the fairly thick, loosely attached soft mucous membrane of the body of the uterus, whilst the thin mucous membrane of the cervix which is firmly attached to the muscle, and in which are embedded the racemose glands, is not curetted at all, or so perfunctorily that the diseased glands remain. When the only complaint is leucorrhoea and an operation has been decided upon, there is no need to curette the body of the uterus; it will not do any good and it may do harm. The cervical mucous membrane, however, should be thoroughly scraped with a sharp spoon, and the erosion if present should be similarly treated.

Another common complaint for which curetting is performed is congestive dysmenorrhoea; this is due to an additional

flow of blood to the genital organs, which causes increased tension, stretches the nerves, and so gives rise to pain more or less severe. Removing the mucous membrane of the body of the uterus cannot prevent the additional flow of blood naturally taking place prior to menstruation, neither can it remove the nerves or interfere with their distribution. Hence the operation is an unqualified failure. Why, then, is it so commonly employed? The answer must be that in some cases it is followed by alleviation of the menstrual pain; but in these cases the pain that is relieved is not due to the congestive dysmenorrhoea, but to the spasmodic variety with which it is in such cases associated. Moreover, even then it is not the curetting that relieves the patient, but the dilatation of the cervix antecedent to the curetting, so that the latter is superfluous. It is obvious, therefore, that the disappointment so often associated with the operation when performed for dysmenorrhoea could be obviated if doctors would only take care in diagnosing which variety of dysmenorrhoea their patient is suffering from.

Another class of case for which this operation is performed is that of excessive uterine haemorrhage. Such diseases as chronic endometritis, mucous polypi, and subinvolution, with or without retained products, are successfully treated by this method. In the absence, however, of a careful local examination and a full consideration of all the circumstances, the uterus is quite frequently curetted for haemorrhage due to conditions in which it can do no good, and may perhaps do harm. Among these I may mention excessive bleeding due to an abnormal function of the endocrine glands, fibrosis of the uterus, salpingo-oöphoritis, and fibroid tumours.

Lastly, curetting is often employed in cases of sterility, without the doctor certainly ascertaining that it is not due to some condition of the husband which renders him sterile. I should not be surprised to hear, in the majority of cases in which curetting has been employed for sterility, that the seminal fluid of the husband has never been examined. If one comes to think of it, however, considering that it is calculated that in 10 per cent. of all cases of sterility the fault is on the husband's side, what a criminal thing it is to subject a wife to the discomforts and dangers of such an operation before ascertaining that the testicular secretion of her husband is normal. However, in the absence of local disease, curetting for sterility is on occasions dramatically successful. But here again it is a question whether the actual curetting, in most cases at any rate, is the cause of the success. More probably it is due to the dilatation of the cervix, in spite of the fact that many authorities consider the curetting to be an essential factor.

Apart from the indications I have given, the cervix should certainly be dilated, whatever the age of the patient, in those cases in which no local disease can be found and yet the patient is suffering from irregular bleeding; although in the case of young women it may be justifiable to try a short course of medicinal treatment first on the chance that the symptoms will be cured.

When the cervix is dilated, retained products of conception, polypi, small submucous fibroids, or malignant disease may be discovered; whilst in the absence of any evidence of such disease some mucous membrane can be removed for microscopical examination, when, especially in elderly women, early malignant disease or senile endometritis may be discovered, the latter being well treated by a thorough curetting.

The operation of curetting is generally regarded as easy and safe, though I have known operators of great experience fail to dilate the cervical canal, and be able to enlarge the internal os only by incising the cervix on each side until this appears in view. Safe the operation never is, and gynaecological surgeons, even of large experience, do not care much about performing it.

There are special accidents connected with each of the two parts of the operation which the operator, unless he is forewarned, may fail to detect. I will not discuss the risk of sepsis, though it is a very real one, since everyone who does any operating should have full knowledge of it. There remain laceration of the cervix, perforation of the uterus, and excessive bleeding.

