OPERATION AT END OF FIFTH MONTH FOR EXTRAUTERINE GESTATION WITH LIVING FETUS:

RECOVERY WITHOUT RECURRENT OR SECONDARY HAEMORRHAGE.*

By ALBAN DORAN, F.R.C.S.,

SENIOR SURGEON TO THE SAMARITAN FREE HOSPITAL.

In the following case pregnancy began in the left Fallopian tube. The last show, four months before the operation, was no doubt a uterine haemorrhage caused by the abnormal gestation and not a menstrual period, as the fetus was too well developed to represent only four months of pregnancy.

J. E., aged 35, was admitted into my wards in the Samaritan Free Hospital on July 3rd, 1908. She was sent to me by Mr. Boodle, of Sittingbourne, suffering from an abdominal tumour of uncertain nature. This patient was fairly nourished, but her hair was turning grey. Her cheeks were flushed. She had been married for eleven years and her only child was 10 years of age. Since its birth until the present illness there had never been any signs of pregnancy.

History.

On Easter Day, April 19th, when scrubbing her floor, the patient had a sudden attack of hypogastric pain and vomiting, and at once took to her bed. Mr. Boodle noted symptoms of peritonitis with tenderness chiefly to the left of the hypogastrium. A distinct lump was definable in the region of the appendix a day or two later.

The catamenia during the past three years had become irregular, with intervals of seven or eight weeks. They had also grown scanty and painful. I found after careful inquiry that there had been no show of any kind for four months before admission.

The patient was kept in Rochester Hospital for several weeks, and was ultimately discharged at her own request. Mr. Godfrey Taunton kindly informed me: "The physical signs when she was in hospital were: Fullness in the left fornix, slightly impaired mobility of the uterus, which seemed enlarged, the sound passing 2½ in. During the last week of her stay there was distension of Douglas's pouch with fluid. The temperature ranged from 101° to normal. There was no obstruction of the bowels, but much constipation, requiring enemata. There seemed to be no evidence of rupture of a fetal sac; in fact, the only symptoms complained of were abdominal pain and occasional sickness. The patient gave a history of passing a decidua cast, but also stated that she frequently passed something of the kind. I could define no fetus or fluid swelling in the abdomen, and my diagnosis lay between salpingo-ovariitis and extrauterine pregnancy."

After her discharge from Rochester Hospital the fullness increased until Mr. Boodle was able to define a circumscribed and fluctuating tumour.

Condition on Admission.

I found the abdomen distinctly distended but not tense. A tumour occupied the hypogastrium, extending as high as the umbilicus. It lay mostly to the left of the middle line, and was hardly movable. Palpation was painful, and set up contraction of the muscles of the abdominal wall. The tumour was more definable on the left than on the right side. Fluctuation was not marked. Distinct gurgling was noted over the right iliac region.

The cervix was thick and short, and closely connected with the tumour in the abdomen. A soft mass occupied Douglas's pouch and the left fornix; it was tender to touch. The sound passed for 4½ in. upwards and forwards; there was no blood or sanies on its point when withdrawn, but some clear glairy mucus. The uterus and mass were almost fixed. The breasts were fairly developed but flaccid; no milk could be pressed out of them. The areolae were well marked; the patient's complexion was naturally dark. The tongue was pale and rather glossy. The bowels, previously regular, had been constipated all through the illness. The patient had suffered from dysentery in 1902 and 1904. The pulse was 84, small, compressible, and distinctly intermittent.

Diagnosis.

I kept the patient under observation for seven days. The temperature did not rise above normal. On July 5th an attack of pain occurred and kept intermitting all the afternoon, passing away before the night. No fetal heart sounds could be heard on auscultation. Not a trace of blood or sanies came away before the operation, and their total absence was somewhat misleading. Although the history suggested ectopic gestation, I rather suspected axial rotation of an ovarian cyst, with

subsequent adhesion of intestine. It is true that there had been absolute amenorrhoea for at least four months if not five, but that symptom has been observed when a patient's health is impaired by the pain and the local peritonitis caused by twisted pedicle; besides, the total absence of haemorrhages is unusual in extrauterine pregnancy. The condition of the breasts and areolae did not absolutely favour the diagnosis of pregnancy; the outer limits of the areolae were sharply defined as in many dark-complexioned subjects when not pregnant. Still, diagnosis was very obscure, as the symptoms of several pelvic diseases which seemed possible in this case are known to be irregular.

