

Primary Ovarian Ectopic Pregnancy: A Case Report

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Abstract

Introduction: Ovarian ectopic pregnancy, although is rare is nevertheless is an important cause of maternal morbidity and mortality. The incidence of ovarian ectopic pregnancy is on rise with the use of ovulation induction agents. Pre-operative diagnosis is very challenging, intra-operative and histo-pathology provides definitive diagnosis.

Case report: 20 year old female gravida 2 para 1 presented with complaints of pain in lower abdomen, on clinical examination findings of ruptured ectopic pregnancy were elicited and ultrasound suggested left sided ectopic pregnancy. On OT table, it was found to be ruptured left ectopic pregnancy. Ovarian reconstruction was done. Histopathology confirmed ovarian ectopic pregnancy.

Conclusion: The key to timely management and successful outcome in ovarian pregnancy is the early detection and a high index of suspicion. To prevent misdiagnosis, an awareness of this issue should be developed by gynecologists, surgeons, and radiologists.

Key words: Ectopic, ovarian, pregnancy.

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I. Introduction:

In today's world, one of the crucial cause of maternal mortality, morbidity, and early fetal loss, especially in the first trimester with 10% frequency, is ectopic pregnancy (EP).^(1, 2) The most common site of EP is fallopian tubes. Ovarian form is a rarer event and accounts for 0.15% -3% of total ectopic pregnancies.⁽³⁾ With an increase in the use of assisted reproductive techniques, the cases of OP are also increasing.⁽⁴⁾ The diagnosis is complex and based on surgical and histo-pathological observations.⁽⁵⁾ The diagnosis of primary ovarian ectopic pregnancy is critical and challenging as there are no specific clinical or para clinical presentations and to resolve this issue Spiegelberg's criterias⁽⁶⁾ are used which states the following: 1) Ipsilateral fallopian tube should be intact, 2) The gestational sac should be laid in the ovarian situation, 3) Connection of ovary to ovarian ligament and uterus should be verified, 4) On histo-pathologic examination, the gestational sac walls should contain ovarian tissue. There are very few cases of accurate preoperative diagnosis using ultrasound. Mostly patients undergo surgery for suspected ruptured tubal ectopic pregnancy, hemorrhagic corpus luteal cyst or hemorrhagic ovarian cyst,⁽⁷⁾ however the final diagnosis is given by histo-pathological examination. Hence we are reporting our case.

II. Case Report:

20 years old female presented to Goa Medical College and Hospital as referred patient from private hospital as a case of G2P1 at 6 weeks of gestation with ruptured ectopic pregnancy for further management. She gave history of pain in lower abdomen. On examination, vitals were stable, UPT was positive. On per abdominal examination, tenderness was present, no guarding or rigidity were elicited. On per vaginum examination, uterus was found to be of normal size, left forniceal fullness was noted and CET was positive. On ultrasonography, 6*4.8 cm mass was noted in left adnexa with cystic structure with yolk sac complex within showing peripheral vascularity, suggestive of gestational sac was noted. After basic investigations and sending blood for grouping and cross matching, patient was taken up for laparotomy. On OT table, the findings were left ovarian rent was noted 1*1 cm with active bleeding at the site of ruptured ovarian ectopic pregnancy. Bilateral fallopian tubes were intact. No other site of bleeding was seen. There was minimal hemoperitoneum. Left ovarian reconstruction was done.

Figure 1: OT finding showing left ovarian rent at the site of ruptured primary ovarian ectopic pregnancy

