**Four cases of early extra-uterine gestation / by Alban Doran.**

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# FOUR CASES OF EARLY EXTRA-UTERINE GESTATION.

By Alban Doran, F.R.C.S. Eng.

About a year ago within the space of four months I had under my care four patients who consulted me for symptoms now very familiar to the reader of medical literature. These cases suggest a consideration of certain diagnostic features and of the justifiability of operative interference. The latter greatly depends upon the former. One case clearly required immediate operation. The second was in such suffering that surgical aid was sought and proved justifiable. The third was in a somewhat similar condition, but the patient was single, the clinical history not quite reliable, and the symptoms obscure in certain respects. The operation was, strictly speaking, exploratory. The fourth, which resembled the others in many ways, showed no acute symptoms and recovered after prolonged rest without any operation.

Case 1.—The patient, aged 25 years, had been married three years, and had borne one child eighteen months before operation. The periods had been regular, the last occurring fourteen weeks before the removal

of the fœtus. For two months several violent attacks of pain and syncope had occurred. Dr. Hubert Roberts detected a very tender swelling in the right iliac fossa pushing the uterus upwards and to the left. The patient was admitted into the Samaritan Free Hospital under Dr. Boulton. A characteristic seizure took place one night, and as she was very pale and weak I decided on operating at once, being assisted by Dr. Hubert Roberts and Dr. Walter Tate. After clearing away a quantity of clot and liquid blood I came upon a ruptured cyst bleeding very freely. A fœtus five and a half inches in length protruded from the rupture. (Fig. 1.) I succeeded in making a pedicle between the right side of the uterus and the cyst, which was then removed. It had developed in the infundibulum of the tube. I cleared out all free clots, leaving alone the half-organised coagula, which adhered firmly to the

FIG. 1.

Tubal sac, Case 1, showing position of fœtus. (Specimen now in the Museum of the Royal College of Surgeons of England, No.4695 G, Pathological Series.)

peritoneum, and closed the abdominal wound. The patient was suffering at the time from acute bronchitis, which retarded convalescence. At present, 11 months after the operation, she is in good health.

CASE 2.—The second patient was a thin, sallow woman, aged 40 years. She had been married 14 years, her only pregnancy occurring a year after marriage. Usually quite regular, she missed a period, and three weeks later the right iliac fossa became tender. Two days afterwards a very severe attack of pain, with pallor and collapse, set in and radiated down the front of the thigh. Called in by Mr. Nourse, of Holloway, to examine her, I detected a distinct tender swelling in the right fornix. After a week's rest, several more paroxysmal attacks occurred, suspicious shreddy structures were passed from the uterus, and the swelling grew larger. The temperature rose to 100·8° F. The breasts

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## Cases of Early Extra-uterine Pregnancy.