Operation.

I operated on July 10th, assisted by Dr. Drummond Maxwell, Dr. Belfrage administering the anaesthetic.

On opening the abdominal cavity I found much intestine adherent to the tumour. On setting the bowel free I noted that the vermiform appendix was quite healthy.

The tumour was now seen to be a big cyst. Its walls were dull and of a deep ochreous colour, such as is seen in an ovarian dermoid after chronic axial rotation. On tapping, a little turbid fluid came away. I then passed my hand behind the cyst, and could feel a fetus lying in its lower part. I pushed the greater part of the cyst gently out of the abdominal wound and carefully enlarged the tapping puncture with scissors till I was able to extract a fetus of about the twenty-fourth week, which showed signs of life. The sigmoid flexure ran on the posterior wall of the sac.

Although I took pains to extract the fetus as gently as possible, the greater portion of the placenta was torn away with it. The sac wall bled profusely. I packed the cavity with a long roll of gauze, and as the cut edge of the sac bled freely I made a purse-string suture round it, but I drew on it very little, as the least traction affected the sigmoid colon, which was incorporated with the wall of the sac. The bleeding from the edge was, however, checked by the suture without much traction. On the other hand, the cavity of the sac required repeated packing. I sewed the edge of the sac lightly to the parietal peritoneum and closed the abdominal wound except at its lower extremity, where a portion was left open on account of the gauze packing.

After-History.

There was much oozing for four hours after the operation, and a pad was twice applied to the lower part of the abdomen. For two days the patient suffered from nausea and vomiting with high pulse.

At 12 p.m. on July 12th, fifty hours after the operation, Dr. Belfrage administered chloroform and I prepared to dress the wound. I feared that the haemorrhage might recur, as in cases recorded by Malcolm¹ and others. In drawing the gauze out of the wound I found that it was saturated with blood which had become very fetid. When the sac was emptied I was greatly relieved as I noted the total absence of oozing from any part of the sac. About two or three minutes later I passed some dry, absorbent wool into the lowest part of the sac, and on retracting it I found that it was not stained with fresh blood. I packed the cavity of the sac lightly with a roll of gauze.

Within seven hours rather free uterine show, the first for four months, was observed, but there was no more oozing from the sac. No traces of decidua came away from the uterine cavity then nor later. Much fetid, bloody fluid collected in the sac for several days after the dressing; it was washed out with antiseptic solutions. The dressing gave the patient great relief; flatus passed freely, and the bowels were easily relieved by enemata. The knot of the purse-string suture came away on July 17th, and the remainder, with the sutures fixing the sac to the parietal peritoneum, were gradually eliminated.

By July 23rd, the cavity of the sac had greatly contracted, so that it had become a sinus. A sound introduced into it passed 5 in. downwards and backwards. On pelvic exploration, the uterus was found to be distinctly movable. The end of the sound which had been passed into the sinus could be felt touching the anterior wall of the rectum behind the uterus.

On August 10th I left the patient under the charge of Dr. Drummond Maxwell. The sinus, as was expected, contracted very slowly, and there was some purulent discharge, free from faecal odour.

On September 9th the patient was discharged from hospital. I examined her on my return from a vacation, two days before she left my wards. She had gained flesh, and was in very good general health. The sinus had become narrow and tortuous, discharging a little pus daily. The cervix had undergone very marked involution, having become short and thin, whilst, when I examined the parts before the operation, it was very thick. The sac seemed to have contracted on to the back and fundus of the uterus, the whole mass being to a slight extent movable. The right fornix and Douglas's pouch were free. A slightly tender body, feeling like the ovary, could be defined in the left fornix. There had been no period since the operation.