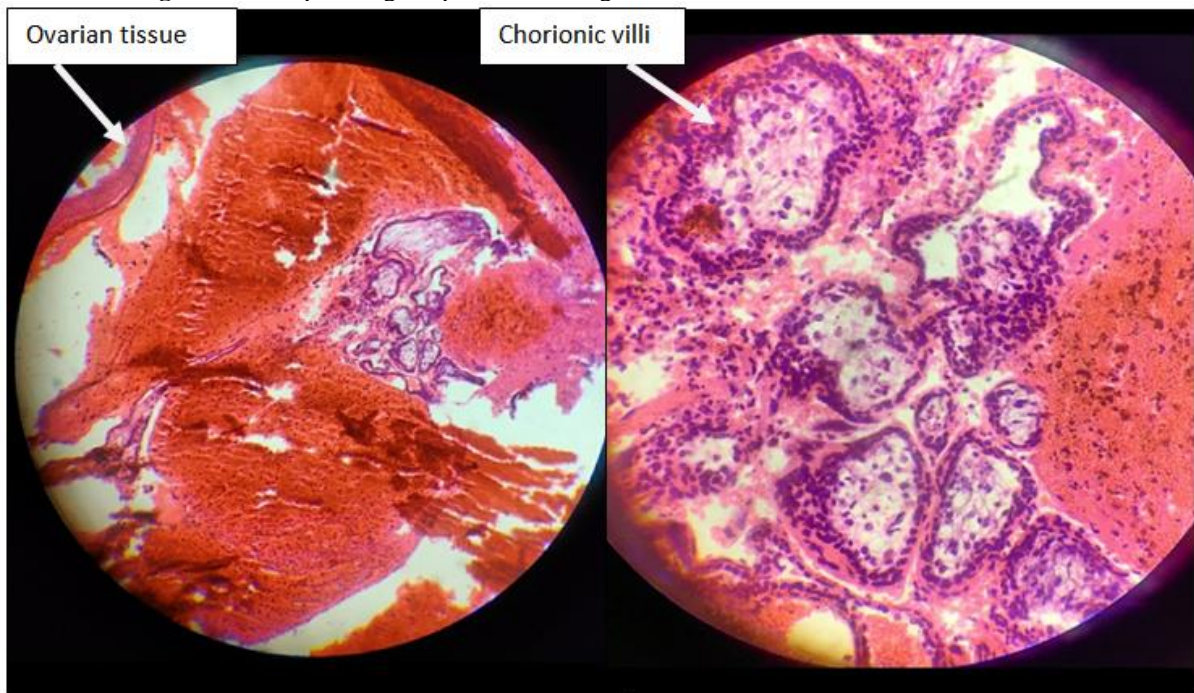


Differential diagnosis on OT table were:

- Left ruptured ovarian ectopic pregnancy.
- Intrauterine gestation with left ruptured corpus luteal cyst.
- Pregnancy of unknown location.

Sample were sent for histopathological examination which showed chorionic villi with blood clots with normal ovarian tissue, hence ovarian pregnancy was confirmed

Figure 2: Histopathological picture showing chorionic villi with normal ovarian tissue



III. Discussion:

The incidence of primary ovarian ectopic pregnancy ranges from 1 in 7000 to 1 in 40000 deliveries.⁽⁸⁾ The ovarian pregnancy develops under 2 situations: First, when fertilization occurs in the peritoneal cavity and, then, fertilized ovum is implanted into the ovary; and second, when fertilization occurs in the fallopian tube

and, then, via tubal abortion or perforation, products of conception are implanted on the ovarian surface.⁽⁹⁾ The important risk factors for the development of primary ovarian ectopic pregnancy are: 1) Obstructed ovulation, 2) Malfunctioning of fallopian tube due to previous salpingitis, 3) Endometriosis, 4) Use of intrauterine contraceptive devices, 5) Chronic pelvic inflammatory disease, 6) Tuberculosis (especially in the developing countries), and 7) Assisted reproductive technology (in vitro fertilization and in vivo transfer of the embryo to the uterus (IVF-ET) and intrauterine insemination).^(9, 10, 11) There were no such evidence of predisposing conditions and factors found in the past medical history of the present case. It can be hypothesized that this ovarian pregnancy may have resulted from intra-follicular fertilization following failure of extrusion of ovum after rupture of follicle.

Clinically, presentations are variable. This range includes a totally asymptomatic lady, a lady with pelvic pain of different degrees or even total collapse. She may have pallor and signs of hypotension.⁽¹²⁾ When the patient is asymptomatic, early diagnosis may be missed till later in pregnancy.⁽¹¹⁾ Thus, predisposing to risk of rupture, secondary ectopic implantation, and complications during surgery.⁽⁸⁾

The differential diagnosis of the primary ovarian ectopic pregnancy are 1) Corpus luteal cyst, 2) Hemorrhagic corpus luteum, 3) Tubal ectopic pregnancy, 4) Hemorrhagic ovarian cyst, 5) Ruptured endometrioma, 6) Ovarian tumor, 7) Ovarian torsion, and 8) Intrauterine pregnancy.⁽¹³⁾ In the present case, patient had regular menstrual cycles and no previous adnexal fullness or pain was noted. Also, imaging and laboratory results ruled out any evidence of benign or malignant cystic, or solid ovarian tumors.

Diagnosis is based on the classic description of a cystic lesion with a wide echogenic outer ring using ultrasound. Ultrasound can only suggest the diagnosis, surgery is the best method of diagnosis and management.⁽⁷⁾

Early detection of ovarian ectopic pregnancy allows for the wedge ovarian resection in the selected cases with preserved uninvolved ovary. The other treatment option is methotrexate (conservative treatment), but may not be appropriated.⁽¹⁴⁾ As in our case, ectopic pregnancy was ruptured through a rent in ovary, the remaining healthy ovary was reconstructed thus preserving the fertility of patient.

The case we presented here fulfilled the Von Spiegelberg⁽⁶⁾ criteria for primary ovarian ectopic pregnancy based on the following findings: The gestational sac being in the area of the ovary, ovarian tissue in the wall of the gestational sac confirmed on histopathology, and intact ipsilateral fallopian tube⁽⁶⁾, similar to the studies by Ghasemiet. al.⁽¹⁾, Bhuria et. al.⁽²⁾ and Manjula et al.⁽⁹⁾ and Fatemah Samiee Rad et. al.⁽¹³⁾

IV. Conclusion:

Ovarian ectopic pregnancy is rare but challenging case to diagnose. The important thing in timely management and successful outcome in ovarian pregnancy is the early detection and a high index of suspicion. Though transvaginal sonography usually resolves the diagnostic dilemma, it must be remembered that ultrasonography is an operator-dependant modality. To avoid misdiagnosis and to reduce the associated morbidity and mortality, awareness of this condition by gynecologists, surgeons, and radiologists is important.

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