Rare Case of Ovarian Ectopic Pregnancy

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ABSTRACT

Ovarian pregnancy is a rare form of ectopic pregnancy. It constitutes to 1% of all ectopic pregnancies which usually ends with rupture before the end of the first trimester.

We report here one such uncommon case of ovarian ectopic pregnancy. 38 years old P2L2 woman with one previous cesarean section and one VBAC with history of IUCD for 5 years presented with hypovolemic shock. During laparotomy, ruptured right ovarian ectopic pregnancy with 1.5 litres of haemoperitoneum was found, and wedge resection of the ovary was done. Histopathological examination confirmed it to be an ovarian ectopic pregnancy.

Intra uterine devices (IUD) is one of contraceptive methods which prevents intra-uterine implantation in 99.5%, if implant occurs with IUD, it is tubal implantation in 95% of cases, and it is very rare in other places such as ovary. The most important risk factor of ovarian ectopic pregnancy is IUD as in this study it was showed.

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Introduction
Ovarian pregnancy is estimated to be 3% of diagnosed ectopic pregnancies [1]. We report a case of ruptured right ovarian pregnancy with previous LSCS followed by VBAC with history of Intra uterine contraceptive devices (IUCD) for 5 years presented to casualty with hypovolemic shock and was treated with laparotomy with wedge resection of ovary and volume replacement. The preoperative diagnosis of ovarian pregnancy is difficult though diagnosis of ovarian pregnancy should be suspected from elevated beta HCG, lack of intrauterine gestation, a complex ovarian mass on USG, IUCD usage, history of PID, in addition to the Spiegelberg criteria [2]. Spiegelberg’s criteria includes: (1) an intact ipsilateral tube, clearly separate from the ovary; (2) a gestation occupying the normal position of the ovary; (3) a gestational sac connected to the uterus by the utero-ovarian ligament; (4) ovarian tissue in the wall of the gestational sac. Ovarian pregnancy during surgery is difficult to differentiate from a hemorrhagic corpus luteum intraoperatively [3].

Environmental conditions favouring tubal ectopic gestation such as pelvic inflammatory disease, previous surgery, and history of infertility are very rare in ovarian pregnancies. However, a few risk factors seem to be present for ovarian pregnancies: endometriosis and intrauterine device usage are reported to contribute in the majority of cases.

Case Presentation
A 38-year-old P2L2 with one cesarean followed by vaginal delivery woman presented to casualty of our department complaining of anxiousness with severe pain in lower abdomen. She had amenorrhea of 4 week 6 days with faintly positive UPT. Physical examination revealed initial blood pressure 90/60 mmHg, pulse 110 beats/min, and body temperature 98.4° F. Per abdominal examination revealed patient had tenderness in lower abdomen. On speculum examination there was a small amount of blood but the cervical os was closed. On bimanual clinical examination she was found to have a normal size anteverted uterus, no cervical motion tenderness but right adnexal tenderness was present. Urine pregnancy test was faintly positive, Transvaginal examination showed an empty uterus, right side TO mass of about 5 x 4 cm with fluid in the cul-de-sac (figure 1). Her laboratory results were: White Blood Cells (WBC): 6500, Hemoglobin (Hb): 6 g/dL, Hematocrit (Hct): 30%, Platelets (Plt): 250 × 10^9/L. The patient was admitted with a diagnosis of suspected ruptured tubal pregnancy and decision for emergency laparotomy was taken with 3 units of blood and high risk consent for ICU admission. On laparotomy around 1.5 litre haemoperitoneum was present. Rent was observed from the right ovary, which was bleeding suggestive of ruptured ectopic pregnancy of around (5 cm × 4 cm) size (figure 2). Wedge resection of ovary was done and rest of the ovarian tissues was preserved. Intraoperatively 2 units blood was given. Postoperatively patient was stable Hb was 7.5 gm% and she received one more unit of blood. Patient was discharged three days later.

Discussion
Ovarian pregnancy is a rare variant of ectopic pregnancy [1]. One in every nine ectopic pregnancies among Intra uterine devices (IUD) users is an ovarian pregnancy [3,4]. Preoperative diagnosis remains challenging, and it is diagnosed generally during surgery [5]. Rupture in the first trimester is the usual rule in ovarian ectopic pregnancy. Diagnosis of ovarian pregnancy should be suspected from elevated beta HCG, lack of intrauterine gestation, a complex ovarian mass on USG, patient’s history, signs, symptoms, in addition to the Spiegelberg criteria [2]. Comstock et al [7] reviewed six cases of ovarian pregnancy to review common ultrasonographic findings in all. The study demonstrated a common feature in five of six patients: A hypechogenic ring was seen on/within the surface of the ovary. Only one of these contained a yolk sac. The patient in which this finding was not seen was found to have a ruptured ectopic at surgery.

The difference between ultrasonographic appearance of a corpus luteum and ovarian pregnancy is that while both have a ring-like appearance, in the majority of cases, a corpus luteum appears less echogenic than the ovary itself. This is in contrast to an ovarian pregnancy in which the ring-like structure appears more echogenic than the
Fig. 2: Intra-operative images showing ruptured right ovarian pregnancy

This is attributed to the fact it enables a histological diagnosis. Hallat confirms this in his study of 25 cases of ovarian pregnancy where he reports that a correct diagnosis at surgery was only made in 28% cases. The study correctly highlighted the difficulty in distinguishing between an ovarian pregnancy and a haemorrhagic cyst/corpus luteum.

In our case the ovarian pregnancy was misdiagnosed as a tubal pregnancy, as USG was not useful for distinguishing between ovarian and tubal pregnancy. Medical therapy with methotrexate was not possible due to the occurrence of massive bleeding. The most common surgical treatment consists of ovarian wedge resection or oophorectomy [8], either laparoscopic or via minilaparotomy. Patient was haemodynamically low so we took decision for laparotomy along with all resuscitative measures. Wedge resection of ovary was done and tissue was sent for histopathology and later confirmed for ovarian ectopic. Patient was stable postoperatively and discharged on day 4.

Conclusion
Ovarian ectopic pregnancy is a rare variant of ectopic gestation. The diagnosis is made often at surgery and requires histologic confirmation. Fertility after conservative surgical procedures does not appear to be affected and ovarian wedge resection or ovarian cystectomy is the treatment of choice.

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References

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