

## Management of ovarian ectopic pregnancy: a case report

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### ABSTRACT

An ectopic pregnancy occurs when a developing blastocyst implants at places other than the uterine cavity. An incidence of ovarian implantation is 1 in 7000 to 40000 live birth and 0.5 to 3 % of all ectopic pregnancies.

If ruptured, it is a life-threatening condition. We report a case of 30-year-old multiparous (G3P2L2) female who presented to us with chronic lower abdominal pain and irregular per-vaginal bleeding. She was diagnosed with differential ruptured ovarian pregnancy and a corpus luteal cyst on her left side and underwent laparotomy. During laparotomy, the diagnosis was confirmed to be left ruptured ovarian pregnancy which was later confirmed by the histopathological report. She underwent left-sided oophorectomy with preservation of the fallopian tube as it was normal.

**Keywords:** Ovarian pregnancy, oophorectomy, chronic pain

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## INTRODUCTION

Ovarian ectopic pregnancy is the rarest form of ectopic pregnancy which is 0.5 to 3% and it is the leading cause of maternal mortality which is about 10%.<sup>1</sup>

The criteria for ovarian pregnancy are Spielberg's criteria which include the ipsilateral tube must be intact, the gestational sac must occupy a position in the ovary, the ovary must be connected to the uterus by ovarian ligament and ovarian tissue must be seen in the sac wall of the pathology.<sup>2</sup> Ovarian pregnancy was always confirmed only after histopathological examination.<sup>3</sup>

## CASE REPORT

A case of 30-years-old female presented in our emergency with a complaint of lower abdominal pain for 2 months and irregular vaginal bleeding for 15 days. She visited in emergency with history of increase in the intensity of pain since today morning. She was married for 5 years and has two children. She had no history of abortion. She was not using any contraceptives.

On examination, she had no pallor, during vital measurements she had tachycardia but her blood pressure was normal. On per abdominal examination, she had tenderness at the hypogastrium and left iliac fossa on deep palpation. On per speculum examination, a minimal amount of bleeding was seen. On per vaginal examination, there was cervical motion

tenderness and fullness over the left side was present.

With the differential diagnosis of ectopic pregnancy, we had to send a urine pregnancy test which was found to be positive. We had done an urgent ultrasound scan in emergency in which we noted an adnexal mass or cystic structure of 5 x 7 cm; which was noted at the left ovary (suspected gestation sac) with an echogenic outer ring. Color Doppler revealed hypervascular rim with a minimal collection over the POD (figure 1). With the differential diagnosis of ruptured left ovarian pregnancy or corpus luteal cyst we have done other basic investigations and arranged blood. Her hemoglobin was 11g/dl. She was then posted for exploratory laparotomy with informed and written consent. During exploratory laparotomy, there was a ruptured ovarian mass of 10 x 7 cm. Left ovary was not separately visualized. But the left fallopian tube was intact. A minimal collection of around 50 ml was present in POD (figure 2). Left-sided oophorectomy was done with preservation of the left fallopian tube. Her postoperative period was uneventful. Her hemoglobin on 2<sup>nd</sup> post-operative was 9g/dl. She was discharged on the 3<sup>rd</sup> postoperative day with advice to follow up on the 7<sup>th</sup> day for suture removal and follow up with a histopathological report. A histopathological report confirmed left ovarian pregnancy as it showed the presence of chorionic villi and trophoblastic tissue on the ovary.



Figure 1. Ultrasound finding suggestive of left ovarian pregnancy

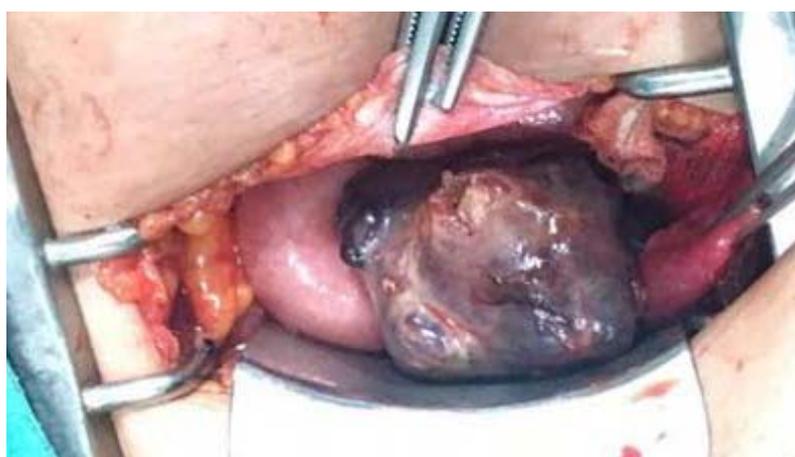


Figure 2. Intraoperative picture of case showing ruptured ovarian mass

## DISCUSSION

Ovarian pregnancy is the rarest form of ectopic pregnancy that accounts for 0.5 to 3%.<sup>1</sup> Ovarian pregnancy can be missed and diagnosed with a ruptured corpus luteal cyst in 75% of cases.<sup>2</sup> So, it is always best to keep differential diagnosis as

corpus luteum cyst as in our case as well. Chronic pelvic pain alone is the most frequent clinical symptom of ovarian gestation as in our patient.<sup>4</sup> The diagnosis is often made at surgery and required histopathological confirmation.<sup>5</sup> A correct diagnosis of ovarian pregnancy during surgery is

only possible in 28% of the cases because it is difficult to differentiate from a hemorrhagic corpus luteal cyst intraoperatively.<sup>6</sup> In our case also we confirmed our diagnosis only after the histopathological report. Diagnosis is always based on the description of the cyst with a wide echogenic outer ring using ultrasound which is also a feature of ovarian ectopic pregnancy. Although, ultrasound may suggest the diagnosis surgery (laparoscopy or laparotomy) remains the best method for differential and management.<sup>7</sup>

A high index of suspicion is based upon a combination of ultrasound findings (both grey and color Doppler), as well as a high level of serum beta HCG. But we have only seen a urine pregnancy test which was not adequate. We were only able to differentiate from ovarian mass but not able to differentiate from corpus luteal cyst with complete abortion and ectopic pregnancy. It was a huge limitation of our study since we were not able to get differentiate between our differential ovarian pregnancy and hemorrhagic cyst. Treatment of almost all known ovarian ectopic pregnancies has been surgical.<sup>8</sup>

### CONCLUSION

It is very challenging for general practitioners like us to work in the periphery with a very low resource setting. When diagnosis depends only on the skills of Ultrasound and other investigations like beta HCG are not available to differentiate the diagnosis. Even if the patient had arrived early before the rupture of ovarian pregnancy diagnosis and conservative management would have been challenging.

### Consent

Written informed consent was taken from the patient.

### Conflict of Interests

None

### Funding

None

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