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A Rare Presentation of an Ectopic Ovarian Pregnancy – A Diagnostic Challenge

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ABSTRACT

Introduction: Ectopic pregnancies in the present day are on a rising curve. Ovarian pregnancy is a rare form of ectopic pregnancy with an estimated incidence of 0.5 to 3%. The ovum is fertilized in the peritoneal cavity and implanted on the ovarian surface. Ovarian ectopic pregnancy is associated with high morbidity and mortality rates.

Objective: This paper aims to present clinical features, radiological features of an ectopic pregnancy.

Results: Comparison of clinical features, radiological features suggested of final Diagnosis

Conclusion: The findings at surgery establish Spiegelberg's criteria which is diagnostic for ovarian pregnancy. Laparoscopy is the mainstay of diagnosis as well as a treatment modality. Unless diagnosed early it will lead to catastrophic haemorrhage which may be life-threatening. The intra-operative diagnosis is confirmed by histopathological assessment.

Key Words: Endometriosis, Ectopic, Spiegelberg's Criteria, Methotrexate, Ovarian Ectopic

INTRODUCTION

The incidence of ovarian ectopic pregnancies is steadily rising. Being a rare form of ectopic pregnancy the incidence is stated to be around 0.5 to 3%. It was first described in the 17th century¹ but the present-day modern techniques of assisted reproduction as well as intrauterine devices for contraception have been seen to be associated with a rising incidence of ovarian ectopic pregnancies. Endometriosis and pelvic inflammatory disease are also causal factors for ovarian ectopic pregnancy².

CASE REPORT

A 30-year-old female presented to the outdoor patient department of gynaecology of East Coast Railway Divisional Hospital, Sambalpur, Odisha with chief complaints of pain in the right iliac fossa for 2 days following a missed period of 6 wks. She was gravida 3, para 1 with a history of one MTP. She had a cesarean section 5 years back. She had a regular menstrual cycle of 4-5 days /28-30 days. On examination, she was short-statured, afebrile with mild pallor. Her vitals

were normal with a pulse rate of 90/min, regular. Blood pressure was 110/70 mmHg; the chest was clear. The respiratory rate was 20/min. Her body weight was 45 kg. Per the abdomen, findings showed abdomen to be soft, non-distended with mild tenderness in the right iliac fossa. Per speculum examination revealed the cervix to be healthy and there was bleeding through the ostium. Bimanual examination showed the uterus to be anteverted, bulky, soft, with restricted mobility and right fornix. Full excitement pain was positive.

A provisional diagnosis of ectopic pregnancy was made and the prognosis was explained to the patient. All investigations were done. Her Hb% was 8.2g/dl, TLC-6,800/cum, Blood grouping, and Rh typing was A positive. HIV, HBsAg was negative. Real-time ultrasonography of the pelvis showed an ectopic gestational sac of 7 weeks 2 days and a fetal pole of 7weeks1 day gestation with absent cardiac activity (Figure 1 and 2). A diagnosis of unruptured ectopic pregnancy was made. The patient however refused hospitalization and went back. She presented again after 4 hours with features of shock. She was taken up for laparoscopy keeping two units of blood on hand. Upon entering the abdomen, the abdomen was filled with blood and clots. Careful suction and dissec-

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tion revealed right ovarian ruptured ectopic pregnancy with ovarian endometriosis and right tubo-ovarian mass. The right fallopian tube is healthy but congested. Right, salpingo-oophorectomy was done maintaining hemostasis. The intra-abdominal drain was given. The post-operative period remained uneventful and the patient was discharged on 4th postoperative day in a satisfactory condition. Histopathology reports showed: Ovarian tissue- villous structure with fibrin thrombi amidst the ovarian parenchyma. Fallopian tube- Normal appearing fallopian tubal plicae (Figure 3, 4 and 5)

