



AN OVARIAN RUPTURED ECTOPIC: A CASE REPORT

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ABSTRACT Ovarian pregnancy is a rare form of the non-tubal ectopic pregnancy. Primary ovarian pregnancy is the implantation of gestational sac in the ovary. It usually ends with rupture before the end of first trimester. The preoperative diagnosis is difficult due to poor clinical symptomatology and challenging ultrasound diagnosis. The diagnosis is confirmed by histopathology. Conservative approach includes ovarian resection or aspiration of the pregnancy with coagulation of the implantation site, however, in case with profuse intra peritoneal bleeding an oophorectomy or salpingo- oophorectomy may be necessary to achieve hemostasis. We report here, one such uncommon case of ruptured ovarian pregnancy in a multiparous woman which was managed surgically. Our diagnosis is based on intraoperative and histopathological findings.

KEYWORDS :**INTRODUCTION**

Ectopic pregnancy is defined as implantation of the trophoblastic tissue outside the uterine endometrium with an estimated incidence of 1.5% to 2% among all pregnancies.¹ It is a very risky and possibly a life threatening condition, being one of the most common causes of maternal mortality in the first trimester of pregnancy.² The most common site of ectopic pregnancy is tubal, with the incidence being 95% to 97%. The other sites are cervical, ovarian, peritoneal and caesarean/hysterotomy scars.

Ovarian ectopic pregnancy is a very rare entity, with an estimated incidence of 1/7000-1/40,000 live births and 0.5-3% of all ectopic gestations. In true ovarian pregnancy, the ovum is fertilised while it is in the graffian follicle or in the process of leaving the follicles. The pregnancy then develops within a capsule of ovarian tissue with the corpus luteum immediately alongside it.

Ovarian ectopic pregnancy is diagnosed using Spiegelberg's criteria⁴ -

- 1) intact fallopian tube on the affected side;
- 2) fetal sac must occupy the position of the ovary on the affected side;
- 3) ovary connected to the uterus by ovarian ligament;
- 4) ovarian tissue must be located in the sac wall ,to be confirmed by histopathology.

CASE REPORT

Our patient, a 20 year old G₃P₁L₁A₁ reported to the emergency labour ward of OBGY ,NSCB Medical College Jabalpur with complaints of severe pain in lower abdomen and slight vaginal bleeding since 8-10 days. Patient having 3 months of amenorrhoea ,gave history of over the counter medications for termination of pregnancy followed by D&C procedure 2 months back. The pain in lower abdomen did not subside ,rather increased past few days which brought her to our hospital.

Patient was married for 3 years. Her past cycles were regular , average flow with no history of dysmenorrhoea . There was no history of any use of contraceptive method by the patient and this pregnancy was a spontaneous conception.

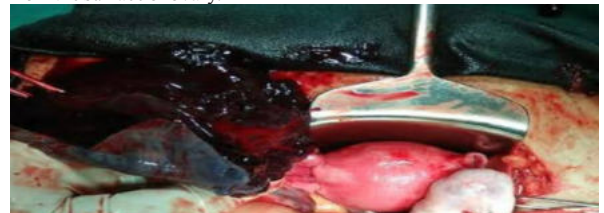
On examination, she had moderate pallor , pulse of 120/min and blood pressure 90/ 60mmHg. On per abdominal examination ,tenderness was present on right iliac fossa. There was guarding and rigidity present. On per speculum examination slight bleeding with closed external Os was observed. On per vaginal examination, uterus found to be bulky, cervix soft with cervical motion tender. A palpable mass of around 4cm x4cm size felt through right fornix, which was tender and could not be felt separated from the uterus. Left fornix examination appeared to be tender with some fullness present.

Urine pregnancy test was positive, Hb was 7.3 gm/dl, total leukocyte

count was 8190 /cu mm and platelet count to 2.7 lacs. Her random sugar was 99mg/dl. Urinalysis was within normal limits.

Ultrasound pelvis findings reported normal size and shape uterus ,no gestational sac in the endometrium. An extrauterine CRL of 44 mm corresponding to 11 weeks plus 2 days with no foetal cardiac activity in right adnexa with mild to moderate intraperitoneal collection .Left ovary was normal with no adnexal mass seen. The clinical and ultrasound findings helped in establishing the diagnosis of ruptured ectopic pregnancy. An informed consent was obtained and patient was taken to exploratory laparotomy .

Intraoperatively, around 400 ml of hemoperitoneum was observed . On inspection both fallopian tubes and left ovary were normal. Right sided ovary was bluish and ruptured with adherent blood clots and oozing from the surface of ovary.



Right sided oophorectomy was done. Omentum was adhered to right side of the ovary so a part of omentum was removed along with ovary. Specimen sent for histopathological examination.

