pushed up and a pessary suitable in size and shape introduced, it is not possible to determine accurately whether any or all of the symptoms complained of were due to the position of the uterus. If marked relief to the symptoms follows, as is often the case, then we know that the low-lying retroverted uterus was the cause, but if, on the contrary, no relief is obtained and the pessary employed is suitable in size and shape, then some other source of the trouble must be sought for and the pessary discarded.

If the body of the uterus in addition to being retroverted and prolapsed is markedly tender, rest in bed and hot douching should be employed for a week before any attempt is made to fit a pessary. In nearly all cases the uterus exhibits some tenderness, and pressure on it for the purpose of pushing up causes pain, but in the kind of case I allude to the sensitiveness is extreme, and to push it up without the employment of an anaesthetic would be impossible.

The cradle pessary and the ring pessary are the two kinds which are generally employed. The cradle pessary, often called a Hodge, is usually made of vulcanite, and is, therefore, rigid and incompressible. This increases the difficulty of introduction. The rubber watchspring ring is, as we all know, comparatively easy to introduce, and in those who have borne children is usually the best form to employ. After childbirth the vagina is nearly as wide as it is long, and therefore a ring-shaped instrument fits best. If, as is often the case in those who have had no children, the vagina is comparatively long and narrow, then a cradle pessary is sometimes more comfortable. A further advantage is that a vulcanite instrument is more easily kept clean. Rubber perishes with time and secretions accumulate on depressions and corrugations which form on its surface. None the less, a watchspring rubber ring is generally the best instrument to use. Those filled with glycerine can sometimes be well borne when the ordinary ring causes discomfort.

A 2½-inch ring may be regarded as the stock size. When the upper edge lies, as it should do, in the post-fornix, the lower edge should reach to within ¼ in. of the urethral orifice, and laterally it should not be so tight as to prevent the tip of the finger being swept round between it and the vaginal wall. By the use of daily douching and the removal of the instrument at intervals of six months, it can be kept clean and free from offence. The more frequent removal of the pessary is rarely desirable.

The question is often asked as to the length of time that such a support must be worn. In some cases unfortunately it is necessary to continue to use the support for many years. As soon as it is removed the old symptoms of back-ache, bearing down, and hypogastric discomfort return. In others, after an interval, the pessary may be removed without any return of the symptoms. In a few of the less severe cases the uterus may sometimes regain its normal position, and maintain it after the pessary has been taken out.

There are cases in which an operation such as ventrifixation may be advantageously performed instead of making use of a pessary. This is perhaps specially the case in young married women, who otherwise might have to look forward to many years of pessary life, and again in those in whom the vagina is so sensitive as to make it difficult or impossible for them to wear a pessary. In a virgin with a short vagina and a small uterus the operation is contraindicated.

In no case should an operation be performed unless it is clearly proved by the use of a pessary that the symptoms are due to the position of the uterus. A case in which a pessary gives no relief will generally be found to be one in which an operation gives no relief. Of all the operations performed or suggested for the relief of this condition, I believe ventrifixation to be the best.

The very progressive and up-to-date surgeon might well urge that in all cases operative treatment should be adopted and pessaries discarded. I cannot help feeling, however, that pessaries often fulfil a very useful function in these cases, and that there are quite a number of people who still cherish a preference for keeping their abdominal walls intact, in spite of the slight inconvenience entailed by wearing a pessary.

At the present time, however, although the operation is undoubtedly a useful one, it cannot be widely and indiscriminately recommended. I need not here describe the

operation in any detail. If the sutures which unite the uterus to the abdominal wall are introduced just above the level of the os internum, the body will be left free to expand if pregnancy should subsequently occur. This being so, there is no particular risk of miscarriage or of any difficulty in the course of labour at term. I have seen quite a number of patients delivered who have had their uteri fixed, and no special difficulty was encountered in the course of delivery. Moreover, after delivery the uterus showed no sign of returning to the retroverted position.

I have endeavoured to make clear my own views on this very important subject, fully realizing the difficulty of the task. It is not simply a mechanical problem which we have to consider. We know too little about the causes and effects of the condition. Still, if I have given you any food for thought and have done something to start a discussion, I have fulfilled my purpose.