To curette the uterus the cervix must be dilated. Before inserting the dilators it is necessary to know the exact position of the uterus; failure to recognize this has often led to perforation of the anterior wall of the uterus when the latter has been displaced backwards. Yet doctors quite frequently start the operation without making a bimanual examination or passing the uterine sound. The next danger

is concerned with the dilatation of the cervix. It is probable that in all cases in which the cervical canal is dilated sufficiently to insert the index finger for purposes of diagnosis some of the muscle fibres in the neighbourhood of the internal os are lacerated. At times, however, owing to the rigidity of the tissue and the consequent employment of excessive force, or because of bad technique, the cervix is very badly lacerated. Excessive force can easily be avoided by holding the dilator with the thumb and first two fingers only and resting the wrist against the buttock of the patient. To seize hold of the dilator with the hand, and without any counter-pressure of the buttock, then to press the dilator forward with great force, at times leads to the internal os suddenly splitting, when, before the operator can control it, the end of the dilator shoots forward and the uterine wall is perforated. I have seen this happen more than once.

By bad technique I mean not being sure that each succeeding dilator is inserted at least through the internal os. If the internal os is difficult to dilate it may easily happen that the dilator used is not inserted as far as the previous one. If the operator is not paying particular attention, or is ignorant that such a thing is likely to occur, each succeeding dilator goes in a shorter and shorter distance; in fact, the cervical canal only is being dilated efficiently and not the internal os. When he has passed as many dilators as he thinks necessary the operator in ignorance curettes the cervical canal only; or alternatively, if the operator notices that there is an increasing difficulty in getting his dilators to pass through the internal os, he commences to use undue force. The result is that the muscle fibres in the neighbourhood of the internal os are lacerated, and the point of each succeeding dilator, instead of passing through the os, catches in this laceration and perforates the uterus, commonly into the broad ligament and more rarely into the utero-vesical pouch. In such circumstances the curette has been passed through the laceration and the tissue beyond curetted.

The cervix having been dilated successfully there still remains the danger of perforation. This accident is very likely to happen if the uterine wall is soft, as it is in pregnancy, and this, together with the risk of sepsis, is the reason why most authorities teach that the uterus should not be curetted for retained products in cases of very recent miscarriage. On the other hand, the uterine wall may be the seat of unsuspected malignant disease, into which the curette will sink as easily as it will into a pat of butter. If a flushing curette is being used some of the lotion may be delivered into the peritoneal cavity before the operator is aware of the accident, and fatal results have been reported in such circumstances; if, as should be the practice, a non-flushing curette is being used and the case is a clean one, as a rule the patient does quite well as long as the operation is stopped and a douche is not given. If the case is a septic one, pelvic cellulitis or peritonitis, as the case may be, may result, and I have known deaths in such circumstances. Perforation may also lead to intraperitoneal bleeding necessitating the removal of the uterus, of which I have seen one case.

Sometimes after curetting the bleeding is quite severe, especially in cases of retained products which are rightly curetted some time after miscarriage; in such cases the uterus should be packed. A graver form of haemorrhage occurs in severe laceration of the cervix when the uterine artery or an important branch thereof has been ruptured. In such cases sutures inserted through the lacerated cervix are usually sufficient to stop the bleeding; failing that the artery will have to be exposed and tied either by the vaginal or the abdominal route. More rarely the blood, instead of escaping externally, infiltrates the cellular tissue of the broad ligament, causing a large haematoma, which may spread upwards over the pelvic brim and necessitate the abdomen being opened.

Lastly, occasionally very serious bleeding happens about the tenth to the fourteenth day after the operation, and failure to recognize its cause may lead to a fatal result. It is due to sloughing of the uterine artery, or to the displacement of a thrombus in the torn artery following a severe laceration of the cervix. I have seen such cases in hospital practice, and on three occasions I have been asked to see similar cases in private. On the last occasion the patient was so bad that I had to remove the uterus immediately and resort to transfusion. In this case when the bleeding first started the uterus had been packed on the assumption that the blood was coming from the uterine cavity.

THE ARTIFICIAL TERMINATION OF PREGNANCY.

Women regard miscarriages or premature labours from different points of view. While some are heartily glad to be free of what they consider to be an incubus, others are so grieved that a serious mental effect may be produced, and if it be the only time they have been pregnant entirely alter their outlook on life. Apart, however, from the feelings of the patient or her husband, the medical attendant has certain things to consider. For instance, every year a certain number of deaths are associated with the artificial termination of pregnancy; moreover, such an operation may be followed by much misery from chronic disease of the uterus and its appendages. Further, the practitioner is depriving the nation of a potential citizen, and perhaps—who knows?—of a Shakespeare or a Newton.

