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## Case Report

# Primary ovarian pregnancy a rare clinical entity: a case report

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### ABSTRACT

Ovarian pregnancy is a rare form of ectopic pregnancy. It constitutes <3% of all ectopic pregnancies with an incidence ranging from 1:6000 to 1:40000 pregnancies. There has been an increase in the incidence of ovarian pregnancies due to better diagnostic modalities such as transvaginal ultrasonography (TVS) and serum beta-HCG estimation. Though it is usually misdiagnosed as ruptured tubal pregnancy, ruptured haemorrhagic cyst, ruptured corpus luteal cyst, therefore, awareness of this rare condition is important in reducing the associated risk. Hence, we report a case with ectopic ovarian pregnancy managed by conservative surgery at MMIMSR, Mullana, Ambala. Ovarian ectopic pregnancy can be managed by conservative surgeries.

**Keywords:** Ectopic ovarian pregnancy, Transvaginal ultrasonography (TVS), Beta-HCG

### INTRODUCTION

A primary ovarian pregnancy is one of the rarest varieties of ectopic pregnancies. Patients frequently present with abdominal pain and menstrual irregularities. Abdominal pain is the most common presenting complaint, but the severity and nature of the pain varies widely ovarian pregnancy is neither associated with pelvic inflammatory diseases nor infertility. Incidence of ovarian pregnancy is 0.15 -3% of all ectopic pregnancies.<sup>1</sup> Diagnosis of ectopic pregnancy requires a high degree of clinical suspicion and is necessary for appropriate management which will highly reduces morbidity and mortality associated with this condition. We report a rare case of ovarian ectopic pregnancy that was managed successfully.

### CASE REPORT

A 25 year old female, Gravida: two, Para: zero, abortion: one, presented in gynae OPD with complaints of overdue by seven days, bleeding per vagina since 24 hours and pain abdomen from 10 hours. Bleeding was mild. Her last menstrual period (LMP) was on 28-Jan-2012, previous

cycles were regular, 28-30 days cycle with average flow. There was no history of tuberculosis in patient and her contacts. There was no history of pelvic surgery, IUCD and treatment of infertility.

On examination her general condition was satisfactory. Her vitals were stable. Mild pallor was present. Per abdomen examination revealed slight tenderness in lower abdomen, no guarding, no rigidity present and no rebound tenderness. On per speculum examination bleeding was coming from OS & on per vagina examination uterus was normal in size, bilateral fornix clear and cervical movements were tender.

Upon Investigation, her haemoglobin was found to be 11.3gm%. Urine for pregnancy test was weekly positive. Pelvic ultra sonography revealed ruptured right sided tubal pregnancy with haemoperitoneum with empty uterine cavity with thickened endometrium. Two units of blood were arranged and she was taken for emergency laparotomy.

Intraoperative findings (picture I-III) showed haemoperitoneum. Uterus and bilateral tubes were

normal. There were no signs of tubal abortion. Right ovary was enlarged and hemorrhagic mass (approx. 1.2 x 1.5 cm) seen on the anterior surface of the ovary having a purplish colour. It appeared to be a ruptured right ovarian

pregnancy. Haemoperitoneum containing blot clot (approximately 300 - 400 gm) and blood (approximately 700ml) was found. The left ovary was normal.



**Right ovarian pregnancy**



**Right fallopian tube**



**Products of conception**

**Figure 1: Intra operative findings.**

Conservative surgery was done. On right side ovarian wedge resection was performed. Peritoneal washing was done. Patient shifted in satisfactory condition. The postoperative period was uneventful. Sutures were removed on day 7 and discharged on day 8. Contraception was advised.

#### **Histopathological examination**

Gross, Right ovary measuring 3.5 x 3 x 1.8 cm multiple pieces of blood clot measuring 13 x 7 x 3 cm. Externally ovary appears smooth and greyish white. Cut section revealed haemorrhagic areas along cyst of size 3.5cmx3.5cm. Microscopic section showed ovarian tissue along with chorionic villi cyst and syntiotrophoblast with large areas of haemorrhage.

So diagnosis of right ruptured ovarian pregnancy was confirmed.

The patient was under regular follow up in our department. Patient conceived again. At present, her period of gestation is 16 weeks.

#### **DISCUSSION**

Ovarian pregnancy incidence is 0.15-3% of all ectopic pregnancies.<sup>1</sup> The conditions most commonly confused with ectopic ovarian pregnancy both clinically and pathologically haemorrhagic corpus luteum, chocolate cyst and ruptured tubal ectopic pregnancies. Therefore, the Spiegelberg criteria are important to diagnose the ovarian pregnancy.

Diagnostic criteria laid down by Spiegelberg<sup>2,4</sup>:

- The tube on the affected site must be intact and separate from the ovary.

- The gestational sac should occupy the normal position of the ovary.
- The gestational sac should be connected to uterus by the ovarian ligament.
- Definite ovarian tissue must be present in the sac wall.

#### **Ovarian pregnancy classification<sup>3</sup>**

##### **Primary ovarian pregnancy**

Primary ovarian pregnancy occurs if the ovum is fertilized when it still lies within the follicle and the phenomenon is postulated to be a consequence of ovulatory dysfunction.

##### **Secondary ovarian pregnancy**

In the secondary ovarian pregnancy there is tubal abortion followed by secondary implantation of the embryo in the ovary.

Although increase in the incidence of ovarian pregnancy is due to wider use of IUCDs, ovulatory drugs and assisted reproductive techniques<sup>4</sup>, no such history was present in this patient. Modern methods like ultrasonography, laparoscopy and estimation of serum HCG levels have been used in conjunction with repeated clinical evaluation in the diagnosis and management of extra uterine pregnancies.

Fertility after conservative surgical procedure does not appear to be affected and ovarian wedge resection is the treatment of choice. Patients with ovarian pregnancy have good prognosis for further fertility, therefore, conservative surgical management is advocated.<sup>5,6</sup> Since our patient was a case of secondary infertility, preservation of her ovary

was of utmost importance for us. The outcome recorded in a study by M D Helde et al had recorded that wedge or partial resection and repair is adequate to control bleeding from early ovarian pregnancies.<sup>7</sup>

The use of methotrexate in a carefully selected case may further be beneficial in conserving future fertility. However, the presence of free peritoneal fluid, presumably blood, as in our case, is considered by many to be a contraindication to methotrexate therapy, because it may indicate ongoing tubal rupture.<sup>8</sup>

The authors agree with Seiner et al<sup>9</sup> concluding that as laparoscopy is required for diagnosis, it is logical to effect definitive surgical management at the same time.

Unlike tubal pregnancy where there is a 15% chance of recurrence, no case of a repeat ovarian pregnancy has been reported. Fertility in patients treated for ovarian pregnancy remains unaffected and subsequent pregnancies are invariably intra uterine.<sup>10</sup>

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