PRIMARY OVARIAN PREGNANCY — A CASE REPORT

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SYNOPSIS

Ovarian pregnancy is a rare form of ectopic gestation, occurring in about 1% of ectopic pregnancies. This report presents the clinical and histological findings of a case managed in the Toa Payoh Hospital. The diagnostic criteria, clinical presentation, differential diagnoses, treatment and aetiology are highlighted.

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INTRODUCTION

Ovarian pregnancy is a rare form of extra-uterine pregnancy, and is defined by the criteria described by Spiegelberg(1). According to Lehfeldt et al, it occurs about once per 40,000 deliveries and comprises 0.7% of ectopic pregnancies(2). In Singapore, Tan and Yeo (1968) found the incidence to be once per 30,000 deliveries with occurrence in 1% of ectopic pregnancies(3). To date, about 300 cases have been reported in the world literature(4).

CASE REPORT

LK, a 23 year old Sikh primigravida, was admitted at 8 weeks' amenorrhoea to the Department of Obstetrics & Gynaecology, Toa Payoh Hospital on 16 August 85 with a one day history of sudden onset of severe lower abdominal pain with radiation to the right shoulder tip. She also felt faint and giddy. A urine pregnancy test, done 2 days earlier by her general practitioner, had been positive.

Clinical examination showed pallor. The blood pressure was 100/70 mmHg and the pulse rate 100 per minute. Her abdomen was distended, with guarding and tenderness. At pelvic examination, there was no vaginal bleeding. Cervical excitation was present. The uterus was anteverted and bulky. The left adnexa was tender with no mass palpable.

A diagnosis of ruptured ectopic pregnancy was made. At laparotomy, a ruptured left ovarian pregnancy was found (Fig 1), with a litre of blood and clots in the peritoneal cavity. The uterus, the other ovary and both fallopian tubes were normal looking. Wedge resection and repair of the left ovary was carried out. Her post-operative recovery was good.

Histological examination showed a nodule composed of blood clots with chorionic villi and trophoblastic tissue within the ovarian parenchyma (Fig 2). These features were consistent with ectopic pregnancy in the ovary.

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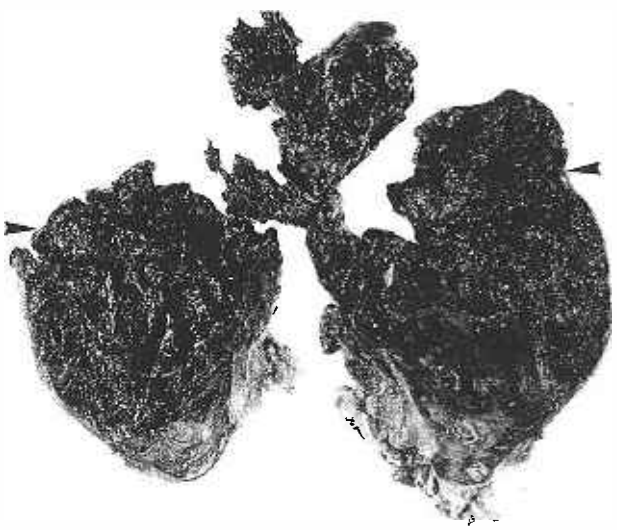

Fig. 1 Cut section through ovary showing blood clots and pregnancy sac (arrowed), within ovarian tissue.

DISCUSSION

The first reported case of a primary ovarian pregnancy was that of Saint Maurice of France in 1682(5). Autopsy revealed a peritoneal cavity filled with blood, with a 2 month old fetus free and unattached. The right ovary was torn, whilst the left ovary uterus and both fallopian tubes were intact.

Ovarian pregnancies are defined as those primarily of ovarian origin. It is possible to encounter them as secondary to tubal abortion. Hence Spiegelberg in 1878, spelt out 4 conditions which must be met in each case of primary ovarian pregnancy(1). These are:

1. The tube on the affected side must be intact and distinctly separate from the ovary
2. The gestation sac definitely occupies the normal site of the ovary
3. The sac must be connected with the uterus by the ovarian ligament
4. Unquestionable ovarian tissue must be demonstrable in the wall of the sac.

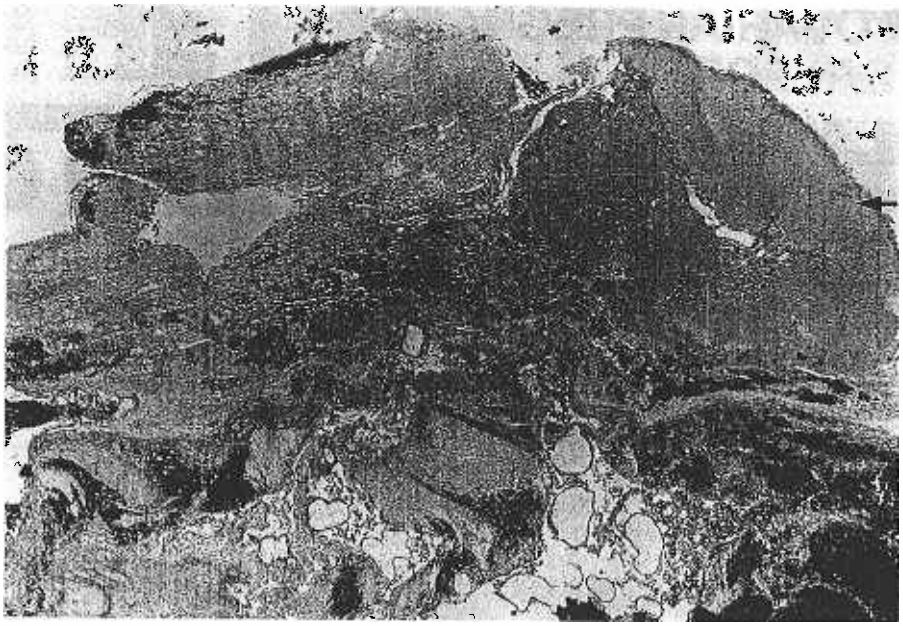

Fig. 2 Magnification 40X. Chorionic villi, trophoblastic tissue and blood clot seen within the ovarian parenchyma. Adjacent to this is a corpus luteum (arrowed).

The clinical presentation of ovarian pregnancy does not differ from that of other ectopic pregnancies. The most common signs and symptoms are abdominal pain, a pelvic mass and vaginal bleeding. In the event of rupture, there are signs of intra-abdominal bleeding and possible hypovolaemic shock.

Intra-operatively, the lesions most commonly confused with ovarian pregnancy are ruptured corpus luteal cyst, haemorrhagic corpus luteum, and even ruptured endometriotic cyst(1,6). Confirmation or final diagnosis rests with the pathologist(3). According to Hibbard, the ratio between ovarian pregnancy and ruptured corpus luteum is 1:90(7).

As most patients are young, conservative ovarian surgery, such as wedge resection, should be practiced. The fallopian tube should not be arbitrarily removed for study, and neither should oophorectomy be done.

Various causes of ovarian pregnancy have been postulated. These are obstructed ovulation from chronic inflammation or adhesions, ineffective tubal function from previous salpingitis, favourable surface phenomenon from decidual reaction or endometriosis, altered tubal motility in intra-uterine conceptive device users, and chance occurrence which permits the occasional mature ovum to be fertilised within the ovary or at the ovarian surface(6,8).

This patient, fulfilled the criteria for primary ovarian pregnancy proposed by Spiegelberg(1). No apparent cause was found but the likelihood that it was a chance occurrence is high.

It may be of interest to note that one and a half years later, the patient conceived and had a normal delivery at term.

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