| No. of case. | Age. | Married or single. | Children and last confinement. | Catamenia and state of breasts. | Last period. | Hæmorrhage apparently not connected with period. | Decidua. | Symptoms, besides menstrual irregularities or hæmorrhages. | Condition discovered at operation. | Catamenia after operation. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25 | Married (3 years). | 1 (18 months); no abortion. | Catamenia previously regular. Breasts full; nipples prominent. | 14 weeks before operation; normal. | Occasional spot or two of blood. A month before operation blood and matter came away (probably from rectum — operation for fistula 2 years before). | Nothing like decidua ever detected. | Several attacks of pain within last 2 months; pain and syncope 1 week, then tender swelling in right iliac fossa, rising above symphysis; acute attack of pain with anæmia and syncope, when operation was performed. | Ruptured cyst of infundibulum of right tube. Peritoneal cavity full of clots. Cyst removed, left appendages normal. | Reappeared 4th day after operation; again 32 days after operation; regular for last 8 months. |
| 2 | 40 | Married (14 years). | 1 (13 years); no abortion. | Catamenia regular. No changes in breasts. | 11 weeks before operation; profuse not very painful. | "Show" 16 and 8 days before operation. | Shreddy structures, mixed with recent clot, passed 8 days before operation. | Violent pain in right iliac fossa (preceded by 2 days of local tenderness) a month before operation, pallor, collapse, swelling in right fornix, frequent paroxysmal attacks with faintness, fever, &c.; emaciation; anæmia not marked. | Pelvis contained dark blood. Cyst of isthmus of right tube ruptured; laceration closed in by firm adhesions to intestines and vermiform appendix. Removed. | Reappeared on the 40th day after operation. Regular ever since. |
| 3 | 18 | Single. | No evidence of former pregnancy. | Catamenia very regular. No changes in breasts. | 1 month before operation; profuse "show" (see next column). | Uterine hæmorrhage twice in the 2 months before operation (Patient's statements not reliable.) | Nothing like decidua detected. | 2 months before operation sudden attack of severe pain in pelvis following a fit of passion; tumour developed in right iliac fossa; marked anæmia, but of long standing. | Thin-walled tubal cyst full of tarry blood in infundibulum of right tube. Omentum, vermiform appendix, and coils of small intestine adhered. Cyst removed. Chorionic villi found in clot. | Reappeared 6 weeks after operation. Continues regular 1 year after operation. |
| 4 | 34 | Married (13 years). | 1 (10 years); no abortion. | Catamenia regular, but scanty. Breasts flaccid. | 2 weeks overdue when acute symptoms set in. | Coffee-coloured discharge for 6 weeks. | Nothing like decidua detected. | Pelvic pains 10 years (since sole confinement); acute attacks twice in last 2 years: severe pelvic pain, nausea, and retching came on suddenly when the catamenia were 2 weeks overdue; coffee-coloured discharge began next day; firm elastic swelling on right side of pelvis, reaching to umbilicus; uterus 2½ in., pushed forwards and upwards. | No operation. After 3 weeks' rest in bed the swelling became very much smaller; 8 months later it was not larger than an egg, and patient was perfectly well. | (No operation.) Quite regular since subsidence of swelling. |

were flaccid. I operated on March 23rd, 1895, exactly a calendar month after the first attack of pain. The patient had grown very weak from the pain, but was not distinctly anæmic. I found several ounces of dark blood in the pelvis. A spherical sac of the isthmus of the tube, $2\frac{1}{2}$ inches in diameter, was plainly adherent to the small intestine and the vermiform appendix. On separating the adhesions I exposed a laceration in the upper part of the sac, which at once bled very freely. The inflammatory changes had stopped the hæmorrhage. The affected tube and ovary were removed. I cleared the pelvis of clots and closed the abdominal wound. The period reappeared on the fortieth day after the operation, and the patient, who has gained flesh, has been regular ever since. Though no fœtus was found, the microscope confirmed my suspicions that there had been ectopic gestation. (See Figs. 3 and 4.)

Case 3.—I am indebted for the third case to Dr. Rasch. She was a naturally anæmic Polish Jewess, aged 18 years, and unmarried. After suffering cruel privations from sudden expulsion from the Russian Empire she settled in the East End with her mother, who one night scolded her for coming home late, and expressed suspicion about her conduct. The girl flew into a passion and stamped on the ground, upon which a paroxysm of intense pelvic pain set in. Another attack came on a few days later with a show of blood, which she believed, or wanted others to believe, to be a period. Dr. Rasch discovered a painful swelling in the right iliac fossa. A free show of blood began about a month after the first attack of pain. Rest was of no avail. I operated on January 8th, 1895. After separating the adherent omentum, small intestine, and vermiform appendix, I drew up a cyst of the infundibular part of the right tube full of tarry blood and about three inches in diameter. The rest of the operation was easy; a good pedicle could be made as there was over half an inch of tube internal to its fœtal sac. I broke down the adhesions which bound down the left appendages and closed the abdominal wound. The patient soon regained health. A well-marked chorionic villus was found in the clot adherent to the wall of the sac. (Fig. 2.)

