

## Ectopic Pregnancy occurring twice in the same Patient.

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THIS complication, although by no means rare, possesses a special interest in that it affords an opportunity for the discussion of the operative treatment of ectopic pregnancy in general. The present case is a typical example of its kind, and differs in no important feature from many already recorded, unless it be in the fact that both specimens removed have been available for examination and a fairly complete account also obtained of the patient's successive attacks and her health during the interval.

E.K., aged 28 years, was admitted to St. Mary's Hospital on August 21 1912. She had been married  $5\frac{1}{2}$  years, and had had one child, four years previously, the confinement having been apparently normal. Menstruation commenced at the age of 19, was of two to four days' duration, and occurred regularly every four weeks, the last period terminating on May 16. The patient missed her June period, but on July 27 commenced to have a slight loss. This became more free on the following day, and a portion of what she describes as skin was passed. Pain commenced simultaneously with the loss, but was not severe at first, being of a griping character and confined to the right lower abdomen. For the following three days the discharge was slight, but on the fourth day increased in amount, whilst the pain became suddenly more severe, drawing the patient to the floor, but relieved somewhat on her bearing down. The patient's condition again improved slightly, but three weeks later, on August 20, she was suddenly seized with excruciating pain shortly after retiring to bed, and felt as though her back were going to break. She was violently sick, but there was no feeling of faintness. This attack lasted for two hours, when the pain became somewhat easier, but as the patient still felt very ill she was sent down to Hospital early the following morning. On examination, she appeared to be rather pale and her expression anxious. Her pulse was 116, the temperature normal. There was considerable tenderness over the lower part of the abdomen, but nothing more than this could be made out. On vaginal examination, however, the uterus, slightly enlarged, was found to be pushed over to the left by a firm, tender swelling, the size of a walnut, in the right fornix and forwards by an indefinite mass, suggestive of blood-clot filling up the pouch of Douglas. A diagnosis of ectopic pregnancy with intraperitoneal hæmorrhage was

made, and the patient immediately prepared for operation, this being subsequently performed by Dr. Walls.

On opening the abdomen a large amount of free blood was found in the peritoneal cavity. The right tube was enlarged and bleeding freely from a ragged opening in its posterior wall. Filling the pouch of Douglas was a large quantity of blood-clot, some recent, some of earlier date, and lying in the midst of this was found a hard mole, the size of a duck's egg. The right tube and ovary were removed, and most of the blood-clot cleared out. The left appendage was examined, but as it appeared to be healthy was left intact. Recovery was uneventful, the patient leaving hospital on September 11, three weeks after her operation.

The specimens removed are two in number, the ruptured tube and the blood mole. The tube is enlarged near its outer end and presents on its posterior aspect a large ragged opening leading into a deep cavity from which the mole has escaped. The fimbriated end of the tube is patent, and surrounding it is an incomplete adventitious sac formed by some of the blood which has escaped during an attempt at tubal abortion. The mole is a hard oval mass measuring 3" x 2", and consists of a thick wall of blood-clot surrounding an irregular-shaped amniotic cavity one inch in diameter. Within the latter is suspended a small embryo three-quarters of an inch in length. In this case the pregnancy evidently advanced to the sixth week when the blood-mole was formed. The griping pain complained of during the early part of the attack was undoubtedly caused by attempts at tubal abortion, which were unsuccessful, however, with the result that four weeks later, as shown by the sudden excruciating pain, the tube ruptured and the mole was expelled into the abdominal cavity. After leaving Hospital the patient improved in her general health, and menstruated regularly every twenty-eight days until November 1913, when she again went two weeks over her period and commenced with sudden pain and slight loss of blood on November 16. The pain was rather indefinite and varied in severity from day to day until her admission to the Manchester Royal Infirmary on November 27. There was some doubt about the diagnosis at first, as the symptoms appeared to suggest an attack of appendicitis. She was therefore placed in one of the general surgical wards, and remained there until December 2, when she was examined by Dr. Fothergill and transferred by him to the gynaecological department. Whilst in hospital both the pain and hæmorrhage became less, but as vaginal examination revealed a definite swelling lying to the left of the uterus an ectopic pregnancy was diagnosed and operative measures decided on.

The second operation was performed by Dr. Fothergill on December 5, 1913. On opening the abdomen a tubal mole was found on the left side and removed together with the corresponding ovary.

The uterus was somewhat enlarged, but otherwise normal. The right appendage was absent, and some adhesions were found around the vermiform appendix. The pouch of Douglas contained a large quantity of blood-clot, and about a breakfast-cupful of this was removed before closing the abdomen. The patient made an excellent recovery, and left Hospital at the end of three weeks.

