OBSERVATIONS ON FOUR SUCCESSFUL CASES OF CÆSAREAN SECTION.

By C. YELVERTON PEARSON, M.D., F.R.C.S.;
Professor of Surgery, University College, Cork.

[Read in the Section of Obstetrics and Gynæcology, November, 17, 1911.]

It is my desire to bring forward for consideration a series of four cases in which I have performed the operation of Cæsarean 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 Cæsarean 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 give only a brief sketch of them. The two latter 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 me by Dr. Reid, of Bandon, as a case of abdominal tumour of a doubtful nature.

238 *Four Successful Cases of Cæsarean Section.*

The patient, Mrs. M., a rather anæmic and delicate-looking woman, aged thirty-eight 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 foetal 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 four inches 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 in 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. Hæmorrhage was temporarily controlled by manual pressure. A large fibromyomatous tumour was extracted from the pelvis with 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 thirty-three years, height 4 feet 6 inches, with pelvis markedly contracted in the conjugate diameter. She was 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 Cæsarean 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 vertebræ, 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 forty-four 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, when 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 specially desirable

240 *Four Successful Cases of Cæsarean Section.*

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 foetal heart was distinctly heard. The pelvis was of the masculine type, and it was clear that delivery of a fully developed foetus 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 fæces. 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 Cæsarean section. She accordingly went home, and returned on February 15th, when she was admitted to the Victoria Hospital.

Operation.—On February 28th I performed Cæsarean section in the ordinary way and before the onset of labour. The child was a vigorous male. She 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 twenty-eight 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 posi-

tion. 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 foetal heart sounds were best heard between the umbilicus and the right anterior superior iliac spine. The position of the foetus 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 Cæsarean 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. Hæmorrhage 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. Consider-

242 *Four Successful Cases of Cæsarean Section.*

able 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 half 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 Cæsarean 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—through a coincidence—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 anæsthetic.

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

eight month. I am prepared to defend my course of action on the following grounds :—

1. I hold that in competent hands the operation of Cæsarean 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 (forty-four) 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 Cæsarean 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, there will be far less hæmorrhage 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 hæmorrhage from the margins of the uterine incision by means of compression forceps. It is better to proceed quickly at this stage, and every effective hæmostasis 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 them.

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. Hæmorrhage 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 hæmorrhage.

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 judgment there is no reason why Cæsarean 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 Cæsarean 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.

SIR WM. SMYLY remarked that it was curious that we had not a greater number of Cæsarean sections in Ireland. In Glasgow they have them every fortnight or even oftener. This he attributed to the fact that Irish women nurse their children, whereas the Scottish do not. The case of ovarian tumour was the only one he would like to ask Dr. Pearson about. In his opinion it would have been better to have got at the tumour about the fifth month. However, it was explained that it was not possible to do so in the particular case. He thought there were several advantages in performing the Cæsarean section through the lower uterine segment, but it had been fully decided that it had completely failed in the object for which it was introduced—the treatment of infected cases. It was of the greatest importance to be able to do Cæsarean section before the onset of labour. He attributed the death of one patient to the fact that it had not been done before, as he found the intestines adherent to the front of the womb, and a small pinhole caused the patient's death through not being noticed in the defective light. He agreed with Dr. Pearson that it was not a good practice to fix the womb to the abdominal wall, and thought it likely afterwards to separate. The way that Dr. Pearson had described of inverting the front of the uterus as he would the intestine appeared to him to add strength to the wound.

DR. FITZGIBBON said he thought that the first case reported by Dr. Pearson answered the question which he had asked when showing his specimen. It was obvious

248 *Four Successful Cases of Cæsarean Section.*

in his case that labour could not take place past the fibroid, but perhaps it might have been left so, and a section done later, as was done in Dr. Pearson's case. The point in favour of operating before labour starts he agreed with. As to the separating of the placenta instead of going through, he thought the separation from the uterine wall was advantageous, as the bleeding from the mother was not increased, whereas the bleeding from the child would be diminished.

DR. SHEILL said, with reference to the douching of the uterus in the case of uterine inertia, he thought it would be impossible to use the douche sufficiently hot to be of any value.

DR. SOLOMONS remarked with regard to the case followed by perinæorrhaphy, would it not have been better to have got the patient back in, say, nine or ten weeks, and to do the operation then. When he assisted at extra-peritoneal Cæsarean section he was struck with the advantage of opening up only the lower uterine segment, as the abdominal cavity seemed to be shut off from any septic infection. A small point in the technique that occurred to him was the holding of the child. The method adopted at the Rotunda Hospital was for the operator to hold the child and the assistant to clamp.