Case 4.—This case recovered without any operative interference. The patient, aged 34 years, had been married 13 years. Since her only pregnancy, 10 years ago, she suffered from frequent attacks of pelvic pain and had been laid up twice in the last two years. The catamenia suddenly ceased, and when two weeks overdue a paroxysm of pelvic pain set in with nausea and retching. On the second day a coffee-coloured discharge appeared and continued for six weeks; then Dr. Walter Tate examined her and noted:—"Cervix forward; body of uterus pushed forward $2\frac{3}{4}$ inches. Firm, elastic swelling fills up the right side of the pelvic and posterior part and extends to the level of the umbilicus. Harder and more nodular on the left side." Two days later the patient felt the menstrual molimen and the show increased. Next day Dr. Tate sent her into the hospital as the swelling was increasing. I found the patient to be fairly nourished; the breasts were flaccid. The tumour was as above described by my colleague and it extended down to the left fornix. As no second paroxysm of acute pain had occurred I kept the patient in bed for three weeks. At the end of that period the mass had become much smaller and harder; it was clearly a hæmatocele. Dr. Tate

watched the patient carefully. Eight months later he reported that "the tumour had become almost entirely absorbed. It was not larger than an egg and the patient was perfectly well."

*Remarks.*—These cases tend to show that sudden attacks of pain associated with the development of a mass on one side of the uterus are the most characteristic symptoms of early ectopic gestation. The signs of normal pregnancy may be absent. Amenorrhœa is

FIG. 2.

Chorionic villus in clot adherent to wall of tube, Case 3. The dark border represents the trophoblast.

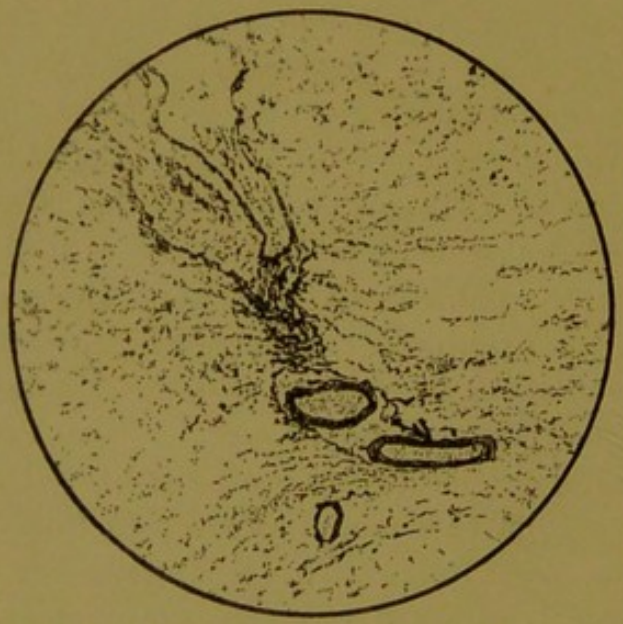
very unreliable, nor must we forget that menstruation may continue during normal pregnancy. The period had ceased in Case 1, which was so perfectly clear. In Case 2 it had ceased 11 weeks, but there was "show"; in Case 4 there was a continuous coffee-coloured discharge for six weeks. In these two latter cases the patients were intelligent and based their statements on the absence (Case 2) or presence (Case 4) of the menstrual molimen. We know, however, that this purely subjective symptom may mislead multiparæ. In Case 3 the patient's veracity was doubtful. In Case 1 alone was there any tendency to the changes in

the breasts which are characteristic of pregnancy. The remainder were all more or less sickly. On the other hand, a trace of evolutionary change in the mammæ may remain for months or years after lactation, and the development of pelvic or even abdominal disease may set up fulness in the glands. In December, 1895, I examined a young woman who had a large abdominal tumour. One breast was distended and milky fluid issued from the nipple. The urine was normal. I explored and removed a large tumour of the right kidney. The uterus showed no sign of pregnancy. The breasts are, then, an uncertain guide in early ectopic gestation. The decidua is a valuable bit of evidence if it be shed, detected, and preserved. Pilliet* has recently shown that in early ectopic gestation it is not smaller, but, on the contrary, much more developed than in normal pregnancy. In Case 2 suspicious shreddy structures were expelled after one attack of pain; in others the decidua was either not shed or escaped unnoticed. In Case 2 the last pregnancy occurred 13 years before, and in Case 4, 10 years before the abnormal gestation, but in Case 1 the patient had a child 18 months old, whilst in Case 3 the patient was only 18 years of age and probably a primipara. The previous histories are just as conflicting in respect to pelvic inflammation, from which Case 4 had suffered for 10 years, whilst Case 2 had been perfectly well during her 13 years of sterility. Case 1 seems to have been free from this complication, and Case 3 was very ill after expulsion from Russia. Acute anæmia was marked in the self-evident Case 1. Case 3 was extremely anæmic, but through constitutional causes, and the hæmorrhage was confined to the interior of the sac. In Case 2 the pallor was marked at every paroxysm of pain and passed off soon, to be replaced by sallowness. In short, it was the pallor of pain. In Case 4 there was no pallor, though there was evidence of extensive hæmorrhage. On the other hand, there was a history in all of one or more violent attacks of pain. The cause, in ectopic gestation, of this paroxysmal agony is an interesting subject, but it cannot be discussed at present. In Cases 1 and 2 the attack frequently recurred. In Case 3 there was only one fit of severe pain, which directly followed a fit of violent passion; no doubt hæmorrhage into the sac occurred then.