There are many conditions in which pregnancy may legitimately be terminated forthwith and without any hesitation; these are for the most part rare, with the exception of molar pregnancy and severe toxæmia, and I do not intend to discuss them. Certain other conditions comprise the majority of cases in which pregnancy is prematurely terminated, and in many instances such a method of treatment is inadvisable or quite unwarranted. These conditions are: bleeding from the uterus, severe vomiting, and certain cases of albuminuria.

It is often very difficult to determine in the case of a pregnant woman who is bleeding whether to empty the uterus or not. Unless the bleeding is so severe that it causes marked symptoms and signs it is no indication that the pregnancy should be terminated, neither is the duration of the bleeding nor the colour of the blood escaping. I have vivid recollections of a patient who bled not a little for five consecutive weeks, commencing when she was four months pregnant. At the end of the five weeks the bleeding stopped, and after a further rest in bed for another ten days I allowed her to get up. The same afternoon, when walking from her bed to the sofa, she had a really furious hæmorrhage which spoilt the sofa and carpet before she could be got back to bed. As she had previously had one Fallopian tube removed for a ruptured tubal gestation, when she nearly lost her life, and had subsequently not become pregnant for four years until she had been curetted for chronic endometritis, and as an heir was particularly desired and her husband was approaching 60 years of age, great pressure was brought to bear upon me to give her another chance. Beyond a somewhat free discharge for the next day or two nothing occurred, and at the end of another fortnight I again allowed the patient to get up, and subsequently delivered her at term, with no difficulty, of a child weighing 8 lb.

I feel confident that the uterus in a large number of pregnant patients is emptied because of bleeding when there is no need or justification. The doctor is not always to blame for this; many patients will not tolerate the proper treatment, or their circumstances will not allow them to follow it. Others, in their anxiety to get rid of the pregnancy, do not follow the treatment prescribed, and deliberately by various acts endeavour to hasten the evacuation of the uterus, whilst the patients of a third group or their relatives may be so alarmed at the bleeding and worry the doctor so much that in desperation he empties the uterus. Now unless the bleeding is really dangerous the doctor should be in no hurry to empty the uterus until he is satisfied, by the fact that the uterus is not normally increasing in size, that the ovum is dead. This may mean waiting for a month or more. Moreover, the fact that a discharge is brown in colour is no certain indication that the ovum is dead; such a colour may be due to the fact that the blood has been held up in the uterus, and if allowed to lie in the vagina it may even become offensive.

Of all the subterfuges women invent to get rid of their pregnancy, sickness is the commonest. Morning sickness, or, later in pregnancy, severe vomiting due to neurosis and not toxæmia, may be very difficult to treat, short of emptying the uterus. In such cases many a doctor has been driven to empty the uterus against his better judgement, either from the insistence of the patient or of her relatives, or because the patient refuses or cannot afford to follow the correct treatment. It behoves every doctor, therefore, to be very circumspect when he is faced by such a complication. In the first place, he must satisfy himself that the patient really is as sick as she says, and, secondly, whether the sickness is due to neurosis or to toxæmia. To give an example: I know of the case of a well educated woman in a very good position who, having had three children, was determined not to have a fourth. In due course, therefore, she commenced to

complain of sickness and inability to take any food. That she took but little food at her meals was certain from the observation of those in her company, and that she was constantly being sick was evident from the noises she made and the contents of the receptacles into which she vomited. Her medical attendant never tested her urine, and at last, what with the worrying of the patient and her husband, became unduly alarmed and telephoned for a consultant, who hurried down to the patient and, without any examination of the urine, then and there emptied the uterus. Needless to say, the patient made a splendid recovery. Now as a fact, as reported to me some years later by a friend of hers, the patient had boasted to her how she had tricked the doctors by eating quite good meals in secret and later making herself sick by tickling the back of her throat.

If severe vomiting in pregnancy is not due to toxæmia—and in most cases it is not—it can be cured by placing the patient in an institution away from her friends, taking no notice of her refusal to eat, and supplying her regularly with three meals a day. Unfortunately all patients cannot afford to go into a nursing home, and some may refuse to go into the hospital, so that in the end pregnancy has to be terminated. The presence of albumin in the urine and other evidences of toxæmia is an indication that the vomiting is of the toxæmic type, and such indications will now be discussed.

ALBUMINURIA IN PREGNANCY.