OBSERVATIONS ON FOUR SUCCESSFUL CASES OF CAESAREAN SECTION.*

BY

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It is my desire to bring forward for consideration a series of four cases in which I have performed the operation of Caesarean section. These operations were performed during the past four years, and each of them, I am happy to say, has proved successful in the interests of both mother and child. As I have ceased for some time to take any very active part in obstetrics, these cases are presented by one who must be regarded as a general surgeon rather than an obstetrician. They will not, I trust, on that account prove the less interesting.

The indication for the operation in the first case was the presence of a large fibromyoma which completely blocked the pelvis; in the second, a contracted pelvis; in the third Caesarean section was performed at full term in a woman with a masculine pelvis in preference to the induction of premature labour at an earlier date; in the fourth case an ovarian tumour occupied the pelvis.

The first and second of these cases were fully reported in 1907,¹ so that I shall only give a brief sketch of them. The two later cases have not so far been reported.

CASE I.

This case was first seen in my consulting room on February 23rd, 1906, and was sent to me by Dr. Reid of Bandon as a case of abdominal tumour of a doubtful nature. The patient, Mrs. M., a rather anaemic and delicate-looking woman, aged 38 years, the wife of a farmer, had been married on July 29th, 1905.

History.

Previous to marriage menstruation had been regular but had not occurred since. She had noticed some enlargement of the abdomen for a few months previous to my seeing her; had no morning sickness or gastric disturbance; had some sensations of "fluttering," but no distinct quickening. Milk was present in the breasts. Dr. Reid had been unable to detect the fetal heart sounds, but found a large solid tumour presenting in the vagina.

A hard tumour was found in the pelvis, felt through the anterior vaginal wall, and extending about 4 in. above the pubis. The cervix was so high up that it could be reached with difficulty on bimanual palpation, the os, which was out of reach, being directed towards the hollow of the sacrum. Another small and partly movable tumour could be felt through the abdominal wall lying a little above the one just described. In addition I was able to detect a general swelling of a softer nature lying behind these tumours and extending somewhat above the umbilicus. This I suspected to be a pregnant uterus. The patient was admitted to the North Charitable Infirmary for observation, and on making a further examination on the following day I satisfied myself that it was a case of pregnancy complicated with fibromyomata. She was sent home and advised to return early in May, the full term of gestation being calculated for about the end of the second week in that month.

Operation.

She was readmitted to hospital on May 7th. The operation was performed on May 12th. The uterus was opened as high up as possible, and a healthy male child extracted. Haemorrhage was temporarily controlled by manual pressure. A large fibromyomatous tumour was extracted from the pelvis with

* Read in the Section of Obstetrics and Gynaecology, Royal Academy of Medicine of Ireland.

some difficulty. The operation was completed by performing supravaginal or subtotal hysterectomy. The tumour was growing in the lower portion of the anterior uterine wall, just above the cervical junction. It almost completely blocked the pelvis, extended several inches above it, and rendered delivery by natural means absolutely impossible.

The patient made an excellent recovery and returned home with her child on June 9th.

CASE II.

Mrs. S., sent to me by Dr. O'Meara, of Skibbereen, was a deformed woman, aged 33 years, height 4 ft. 6 in., with pelvis markedly contracted in the conjugate diameter. She had been married four and a half years, and had a history of three previous confinements. In the first she was delivered by turning followed by craniotomy; in the second she was delivered with forceps of a dead child with great difficulty; on the third occasion she was confined at six and a half months, and the child lived a few hours. The date of the last delivery was April, 1905. When seen by me on December 27th, 1906, she was again pregnant and very near full term.

Operation.

She was immediately admitted to the Victoria Hospital for Women, and I performed ordinary Caesarean section on December 29th, without waiting for the onset of labour, and extracted a living female child. When the abdominal incision was completed, the uterus, owing to the great prominence of the lumbar vertebrae, delivered itself spontaneously through the wound. After the removal of the placenta the uterus showed little disposition to contract, but soon responded to douching with hot saline. The incision in the uterus was sutured with two rows of continuous iodine catgut.

The patient made an excellent recovery.

CASE III.