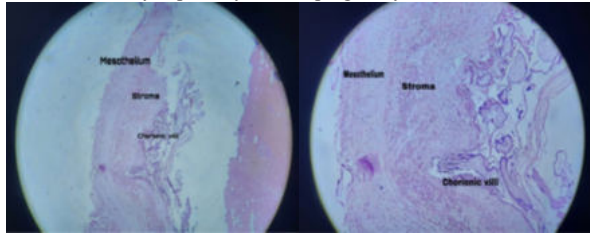


Postoperative period was uneventful, and the patient was discharged on 7th day. She was advised for review and follow-up.



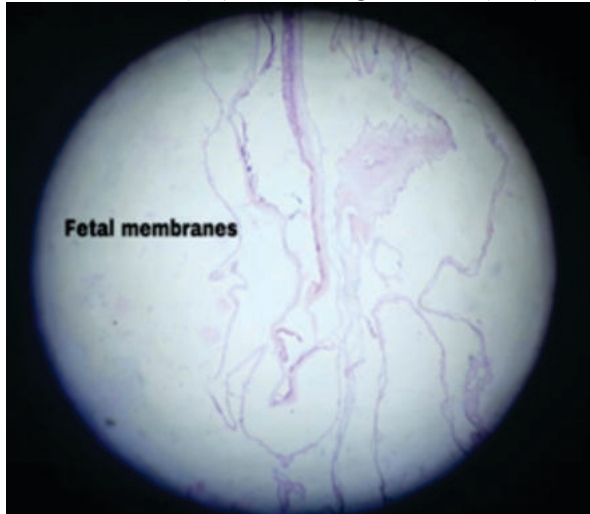
On histopathological examination, the gross specimen showed multiple irregular reddish brown soft tissue pieces along with foetus of crown rump length of around 5cm.

The microscopy revealed ovarian stroma with edema, congestion and haemorrhage along with chorionic villi and foetal membranes, which was confirmatory of primary ovarian pregnancy.



Low Power View (40X) I

High Power View (100X) I



DISCUSSION

Primary ovarian pregnancy is one of the rarest types of extrauterine pregnancies. With advanced diagnostic ultrasound imaging, ectopic pregnancies are now being diagnosed early.

Total number of ectopic pregnancies in last three years record of our department reported 170 ectopic pregnancies (0.5 to 0.7 %). Out of which 3 were primary ovarian pregnancy (1.7%)

Some of the cases have been reported to be associated with predisposing factors such as intrauterine contraceptive device, assisted reproductive technology, endometriosis and pelvic inflammatory disease. We couldn't find any association of these factors in our case study, hence it can be inferred that this primary ovarian pregnancy resulted from intra follicular fertilization that took place following failure of ovum extrusion after follicular rupture.² The proposed hypothesis for ovarian ectopic pregnancy are non-release of the ovum from the ruptured follicle, tubal malfunction and inflammatory thickening of the tunica albuginea.⁵

The patients usually present in early first trimester due to weakening of Ovarian albuginea by the invading trophoblastic tissue. Our patient presented late at 11 weeks of gestation. Ovarian pregnancy usually tends to rupture during first trimester in 90% cases, 5% in second trimester and 3.7% in third trimester.

The signs and symptoms of ovarian pregnancy are similar to tubal pregnancy and mimic ruptured hemorrhagic cyst, corpus luteum cyst and or chocolate cyst.⁽⁵⁾

In stable patient laparoscopy with ovarian sparing is the current surgical choice. In our case it was already a ruptured one, so a prompt laparotomy was instituted, Oophorectomy was done to achieve haemostasis.

Preoperative ovarian pregnancy can rarely be made. Intraoperative it can give a high degree of suspicion but the final diagnosis can only be confirmed by histopathological examination of tissue. In the present case study urine pregnancy test was positive, USG also suggested an

ectopic pregnancy although not exactly the ovarian pregnancy. Intraoperatively we could make a presumptive diagnosis of ruptured ovarian pregnancy. We reserved the final diagnosis pending histopathological report.

This condition is usually managed medically or surgically, depending on the hemodynamic stability of the patient, size of the mass and ruptured or unruptured status of pregnancy. Haemodynamic instability, our clinical suspicion and investigation reports prompt us to manage this case surgically.

The differential diagnosis for ovarian pregnancy both sonographically and intraoperatively remains a clinical challenge that is to distinguish ovarian pregnancy from a corpus luteal cyst or hemorrhagic cyst or even ruptured chocolate cyst.

CONCLUSION

Ovarian pregnancies are rare. They are mostly missed radiologically. Despite modern diagnostic modalities, most of the patients continue to present to us with circulatory collapse due to rupture of ectopic pregnancy. The necessity to maintain a high index of suspicion is required to ensure an efficient mode of treatment and appropriate prognosis. In our patient, the ovarian gestation was ruptured and the only option was emergency oophorectomy. Presence of chorionic villi and trophoblastic tissue on the ovary, on histopathological examination confirms the diagnosis of primary ovarian pregnancy.

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