It is the duty of every doctor to examine periodically the urine of his pregnant patients. By so doing the supervention of eclampsia, one of the most tragic complications of pregnancy or labour, may be avoided. There is also another aspect. Nowadays, what with the ante-natal clinics and the wider diffusion of knowledge generally, it is well known by others than members of the medical profession that the urine of pregnant women should be examined at repeated intervals. The neglect to do so, if eclampsia intervenes, may, as in the instance of a doctor friend of mine, land the practitioner in an action for damages for gross neglect, and sooner than face a public trial of such a nature he may have to pay a large sum to settle the matter.

With the modern biochemical methods of ascertaining the condition of the liver and kidneys at his command, either through the medium of hospital or private laboratories, the doctor has but little excuse if, having discovered albumin in a pregnant woman, he does not have such an examination made. A chemical examination of the blood and urine may be of the greatest value in preventing permanent damage to the patient and also of the greatest value to the doctor in showing him when it is advisable to terminate the pregnancy. Nowadays we do not rely on the amount of albumin and the general condition of the patient so much as on certain tests, which include (1) the estimation of the blood urea, (2) the urea concentration test.

Estimation of the Blood Urea.

Blood (10 c.cm. or even more) is taken from the patient and tested for the amount of urea it contains. Normally there is in a healthy pregnant woman about 20 mg. per 100 c.cm. If the urea content of the blood is definitely raised, say to 40 mg. per 100 c.cm., it is proof that the kidneys are severely damaged, and an indication that the labour should be terminated.

Urea Concentration Test.

The bladder having been emptied, 15 grams of urea dissolved in half a pint of water are given. One hour and two hours after this solution has been drunk the bladder is emptied and the amount of urea is estimated in each specimen. If the kidneys are normal the first specimen should contain at least 1.5 per cent. of urea, the second 2 per cent. If lower figures are obtained a renal lesion is to be suspected. Repetition of both estimations after an interval is invaluable, since a rising blood urea with a falling concentration capacity constitute an obvious indication of a progressive lesion.

PELVIC HÆMATOCELE: RETROVERTED GRAVID UTERUS.

An error of diagnosis, among the most serious I know of with respect to its immediate result, is that of mistaking a pelvic hæmatocele due to extrauterine gestation for a retroverted gravid uterus that is bleeding. I have met with this mistaken diagnosis many times, and have known it to lead to a fatal result.

If we consider the symptoms and signs of these conditions up to a point we need not be so astonished at such a mistake, since the condition may easily be confused unless a most careful investigation is made. In both these complications there may have been a period of amenorrhoea, for the rupture or abortion of a pregnant Fallopian tube does not usually take place before the sixth week of pregnancy, and

may occur as late as the twelfth week, whilst nausea, alteration in the breasts, and softening of the cervix, which are found in intrauterine pregnancy, may also be present in extrauterine pregnancy. In the case of rupture or abortion of a pregnant tube there is bleeding due to the separation of the decidua, whilst a threatened or inevitable miscarriage in a retroverted gravid uterus is not uncommon. In extrauterine gestation a decidual membrane may have been passed, whilst the ovum or part of it may be expelled by the retroverted gravid uterus. In the case of a ruptured or aborted pregnant tube the swelling in the pouch of Douglas is due to the blood which has escaped, whilst the body of the retroverted gravid uterus forms a somewhat similar swelling.

If, then, a case of pelvic haematocoele presents itself to a practitioner he may wrongly assume that he has to deal with a case of retroverted gravid uterus that is bleeding, and he proceeds to treat the patient as follows; and I remember many examples of all three methods of treatment.

1. If the bleeding is not very much, he may endeavour to push up the supposed fundus of the uterus preparatory to inserting a ring pessary with the object of preventing the supposed miscarriage.

2. If the bleeding is severe, he may endeavour to empty the uterus.

3. If the bleeding is slight and continuous, and some substance has been passed, he may come to the conclusion that his patient, having miscarried, is suffering from subinvolution, and think it his duty to curette her.

But suppose the case is one of pelvic haematocoele, what will be the result? In the first case he cannot push up the swelling with the ease to which he is accustomed, and, using greater force, still further ruptures the tube if it is already damaged, or ruptures it if it is aborting, and the woman becomes desperately ill from internal haemorrhage the cause of which he does not identify. In the second case, on dilating the cervix he is surprised to find the uterus empty, thinks she has miscarried, and as a result of his manipulations serious internal haemorrhage may be started. In the third case, if he does not start serious internal bleeding he will think he has curetted in vain, and the woman will still go on bleeding.