Mrs. S., aged 44 years, was a woman of healthy and exceptionally robust appearance, with unusual muscular development.

History.

She had been married four years. Two and a half years before my seeing her she had a very severe confinement, and was delivered by version followed by the application of forceps to the aftercoming head; she then sustained complete laceration of the perineum. She was seen by me on January 2nd, 1909. She was then pregnant about seven months, and was sent to me by Dr. Shipsey, of Schull, with a view of having labour induced, so that she might have a living child. This was especially desirable owing to her age, and he did not think, judging from his previous experience, that there was any prospect of one if she was allowed to go to full term.

Her last period had ceased about May 28th, so that the probable date for her confinement would be March 5th. When examined by me the fetal heart was distinctly heard. The pelvis was of the masculine type, and it was clear that delivery of a fully developed fetus would be a matter of extreme difficulty. The rent in the perineum extended through both sphincters and part of the rectum, and there was incontinence of faeces. Considering all the circumstances I strongly advised against the induction of premature labour, and recommended that she should wait till near the end of term and come back for Caesarean section. She accordingly went home, and returned on February 15th, when she was admitted to the Victoria Hospital.

Operation.

On February 28th I performed Caesarean section in the ordinary way and before the onset of labour. The child was a vigorous male.

The patient progressed most satisfactorily, and ten days after the section I performed colpo-perineorrhaphy with most excellent results. Both mother and child left the hospital three weeks afterwards in excellent condition.

CASE IV.

Mrs. D., aged 28 years, was sent to me by Dr. O'Meara, of Skibbereen, for consultation on July 23rd, 1909.

History.

She was a healthy woman, and had married nine months previously. Menstruation had been regular for some months after marriage, but ceased on February 25th. She was seen by Dr. O'Meara in May, who found that she was pregnant, and wrote to say that he had found a tumour in the pelvis which would obstruct labour, and might cause trouble during gestation. I admitted her to the Victoria Hospital for examination, and found her condition as he described, namely, the usual signs of pregnancy at the fifth month, and, filling Douglas's pouch, a rounded elastic tumour, which could not be raised out of the pelvis by making moderate pressure with two fingers through the vaginal wall while the patient was in the genu-pectoral position. The tumour was believed to be ovarian, but as there were no unusual symptoms the woman was sent home with instructions to pay particular attention to the bowels, and to return in two months for further examination, or sooner if any trouble arose.

She came to me again on October 21st. She had been getting on very well, had no trouble with the bowels, but micturition was rather frequent. On examination, I found the cervix high up, being displaced backwards and to the left. A large elastic

tumour occupied the pelvis, lying behind and to the right of the vagina. The fetal heart sounds were best heard between the umbilicus and the right anterior superior iliac spine. The position of the fetus was easily determined by abdominal palpation; the head lay in the left iliac fossa, the dorsal aspect of the child being directed downwards, forwards, and to the right; the buttocks were felt above and to the right of the umbilicus, so that the long axis of both uterus and child was directed obliquely. As there were no urgent symptoms I again sent the patient home, on the understanding that she was to come up not later than November 21st.

Operation.

She was admitted to the Victoria Hospital on November 19th, having travelled sixty miles by rail. The "waters" had escaped during the previous night, but uterine action had not commenced. The operation was performed at 5 p.m., about two hours after her admission to hospital. The earlier steps consisted of an ordinary Caesarean section and presented no special difficulty. The placenta was anterior, and presented immediately beneath the uterine incision. In this case, as in one of the others, I passed the hand downwards between the placenta and the uterine wall by partially separating them. This, to my mind, is better and more scientific than forcing a passage with the hand through the placenta, as has been done by many operators.

After the removal of a healthy male child the placenta was peeled off. Haemorrhage was temporarily controlled from the placental site and uterine wall by pressure with large gauze pads wrung out of hot saline solution. The pelvic tumour was next dealt with; it proved to be, as was anticipated, a cystic tumour of the right ovary. Considerable difficulty was experienced in raising it out of the pelvis, partly owing to its being impacted, and partly to the great resistance due to atmospheric pressure. The uterine incision was then sutured in the same manner as in the other cases by two rows of continuous suture of iodine catgut placed as follows: The deeper layer passes through the entire thickness of the uterine wall to the margin of the mucosa, not including the latter; the superficial layer is applied by commencing about an inch above the upper extremity of the incision, the stitches being carried about two-thirds of the depth of the uterine wall, and placed so as to invert about half an inch of the peritoneal margin external to the first row. The suture is drawn as tight as possible so as to allow for the rapid shrinkage of the uterus from contraction, and is carried about an inch beyond the termination of the deeper layer, so as to invert the uterine wall for some distance beyond the incision at this end in the same manner as the other.