* Études Histologiques des Modifications de l'Utérus dans la Grossesse Tubaire.—Annales de Gynécologie et d'Obstétrique, vol. xliv, 1895, p. 241.

The dull pain which followed and increased was clearly due to the peritonitis which developed around the sac. The microscope settled the nature of the tubal swelling. From the first three cases we can fairly assume that extra-uterine pregnancy existed in Case 4. Severe pelvic pain, nausea, and retching came on in association with previous menstrual irregularity and subsequent uterine hæmorrhage and development of a hæmatocele. When an operation has been performed, the diagnosis may remain uncertain, for the fœtus is often destroyed by the internal hæmorrhages. The clot and tubal wall should always be examined by a competent observer. I must thank Dr. Eden and Mr. Targett for

Fig. 3.



Chorionic villi in clot adherent to the wall of tube, Case 2. (Half an inch objective.)

their opinions on my specimens. In the sections from Case 1 the villi were well developed and were eating through the thin sac wall, as often happens after the first two months. No traces of decidua remained. In Case 2 no fœtus was found, but the appearances of the sections were absolutely pathognomonic. In the photo-micrographs which are here reproduced (they were taken by Mr. Roughton and Mr. Cosens) the chorionic villi are very evident. (Figs. 3 and 4.) The trophoblast layer, nucleated yet not divided into cells, shows very clearly. Dr. Eden detected large, round, decidual cells in an involution of the tubal wall. As the ostium was not closed, there possibly might have been tubal

abortion at an early stage, with subsequent hæmorrhage into the sac. In conclusion, it seems that operative interference is always called for when acute symptoms are present, especially if they have recurred. The chances of permanent subsidence of the pain and that which causes it are less than the risk of fatal hæmorrhage or complications very prejudicial to health. Thus an operation is less perilous than expectant treatment. When, on the other hand,

FIG. 4.

One of the villi seen in Fig. 3, one-eighth of an inch objective. The trophoblast is very well developed.

we can obtain, as in Case 4, a history of steady subsidence of pain and swelling for weeks after a single acute attack, it is our duty to trust to rest, at the same time keeping a vigilant watch on the patient. Spontaneous recovery is then highly probable.

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17 Rutland Street,
Edinburgh.

Nov. 14th 1890

Dear Dr. Doran:

I think I remember reading in your book on "tumours of the Ovary" which unfortunately I have at present lent to a friend and which therefore I cannot refer to, that two authentic case of pure fibroma of the ovary had been shown.

Now I have in my possession a large tumour of the ovary removed about

a month ago, in which mic
Scopic examination showed t
to be made out of pure white
connective tissue. I have
looked carefully for muscular
tissue but can see none
I intend showing at a
giving some details of the
case to the Obstetrical
Society here,

I had my microscopic
examination corroborated by
one of our teachers of patholo

here, Dr. W. Russell) who has
asked me to give him an
few hints of the tumour. So as
give to his practical pupils
a specimen of a pure fibroma
I hope you will Excuse
me bothering you but know
ing the interest you take
in these tumours, & appreciating
as I do your services, I
thought you might be interested
in the case & might have
something of value to say on
the Subject
Apologizing therefore for

Troubling you

I remain

Yours Sincerely

A. W. Hamilton

P.S. I was introduced to
one day at St Bartholomews
operations in Samaritan
Hospital, but I suppose
you don't remember.