The specimen removed consists of the left tube and ovary. The tube is distended throughout the outer two-thirds of its length and measures at this part about one and a half inches in diameter. The fimbriated end is open and the process of tubal abortion is evidently taking place. On cutting into the tube there is no amniotic cavity or embryo to be found, but stained sections of the tube wall and blood-clot within it reveal the presence of large numbers of chorionic villi in various stages of degeneration. The ovary is of normal appearance and contains a corpus luteum.

The main features of the case are therefore as follow:—The patient has a full-term child eighteen months after marriage. No further pregnancy occurs for four years, a fact in itself suggestive of some inflammatory trouble. Ectopic gestation then occurs on the right side, ruptures, and is removed with both tube and ovary, the other appendage being apparently normal. All goes well for sixteen months, when the same complication occurs again, this time on the left side. Incomplete tubal abortion takes place, and this appendage is excised at a second operation. Had both appendages been removed at the original operation a second one would no doubt have been avoided, and therefore the point arises as to how far it is justifiable to remove both appendages rather than allow the patient to run this extra risk. The frequency of the condition therefore becomes of great importance and is worth considering in some detail.

In 1903 Wassmer<sup>1</sup> collected and carefully analyzed 132 cases.

In 1911 Rabinowitz<sup>2</sup> and Smith<sup>3</sup> both contributed excellent papers on this subject, the former dealing with 157, the latter with 170 authenticated cases respectively. According to Rabinowitz the condition has been recognized for many years, a case having been reported so long ago as the year 1595.

With regard to relative frequency, Smith mentions 2,998 cases of ectopic pregnancy in which 113 recurred, a percentage slightly less than 3·8. It must be remembered, however, that the nature of the operation and other conditions affecting subsequent pregnancy have not been taken into account in compiling these figures, and therefore the percentage is much too low, as both appendages were probably removed in a great number, and recurrence thereby rendered impossible.

In the great majority of cases recurrence takes place in some part of the opposite tube, but a few instances are on record where it occurred in the same tube.

Thus in a case reported by Pearson <sup>4</sup> the sequence of events was as follows:—

January 1903. Married.

November 1903. Ruptured left tubal pregnancy—loop of tube excised.

November 1905. Normal full-term pregnancy (female).

November 1907. Ruptured left tubal pregnancy again—remainder of tube excised.

— 1908. Normal full term pregnancy (male).

February 1909. Again 4 months pregnant.

It may be mentioned here that a few cases of three successive ectopics have been recorded, two of course occurring in the same tube, but their authenticity would appear to be rather doubtful.

As regards the interval between the ectopic pregnancies, this was nearly sixteen months in the present case.

In 145 cases Smith found the average to be thirty months, the shortest being five months, the longest twelve years.

As to children in the interval between the operations, out of 132 cases, seven had normal pregnancies, one an abortion and one a doubtful abortion, the percentage therefore being a little over 6. In no instance did a pregnancy occur in a patient who had never had a child previous to the first operation.

The question of a normal pregnancy following a single ectopic is also of importance.

Ehrenfest,<sup>5</sup> out of 19 cases, found subsequent pregnancy in three, whilst it only occurred three times in Smith's 33 cases. Here again the nature of the operation and other conditions must be taken into account, but it would appear that normal pregnancy does not follow so frequently as one would expect.

A study of these various figures necessarily brings up for consideration the correct method of dealing with an ectopic pregnancy, whether to remove one or both tubes or, as suggested by Whitehouse <sup>6</sup> in a recent paper, to enucleate the gestation and repair the injured tube.

With regard to the last-named method, Smith was unable to trace any case in which this had been done, and where a subsequent pregnancy, either intra- or extra-uterine, had taken place; but Lindquist repaired the opposite tube by freeing adhesions, with the result that it became pregnant; and Polak had a case in which the ectopic repeated in the stump of a tube removed for inflammatory disease. The fact, however, that it is possible for a second pregnancy to occur in the same tube would make it inadvisable to carry out this line of treatment.

As regards the removal of one or both tubes the practice in recent years has been to conserve the non-pregnant tube unless obviously diseased, but it is difficult, if not impossible, to form with the naked

eye an exact idea as to its physiological value, and therefore Smith recommends in his paper that the age of the patient, and the number of previous pregnancies, together with her own personal desires in the matter, should be taken into account before commencing the operation, and that where no future pregnancy is to be expected or desired, both appendages should be removed and the patient thus saved the risk of what is after all a fairly frequent complication.

In conclusion, I wish to express my thanks to Dr. Walls and Dr. Fothergill for kindly allowing me to publish the details of this case.

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