The patient made a perfectly smooth recovery, and returned home with her son three weeks after the operation, both in a very satisfactory condition.

These are the only cases in which it has fallen to my lot to perform Caesarean section, and all of them have terminated in a satisfactory manner. In Cases I, II, and III I was assisted by my colleague, Dr. N. H. Hobart. In the last case I had what is probably a unique experience for a medical man: My elder son, Dr. William Pearson of Dublin, who was staying with me at the time, acted as my assistant, while my younger son, Dr. C. B. Pearson, administered the anaesthetic.

Cases I and II do not call for any special observations here as they have been fully reported elsewhere. In both the indications for Caesarean section were imperative.

In Case III opinions as to the course of action I adopted will probably differ. Some obstetricians may hold that it would have been wiser to have induced labour at about seven and a half months or at the termination of the eighth month. I am prepared to defend my course of action on the following grounds:

1. I hold that in competent hands the operation of Caesarean section is not more dangerous to the mother than the induction of premature labour, probably less, while it is certainly safer for the immediate life of the child. Moreover, instead of the offspring being born prematurely, it is brought into the world in a mature condition.

2. Owing to the condition of the perineum and rectum the induction of labour in this particular case would have been attended with considerable danger of infection.

3. Both the woman and her husband were extremely anxious that she should have a living child.

4. Owing to her age (44 years) it was not very probable that she would again become pregnant, and she was prepared to take any reasonable risk that would ensure the life of her infant.

In Case IV, owing to the position of the tumour, I thought it wiser not to interfere in the first instance, and as the case was progressing favourably at a later date I did not think it necessary to do so. If the case had been one of pregnancy accompanied with an ovarian tumour situated above the pelvic brim I should certainly have

removed the tumour at the earliest practicable date, as I have done so in a case of the kind without any disturbance to the regular course of gestation.

It will be observed that in the first three cases I deliberately operated before the onset of labour. It was my intention to do so in the last case, and, as already stated, labour had not really set in, although the membranes had ruptured some twelve hours previous to the patient's admission to hospital.

Where the probable date of full term can be calculated with any approach to accuracy, I think it is far better, as a rule, to select a time to operate that will anticipate the onset of labour, as everything can be arranged methodically beforehand. This is an unquestionable advantage in the case of those who, like myself, cannot calculate on being on the spot if suddenly required. In the case of a large lying-in hospital, where there is a resident medical staff, there are some advantages in waiting for the onset of labour. One of these is the uncertainty in many cases of calculating the approximate date for the completion of gestation; another is the greater certainty of having satisfactory uterine contraction after the removal of the placenta. On the whole, I think the advantages of operating at a time selected to suit the operator outweigh these considerations.

CONCLUSIONS.

In addition to the four cases of Caesarean section I have just related I have assisted one or other of my colleagues in three others, so that my experience extends to seven cases in all. This is not a very large number from which to make any sweeping deductions. There are, however, a few practical points in which my advice may be of some value to those who have no experience of the operation. These I shall briefly state:

1. The operation is one that may be undertaken with great confidence by any competent operator.
2. The incision should be commenced well above the umbilicus, so that the fundus of the uterus can be easily reached when the abdomen is opened.
3. When making the incision it is well to remember that the abdominal wall is very thin in the middle line, owing to the separation of the recti and the stretching of the aponeurosis. This being overlooked, the operator's knife may easily pass through the parietes in the first incision and wound the uterus, which, though not a serious matter, is inadvisable.
4. The uterine incision should be made as high up as possible. In the first place, because there will be far less haemorrhage from this portion of the uterine wall; and, secondly, because an incision that seems fairly high up when made into the front of the distended uterus will be found very low down when the latter is contracted, and will be much more difficult to suture than one placed higher.
5. When incising the uterus one should avoid opening the membranes until the uterine incision is completed to the required extent, so as to postpone the escape of liquor amnii.
6. It is not advisable to delay in the attempt to arrest the haemorrhage from the margins of the uterine incision by means of compression forceps. It is better to proceed quickly at this stage, and very effective haemostasis can be obtained if the assistant makes steady pressure with the hands on either side through the abdominal wall.
7. If the placenta be found immediately beneath the uterine incision, it is better to pass the hand between it and the uterine wall and separate it to the necessary extent, rather than to tear through its substance.
8. It is advisable, when possible, to grasp the child by the neck from the dorsal aspect with the thumb and two fingers, and extract the head first.
9. When the child is extracted it should be held by a special assistant while the operator places two compression forceps on the cord and divides it between.
10. After the removal of the child the uterus can be easily brought out through the abdominal wound. When this is done the margins of the upper portion of the abdominal incision should be temporarily held together with catch forceps and a large hot compress of gauze placed over it, against which the back of the uterus will rest.
11. If the uterus contracts spontaneously it is probably better to wait for the placenta to separate before removing it, otherwise it may be peeled off.

12. Haemorrhage during this stage and during the subsequent suturing of the uterus can be controlled by the assistant compressing the lower segment of the uterus and the broad ligaments with the hands, or, if found desirable, by employing either a rubber tube or a piece of folded gauze as a constrictor. If the uterus contracts firmly and the incision has been made high up there will be little haemorrhage.

13. If the uterus does not contract readily contraction should be induced, before commencing to suture it, by douching it externally and internally with hot saline or hot iodine solution poured from a jug and by manual pressure exerted on the fundus.

14. It is unnecessary to ligature any vessels in the uterine wall; they can be effectively controlled if the suturing is carried out in the manner already described.

In conclusion, I wish to remark that I did not take any steps to prevent a future conception in the second case, which was the only one in which the question could be entertained. I see no justification for such a proceeding. In my judgement there is no reason why Caesarean section should not be undertaken repeatedly, as has been done in several recorded instances. Again, I do not approve of the suggestion which has been advocated with a view to the repetition of the operation in future pregnancies—namely, to unite the uterus to the abdominal wall. Such a proceeding, in my opinion, would be calculated to interfere with the immediate contraction of the uterus and with its subsequent involution.

I am happy to say that I have no experience of extra-peritoneal Caesarean section, nor can I conceive any advantage that it would possess, while I believe that it has many objections.

REFERENCE.

¹ *Medical Press and Circular*, June 12th, 1907.

THE DIAGNOSIS OF ECTOPIC GESTATION.*

BY

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I PROPOSE to consider the subject under three main heads:

1. The diagnosis of ectopic gestation either before rupture or after primary rupture when the ovum is still developing.
2. The diagnosis at the time of rupture, or what may be called the acute cases.
3. The diagnosis of tubal mole and tubal abortion, or the subacute or chronic cases.

This classification is purely a clinical one, but I think it will be found that all cases fall into one or other of these three groups.

DEVELOPING ECTOPIC GESTATION.

First, I would lay stress on the importance of the patient's past history.

The patient's age is not of great value, as ectopic foetation may occur at any time during the fertile period, but if a large number of cases are examined it will be found that the vast majority occur between the ages of 20 and 30—that is to say, during the earlier rather than the later years of the fertile period. There is a reason for this, as we shall see later.

The most important point in the past history is that of previous pregnancies. It is very frequently found that the patient has had one or more pregnancies, but that the last has been followed by several years of sterility. Now, it is probable that the implantation of the ovum in the tube is in most cases due to some form of obstruction in the tube. The commonest form of obstruction is undoubtedly that due to salpingitis, and here we have the explanation both of the history of sterility and of the common age incidence. An attack of salpingitis occurs after a confinement, and completely obstructs the tube lumen for the time being. Gradually the tube recovers and becomes pervious again, though this may not occur for some years after the attack of inflammation. As the lumen again becomes pervious it is at first only capable of admitting the passage of a spermatozoon, which is then able to

* Read before the New Cross Medical Society.