Such a mistake can be avoided by a careful consideration of the history and by a thorough and complete examination of the patient. No woman has a tubal rupture or abortion without very severe abdominal pain. As a rule the pain associated with a threatened or inevitable miscarriage is not very marked. Moreover, in those cases of miscarriage in which the pain is bad the bleeding is also marked, the pain being due to the contraction of the uterus as it separates the whole ovum. On the other hand, with extrauterine gestation the bleeding in practically all cases is slight, and yet the pain is very bad. Again, if the patient exhibits the classical symptoms and signs of bleeding, and the bleeding which can be seen is slight, why does she have such symptoms? She must be bleeding internally. However, even here one may meet with difficulty, because at times the bleeding goes on so slowly that the classical symptoms are a long time developing.

Lastly, we have an absolute means of diagnosis at our command. The cervix in a retroverted gravid uterus will be pointing forward—so far forward at times that it can scarcely be reached, and then only with the patient on her back. On the other hand, the cervix in extrauterine gestation is pointing backwards and the whole uterus is driven forward by the haematocoele. Even this may escape notice, but where is the fundus of the uterus? The practitioner must make certain of this; if he cannot satisfy himself without putting the patient under an anaesthetic this must be done. A bimanual examination in the case of a retroverted gravid uterus will disclose the fact that the body of the uterus is absent from its normal position, and in the case of an extrauterine gestation that the body of the uterus can be grasped bimanually and that there is a further swelling in the pouch of Douglas. The correct diagnosis is made and perhaps a fatal error has been avoided.

CARCINOMA OF THE UTERUS.

Out of every hundred women who die during the year in England and Wales four die of cancer of the uterus. The uterus is by far the commonest seat of cancer in the female, and more women die of cancer than of consumption.

Without the slightest doubt cancer of the uterus can be cured. The reason why the vast majority of women thus afflicted die is because the disease is not diagnosed until it is too late to operate. Cancer of the uterus is quite easy to diagnose if the doctor uses all the resources at his hand and

of which he is well aware. Therefore, if a doctor has been consulted, the fact that the disease remains undiagnosed cannot in any way be ascribed to ignorance.

Carcinoma of the cervix is, as a rule, quite easy to diagnose because the suspected part bleeds easily, and sometimes markedly, on being touched. On occasions a patient will present herself to the doctor in an early stage of the disease. He finds that the diseased area bleeds rather freely on being rubbed; so do some erosions; there is no apparent growth, and to his eye it looks like an erosion. He therefore treats her for months, and then, as the condition gets worse, sends the patient to hospital with a note that in spite of prolonged local treatment he cannot get the condition to heal. What should that doctor have done when he found the local condition bled so easily? He should have cut a wedge-shaped piece of the diseased area out of the cervix, including the muscle underneath as well as the surface epithelium, and had it examined by the microscope. This small operation is quite easy to perform, and the bleeding, such as it is, can be at once arrested by suturing the edges of the incision with a catgut suture. If afraid to do this, he might have tested the friability of the patch with a blunt probe or uterine sound.

The only symptom that the patient suffering from carcinoma of the body of the uterus may complain of is bleeding. The average age for carcinoma of the body of the uterus is 53—that is, about the time of, or soon after, the menopause. The cause of irregular bleeding from the cavity of the uterus can easily be determined by dilating the cervical canal and examining the interior of the uterus, when, unless the cancer is very early, its presence can at once be detected. Even if the case be very early, so that no friable patches are felt, a microscopical examination of the material obtained by curetting will give the diagnosis.

I am sure that all medical men know what I have just stated. Why do some of them not apply this knowledge? I cannot tell; I know only what I have been told. Patients are admitted into my wards at the Middlesex Hospital almost every month for cancer of the uterus too far advanced for operation. The notes taken out by the house surgeon state: "The patient has been bleeding for many months; she consulted a doctor, who did not examine her and told her the bleeding was due to the change of life." Again a patient is sent up to me with a note from a doctor that she has had irregular bleeding for some time, that he has given her drugs to no purpose, but he has not examined her because he would not know what he was feeling if he did. Perhaps he adds that he had never had any chance of examining patients vaginally when a student, and so has never felt equal to making a diagnosis in that region. The fact that an erosion of the cervix does not improve with local treatment and bleeds every time it is treated does not for a long while strike some doctors as peculiar.