DR. TWEEDY said that those who have not had the chance of seeing the extra-peritoneal Cæsarean section condemn it, whilst those who have seen it become enthusiastic about it. It is an operation which can be done at an advanced stage of labour, after the membranes have ruptured, and when a case is so far advanced that classical Cæsarean section is considered out of course. It has also the advantage that you open through a wall hardly thicker than paper and it does not bleed. It places the wound extra-peritoneal, so that no adhesions form between the intestines and the abdominal scar. Again, if rupture of the uterus occurred, which is unlikely, very little harm would follow. In Glasgow, they say, one of the great reasons why perforation of the child's head is performed in preference to Cæsarean section is the risk of infection owing to the patient having been perhaps already examined by several unknown persons. He held that if the patient died because she was septic, she would have died even if perforation of the living child had taken place. In

one of his cases of extra-peritoneal section the woman had been examined outside, and the wound did suppurate. Some say it is worse to infect cellular tissue than to infect anything else. He would invite any one to recall a case, and say if the cellular tissue was more opened than it would be in sub-total hysterectomy.

DR. ALFRED J. SMITH said Dr. Pearson's method of performing the operation before labour came on appeared to be the ideal one. In the performance of the operation as suggested by Dr. Tweedy it would appear that he had made a point for himself inasmuch as the operation was done when the lower zone had formed. He would like to ask why the tumour was not removed in the earlier months when it was first recognised, knowing how safely operation can be performed during pregnancy, provided the time of operation does not synchronise with the usual menstrual period. He fully agreed with Dr. Pearson in not having sterilised the patients on whom he did Cæsarean section. There are those who recommend sterilisation after Cæsarean section, but he was altogether with Dr. Pearson on no account to sterilise.

DR. JELLETT said that it appeared to be fairly well established that, under favourable conditions, Cæsarean section undoubtedly stands, but that it should always, if possible, be performed before labour comes on. He had no hesitation in saying that the patient is more comfortable by the operation being performed before labour started. He was once present at an extra-peritoneal operation in Vienna, but was not impressed by it. He did not see how it could be called an extra-peritoneal Cæsarean section, as the second step in the operation was that the peritoneum was picked up and divided. He found in operating on cases where the patient was not in labour, while the uterus was in an absolutely atonic condition when out, as soon as it was replaced in the abdomen contraction immediately started.

DR. GIBSON said that he had done the operation eight times, and all the cases had done well. It was, he thought, of importance that, before commencing, the patient should have an intramuscular injection of ergot. As to the suturing he saw no advantage in two layers. The abdominal walls should be closed up with clips, and a large pad should be

250 *Four Successful Cases of Cæsarean Section.*

placed all round, so that anything escaping from the uterus would be immediately absorbed. He did not see why extra-peritoneal Cæsarean section was so called, because the peritoneum is opened although sutured. Personally he never did the operation, and he did not see the advantage of it. The only benefit that appeared to him to be derived from it was that the portion of the uterus incised was extremely thin, and it was possible the wound would not bleed. If the patient was septic he thought it was probable she would have died if the uterus was not removed.

THE PRESIDENT said that in the first case reported it was found that a large posterior myoma blocked delivery. He remembered a similar case where the patient got into labour, and as it advanced the tumour was pulled up and the woman delivered herself. It was a case in which Cæsarean section might have been done. In a case like the second one mentioned—contracted pelvis—it is always found that before labour sets in the membrane is ruptured, consequently in such cases the moment the membrane ruptures a Cæsarean section ought to be done. It appeared to him the simplest operation that one could do. As long as the uterus remained outside the abdomen it remained large, but immediately it was put back contraction took place. It was his invariable practice to apply hot cloths while the uterus remained outside. One other point in Dr. Pearson's notes that struck him was that he had used iodine catgut sutures. He (the President) always used silk, and thought catgut would not give as firm a cicatrix.

DR. PEARSON, replying, said he would not like to hold opposite opinions to those who had spoken on obstetric points, but would reply from the surgical point of view. With regard to Dr. FitzGibbon's remarks criticising his own action in removing the uterus in the case which he had just shown, in Dr. FitzGibbon's case the patient complained of pain, whereas in the case reported by his father no pain was experienced. As to Dr. Sheill's comment regarding the douching, the temperature of the douche was from 105° to 110° F., which was the highest that could be used without injury. Referring to the use of catgut instead of silk sutures, he failed to see the

advantage of silk over catgut. He never used silk himself. In answer to Dr. Solomons' question as to whether it would not have been better to get the patient back for operation at a later date, he said that it was not an easy matter to get patients of the poorer class to come from a distance for a second operation. Regarding the extra-peritoneal Cæsarean section, from a surgical standpoint he certainly did not think that one should dread opening the peritoneal cavity and performing the operation, even in the presence of infection. As to adhesions forming between the uterine scar and the abdominal wall, he thought that if two rows of sutures were put in no adhesions would take place. In his opinion, hæmorrhage from the placenta was as likely to occur in one form of operation as in the other, and if an abdominal tumour were present it would decide which should be undertaken. From the point of view of the surgeon he would be inclined to say that the safer and better operation was the old one of opening the abdominal cavity, bringing the uterus outside.