On December 1st Mr. Boodle informed me, in reply to a letter, that the patient was very well in general health, and only complained of a feeling of soreness over the left inguinal region. The sinus was gradually getting shallower. Menstruation had recently occurred but the show was scanty.

The Fetus.

The height of the fetus was 23 cm., or nearly 9 in. The hairy scalp was distinct, the eyebrows well developed. The skin was almost opaque, not wrinkled, and bore no distinct lanugo. The

* Read at a meeting of the Obstetrical and Gynaecological Section of the Royal Society of Medicine, December 10th, 1908.

limbs were well developed, with perfect hands and feet, bearing equally perfect fingers and toes; the nails were very short. The external organs were of the female type, distinct and without any visible anomaly; meconium escaped from the rectum, and there was no sign of spinal deformity, fissures of the lip and palate, or ectopia of the viscera. This fetus moved its limbs and distinctly cried when extracted, and it showed signs of life for some minutes after delivery. At the end of the fifth month the fetus of intrauterine pregnancy measures about 25 cm. in height. Granting that an ectopic fetus is less well-developed, especially as regards nutrition, I think that the proportions in this specimen indicate that the pregnancy had advanced to the end of the fifth month.

Placenta and Cord.

The placenta, as I have already stated, was torn through during extraction. The greater part, very thick, appeared quite normal; but at the edge there was a large infarct, over 2 in. long by 1 in. broad and 1 in. thick. The laceration during extraction seemed to have begun on the brittle tissue of this infarct. The portion of the placenta removed, some 4 in. in width, included the umbilical cord, which was 8 in. long.

The acute attack of pain on April 19th seemed to indicate rupture of the tubal sac into the left broad ligament, and a "posterior tubo-ligamentary pregnancy" (Taylor), as I found it to be at the operation. The lower boundary of the sac, in that case, was therefore the rectum. The pressure on the bowel caused constipation, as Mr. Taunton reported, and as was the case after admission into my wards, until the removal of the gauze packing. The placenta was not attached to the bowel, else there might have been diarrhoea (Freund). The fetus was living, therefore *Bacillus coli* infection, not rare in posterior tubo-ligamentary pregnancy, had not taken place.

The most important question, however, in regard to this case is the treatment of the sac. I fail to see how I could have adopted any safer method than that which seemed to me the only way to save the patient's life. The tearing through of the placenta was accidental, whilst on my attempting to remove the remainder so much haemorrhage occurred that I left it alone and packed the sac. Arterial blood spouted from the cut edges of the sac, but the purse-string suture checked it at once. The sac was secured to the lower edges of the abdominal wound, otherwise the packing would not have been effective. The packing was removed on the second day and the haemorrhage did not recur.

On the other hand, the disadvantages of this method, inevitable under the circumstances in my case, were clearly manifest to me. The cyst wall, let it be remembered, consisted not only of the posterior layer of the broad ligament but also of the adjacent peritoneum of Douglas's pouch. Therefore, when I drew tightly the purse-string suture on the cut edge of the cyst wall, the large intestine was dragged down, forming a sharp angle, so that obstruction would have occurred had I not relaxed the suture considerably. Then this same suture, as well as those which fixed the edges of the sac to the wound, did not come away until much local suppuration had taken place and the pus mixed with the sanies from the remains of the placenta made up a fetid semifluid substance which necessitated daily dressings of the sac.

Lastly, I dreaded the spread of the suppuration, as in Dr. Herbert Paterson's case;² but I feared much more the recurrence of haemorrhage, as in Mr. Malcolm's, to which I have already referred, and fortunately there was no more bleeding, and the suppuration did not extend. Still, I understand that Dr. Paterson and others find that sutures and ligatures may be dispensed with in the treatment of the fetal sac late in pregnancy, and I desire to learn how far this method guarantees the patient against that essential and imminent danger, never absent when the fetus is alive—namely, haemorrhage.