Now I do not mean to assert for a moment that the blame can always be attributed to the doctor; on the contrary, I think in most cases the reason a diagnosis is not made sooner is because the patient does not seek advice sooner. Her reasons for this are threefold. Most commonly she attributes her irregular bleeding to the change of life, this opinion being supported by the views of her female friends and perhaps of those of some nurse or midwife; or she may object to an internal examination; or, lastly, she may think she has cancer and fears to have her thoughts confirmed. The unfortunate circumstance that irregular bleeding may occur at the menopause without any disease of the uterus is indirectly responsible for the death of hundreds of women every year. When irregular or excessive bleeding does occur, however, there is always an interval, of longer or shorter duration, in which there is no bleeding. The lesson to be learnt, then, is that any unusual bleeding, and especially about the time of the menopause, should always be investigated by a thorough internal examination.

By the radical operation cancer of the cervix can be treated at a very much later stage than by any other procedure. I have taken out the cancer figures at the Middlesex Hospital for the last fifteen years, and I find that I have operated upon over 40 per cent. of those admitted. Most of these were advanced cases, and the disease could not have been removed by any other method. Even with such a handicap my absolute cure percentage—that is, freedom from recurrence for five years—is over 30. I leave you to form your own conclusions as to the results that might be obtained if one could only get these cases in an early stage. The importance of the early diagnosis of cancer of the uterus should be strongly impressed upon nurses and midwives. At the Middlesex

Hospital we have leaflets for distribution to female patients containing in simple language the most important facts concerning this fearful scourge.

POST-MATURITY.

It must have happened to everyone who has practised midwifery that on occasions he has had a patient who, by the usual methods of reckoning, has gone beyond term. Such an event not only causes worry to the patient and her relatives, and additional expense because of the nurse, but it may also be a source of much anxiety to the doctor, who in the end has perhaps to attend a difficult labour, followed in many instances by death of the child. The following points are of interest¹:

1. Post-maturity may be recognized by the presence in the child of excessive length, weight, ossification, and an easy separability of its dura mater.
2. It is probable that spermatozoa cannot live longer in the genital canal than ten days.
3. Although the time between the first day of the last menstruation and delivery, and that of insemination and delivery, can be calculated, that between impregnation or fecundation and delivery cannot within ten days.
4. There are undoubted dangers both to the mother and the child when pregnancy is prolonged beyond its normal time. These dangers are mostly concerned with the difficulty in the passage of the child.

The correct treatment when the practitioner thinks that the child is post-mature is to induce labour. How is he to arrive at such a diagnosis?

1. By noting any prolongation of pregnancy beyond the expected date of delivery, as calculated from the first day of the last period.
2. By a careful ante-natal supervision of his patients, noticing particularly, in the absence of uterine contraction, the ease with which the head of the foetus is passing into the pelvis in a primigravida or can be pressed into the pelvis in a multipara.
3. If an allowance of ten days be made over and above the date selected for the day of delivery it may safely be assumed that after this the pregnancy is post mature, due regard being paid to the relation of the foetal head to the mother's pelvis.
4. With this information, therefore, the doctor may justifiably induce labour 290 days after the first day of the last menstruation, and, indeed, many authorities think that he should do so.

HOT-WATER BOTTLES.

Burns from hot-water bottles are not as uncommon as one would think. The late Dr. F. J. Smith stated that he knew personally of 80 cases.

As a working rule never allow a hot-water bottle to be placed in the bed of a patient recovering from an anaesthetic, not even if it is surrounded with blankets, because in such a case the patient may be restless and kick the blanket off, when the exposed hot-water bottle may burn her. If, however, it is considered essential, because of shock, to place protected hot-water bottles in the bed, a nurse should be directed to stay by the side of the patient until she has completely regained consciousness to ensure that she is not burnt. When such precautions have not been exercised, burns may result which take months to heal and then only with dreadful scarring.

I introduce this subject to warn you that even with this knowledge you may be let down owing to the carelessness or disobedience of the nurse.

A friend of mine operated upon a patient. The operation was a very severe one, and he deemed it necessary to give her an intravenous infusion, and as he could not expose the vein in one arm he had to cut down on a vein in the other. The patient, who was in a nursing home, was put back to bed and was frightfully burnt on one buttock and foot with hot-water bottles. Neither the patient nor her husband appears to have been very inquisitive, and the doctor, therefore, did not feel called upon to discuss with them the exact state of affairs. At the end of fourteen weeks the husband said, "Don't you think that those wounds you made on the buttock and leg, which have been so septic, would heal better at my own home?" My friend then discovered that the owner of the nursing home had told the husband that the surgeon had made wounds on both arms and in two places on the leg to inject saline into the veins, and that the wounds on the buttock and leg were larger because the blood vessels could not be found. This was more than my friend could stand, with the result that when the husband was enlightened he refused to pay the expenses of the nursing home. The owner of the home then brought an action to recover the money; the husband brought a counter-action for damages, and the matter was settled out of court, the husband being paid £500 and costs.