DISCUSSION

Ovarian pregnancy occurs by fertilization of the ovum in the peritoneal cavity and implantation on the ovarian surface³. Ovarian ectopic is associated with high morbidity and mortality rates. The incidence of ovarian pregnancy is estimated to be around 6% of all ectopic pregnancies following in-vitro fertilization⁴ and around 3% for natural conception⁵. Preoperative diagnosis of ovarian pregnancy is a challenge and poses a diagnostic dilemma. Diagnosis is made using Spiegelberg's criteria⁶:

- a. The gestational sac is situated near the ovary.
- b. In the uterus the ovarian ligament involves the ectopic pregnancy
- c. histologically proven Ovarian tissue in the wall of the gestational sac.
- d. The tube on the same side is unaffected.

In the case review of literature, it was seen that in 11-28% of cases the preoperative diagnosis was confirmed at surgery.⁷ In a review of cases conducted by Comstock et al⁸, the sonographic picture of ovarian ectopic pregnancy showed up as a cyst with an echogenic outer ring either on or within the ovary. Such an image should arouse the suspicion of ectopic pregnancy and the clinician should be alerted for a possible diagnosis of ovarian pregnancy. The diagnosis is confirmed at surgery. Laparoscopy remains the mainstay of diagnosis and treatment. Diagnosis is usually made at surgery as Spiegelberg's criteria can only be established at the surgery and not by ultrasonography.⁹ The definitive management is ipsilateral oophorectomy but the current trend favours fertility-preserving surgical management which includes wedge resection of the affected ovary, ovarian cystectomy, or blunt dissection of the trophoblastic tissue.¹⁰ However, cases dealt with fertility-preserving surgical methods need post-operative follow up with serial beta HCG estimation. Patients diagnosed with unruptured ovarian pregnancy with stable vitals can be offered medical management. Administration of methotrexate, prostaglandins, potassium chloride, hypertonic glucose are some of the medical management modalities.¹¹ Mittal et al was successful in treating an ovarian ectopic pregnancy with laparoscopic guided methotrexate injection.¹² Successful therapy with methotrexate injection

obligates the following criteria: a gestational sac <30mm, absent fetal cardiac activity, and gestational age of <6weeks. Juan and colleagues successfully treated a case of ovarian pregnancy with etoposide.¹³

In the present case, a preoperative diagnosis of unruptured ectopic pregnancy was made. The patient was taken up for laparoscopy during which an intraoperative diagnosis of ruptured ovarian pregnancy was made. We opted for definitive surgical management as the intraoperative features were of ruptured ectopic pregnancy.

CONCLUSION

Ovarian pregnancies are a rare form of ectopic pregnancy that is difficult to diagnose pre-operatively. Unless diagnosed early it will lead to catastrophic haemorrhage which may be life-threatening. Diagnosis is usually made intraoperative and confirmed by histopathological study.¹

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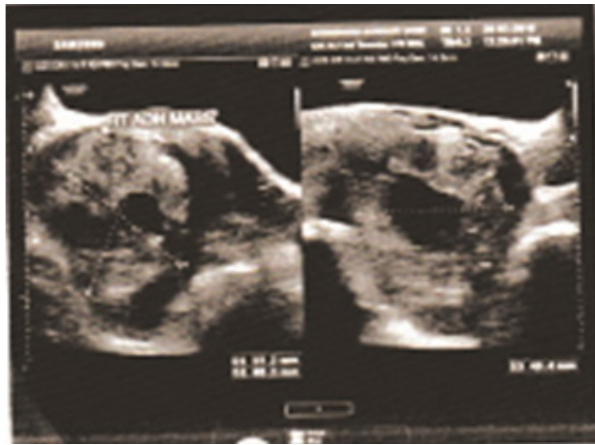


Figure 1: Ultrasound Images.