REFERENCES.

¹ An Operation between the Third and Fourth Months of Extra-uterine Gestation, with removal of a living fetus and much trouble from haemorrhage during convalescence, *Trans. Obstet. Soc. Lond.*, vol. xlv, p. 382. ² A Case of Extrauterine Gestation: Operation during the Sixth Month of Pregnancy, *Trans. Obstet. Soc. Lond.*, vol. xlvii, p. 326.

At the annual meeting of the Wolverhampton Sunday Hospital Collection Committee it was reported that the income was £634 as compared with £653 in the previous year. The money has been allocated as follows: General Hospital, £447; Eye Infirmary, £99; Women's Hospital, £49. The expenses have been slightly reduced.

A CASE OF TUBAL PREGNANCY WITH EARLY OPERATION.

By HOWARD F. WARNER, M.B., B.S.LOND.,
M.R.C.S.ENG., L.R.C.P.LOND.,

HAYWARD'S HEATH.

THE interest in this case lies not so much in its rarity, for such cases are by no means uncommon, but in the somewhat puzzling nature of the symptoms, their comparative mildness, and in the short period after actual rupture at which the abdomen was opened.

Mrs. X., aged 42, married three years, had had no children, but one very early miscarriage about two years ago. She had always suffered from spasmodic dysmenorrhoea, menorrhagia, and, since marriage, from dyspareunia. She complained that for two days she had had abdominal discomfort and pain passing through to the sacrum, exactly similar to the pain generally experienced with the menses, but more acute. She had hitherto been always regular, but at the present time was about one week overdue, and though there was a "show," the flow was not as copious as usual. There was great pain on attempting to micturate and considerable difficulty; the pain was also felt passing through into the rectum and in the right iliac fossa.

The patient was of a very neurotic temperament, and considering her age and previous menstrual history it seemed probable on the first visit that the symptoms might be due to a somewhat early menopause. Hot turpentine fomentations, warm douches, and rest in bed, together with a placebo, were ordered, and on the following day the pains were much better.

I heard nothing further of the patient for seven days, during which time she had been gradually getting about again; then

Posterior view of specimen. A, Glass rod passing firstly through secondary rupture in broad ligament, and then through primary rupture into the tube; B, external limit of sac in tube—the rod will not pass beyond this point; C, divided end of tube; this is closed up; O, ostium abdominale (closed); L, broad ligament, cut edge; V, ovary.

I was sent for, to find that the pains had come on again, and were now of a definitely colicky nature, the flow had become more profuse, and trouble with micturition was again present. On examination the patient complained of tenderness all over the abdomen, which, however, moved well on respiration; deep pressure was impossible anywhere, but the tenderness was most marked just above the pubes, in the right iliac fossa, and in the right loin. She also stated that the pain from the loin radiated downwards to the vagina and down the right thigh. The kidneys were not palpable, there was no superficial tenderness anywhere, and beyond determining that muscular resistance was greater in the right iliac fossa than in the left, the abdominal examination was very unsatisfactory owing to the general deep tenderness. There was no jaundice and no history pointing to gall stone. At this time the temperature was 98°, and the pulse (taken at the end of the visit) was 84, the tongue was furred and moist, but the general appearance of the patient was quite good. The attacks of pain lasted about half an hour and "doubled her up"; there was sweating with the pain, but no vomiting, and during the attacks she had felt faint, but there had been no loss of consciousness. She was not anaemic. The urine contained no pus, and, owing to menstruation, it was impossible to attach any value to the presence of blood, but at this time I thought the diagnosis lay between renal colic, tubal pregnancy aborting, and possibly appendicitis.

Vaginal examination revealed an enlarged and very tender cervix; the uterus was freely movable, normally placed, and extremely tender, giving the same pain as the dyspareunia on being touched; owing to the tenderness nothing further could be made out, except that the rectum was fuller than it should have been if the history were correct. Rectal examination