I remember the case of a lady from whom I removed with the greatest difficulty a very adherent ovarian cyst. There was some very free oozing from the raw surfaces left, and no bleeding point could be secured. I therefore had recourse to the method of

temporarily packing the pelvis with swabs wrung out of boiling water. Three days later I visited this patient in the absence of the doctor and with his consent, and discovered to my horror that her buttock and leg had been frightfully burnt with hot-water bottles. The nurse, of course, had to own up, but begged me not to tell the doctor, saying that he might not employ her again if she did not tell him herself. Foolishly I agreed. I heard nothing more of the patient at the time, and was a little disappointed that the doctor had not written to me, because the operation as a surgical exercise was a great success, and it was the first time this particular doctor had given me a case. Some years later a relative of the patient consulted me; told me that her relative's leg was frightfully scarred. Expressing surprise and inquiring how this accident had arisen, the answer was, "Why, don't you remember, it was due to your pouring all that boiling water over her." I asked who said this, and was told the nurses. I then had no hesitation in telling her the true facts. Naturally I at once wrote off to the doctor, from whom I had never heard again, and he replied that the nurses had told the patient that I had had to use boiling water to stop the bleeding, and when wringing out the swabs had spilt the water all down her side. Further, the doctor was kind enough to add that he had thought it wiser to let the blame rest on me because I could be excused in an endeavour to save the patient's life, whereas the nurse could not be excused, and the husband, if he had known the true facts, would have been certain to have brought an action for damages against the nurse; and he, the doctor, hated law suits!

REFERENCE.

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THE DIAGNOSIS OF INDEFINITE MASSES IN THE BREAST.*

BY

DUNCAN C. L. FITZWILLIAMS, C.M.G., CH.M., F.R.C.S.,
SURGEON, ST. MARY'S HOSPITAL, LONDON.

THE diagnosis of small indefinite masses in the breast presents such peculiar difficulties to the medical man, right diagnosis carries with it such advantages, and wrong diagnosis or unnecessary delay such awful penalties to the patient, that the subject is well worthy of consideration.

In early cases of lumps in the breast it is curious, but true, that though the question, Is it a new growth or is it an inflammatory mass? always arises in one's mind, the smaller the mass is the more one is inclined to put it down as inflammatory. Malignancy is associated in our minds with something sinister and threatening. A small and apparently harmless mass is acquitted merely on account of its small size. This is of course quite wrong; malignant growths must all begin small, and then is the right and most favourable moment for their extirpation; that, indeed, may be the only time at which a cure can be guaranteed. But how many small malignant growths do we operate upon, and how many large ones? The proportion is not more than one in six.

It is widely recognized that if carcinoma is removed early, especially in an organ like the breast, where such a large part of the lymph field is easily accessible, the very best results may be achieved. The difficulty is to decide what is early removal, and how it is to be effected. That difficulty I wish chiefly to deal with.

At the same time it must be recognized that we are not dealing with the constant factor of a machine, but with the vagaries of human nature, with those peculiarities of the human mind, with those prejudices inborn centuries ago, and those leanings which we can only explain by saying that they are second nature. We have all heard of cancer cures—the violet-leaf cure, the cure by turpentine, and by escharotic paste, not to mention some of the older ones; then lately x rays, then radium, then selenium, and now back again to x rays, and larger and more expensive instruments. Wait! these will go like their predecessors, and will be succeeded by some treatment just as effective or ineffective as you may be pleased to term it. Explanations are useless. Each of these methods not only claims its cures, but each can, I know, produce them; people live after each of these treatments for ten, fifteen, and twenty years in the case of the older methods, and the modern methods and future ones will, I am quite sure, afford similar instances. Each holds out just sufficient encouragement to lure on and, I am afraid, to delude the practitioner into thinking that at last the cure is about to be discovered.

• Investigations and experiments should and must continue; I should be the last to decry them. But we, as a profession,

* A paper read before the Chelsea Clinical Society.