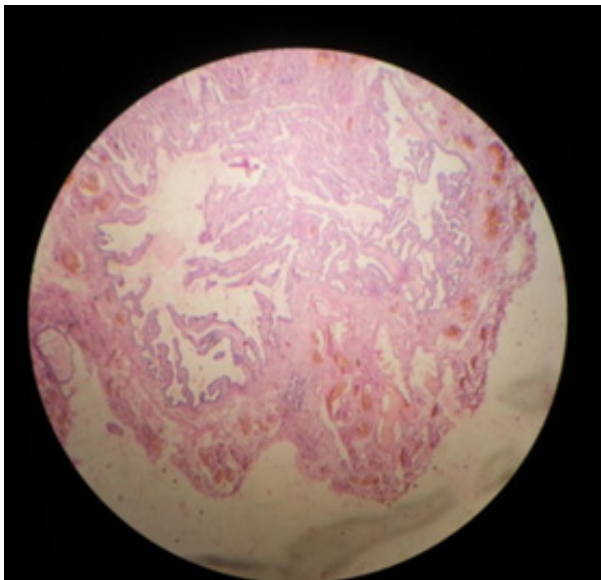


Figure 2: Ultrasound Images.



Figure 3: Normal Fallopian tube, HE x 100.

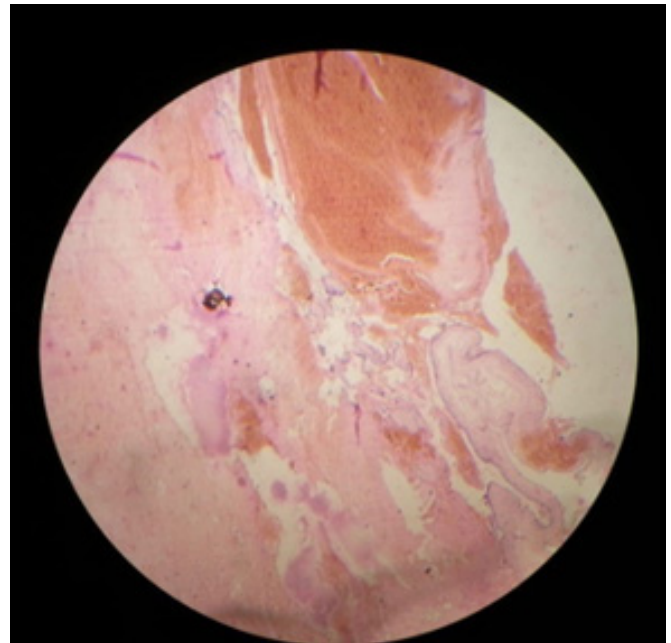


Figure 4: Chorionic villi amidst fibrinoid necrosis & haemorrhage HE x 100.

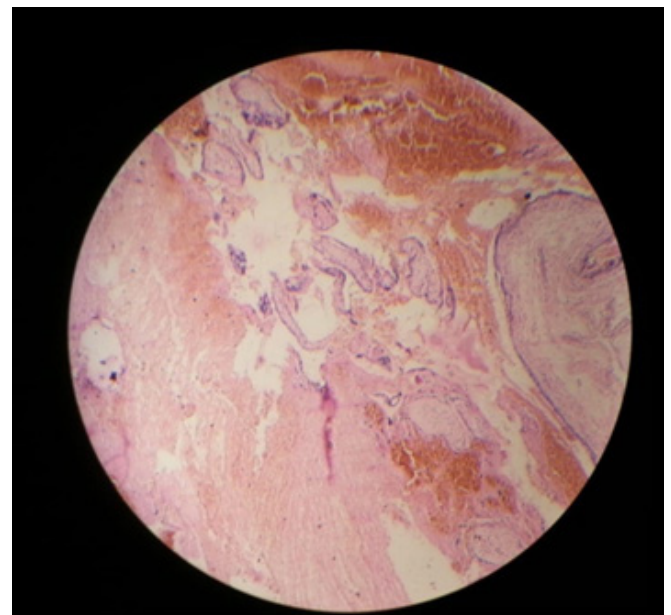


Figure 5: Chorionic villi with sanctity and cytotrophoblastic cells HE x 400.