

## OVARIAN ECTOPIC PREGNANCY: A CASE REPORT

Nisha Marwah<sup>1</sup>, Gauri Munjal<sup>2</sup>, Manali Satiza<sup>3</sup>, Rajeev Sen<sup>4</sup> and Ankur Gulati<sup>5</sup>

<sup>1,2,3,4</sup>Department of Pathology, PGIMS, Rohtak

<sup>5</sup>Department of Radiodiagnosis, PGIMS, Rohtak

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### ABSTRACT

Ovarian pregnancy is rare with reported incidence being 1-3% of all ectopic pregnancies. The common causes which have led to an increased reporting of such cases are wider use of intrauterine devices, ovulatory drugs and assisted reproductive techniques. We report a case of ovarian pregnancy in a 34 year old female with a history of use of IUCD. It is difficult to diagnose ectopic pregnancy before the surgery but TVS scans and Beta-HCG levels have aided in confirming the clinical suspicion.

#### Key words:

Ovary, Ectopic Pregnancy, IUCD

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## INTRODUCTION

Implantation of embryo outside the normal intrauterine cavity is known as an Ectopic pregnancy (EP). When such an implantation occurs in the ovary, it is known as ovarian pregnancy (OP) and forms 1-3% of all ectopic gestations. The term ectopic is derived from the Greek word 'ektopos' which means out of place. The most common site of EP is fallopian tubes, followed by uterine cornu and ovaries.<sup>1</sup>Ectopic pregnancy contributes to 10% of maternal mortality cases. St. Maurice was the first to report a case back in 1682. Ovarian pregnancy is a diagnostic challenge. Though transvaginal USG has aided in early diagnosis of unruptured ovarian pregnancy, final diagnosis is made at surgery and requires histopathological confirmation.<sup>2,3</sup>

## CASE REPORT

A 34 year old multiparous woman came with complains of severe lower abdominal pain. She gave a history of 5 weeks of amenorrhoea. The patient was hemodynamically stable and gave no history of menstrual irregularity. There were no complains of vaginal discharge, difficulty in micturition or any episode of syncope. The patient had previous one normal vaginal delivery and one caesarean section. Her last child birth was three years back and she gave a history of using IUCD since her last delivery. Transabdominal ultrasound (TAS) was performed which revealed uterus of normal size with decidual reaction and no gestational sac which was followed by Transvaginal ultrasound (TVS) which showed free fluid in pouch of Douglas, and a hyperechoic mass in the left adnexa suggesting a tubal pregnancy (Figure 1,2). These results were

also supported by increased levels of Beta-HCG (5726 mIU/ml). Emergency laparotomy was carried out which showed bleeding from left ovary. The left fallopian tube was normal. Excision of hemorrhagic mass from the left ovary was done and was sent for histopathological examination.

On gross examination a haemorrhagic soft tissue mass measuring 2.5x2x0.8cm along with bilateral fallopian tubes measuring 0.6 cm and 3.5cm in length were received. On microscopy, fallopian tubes were unremarkable and the soft tissue mass revealed ovarian tissue with corpus luteum and chorionic villus structure lined by trophoblastic tissue embedded in blood clot (Figure 3,4,5). A diagnosis of ovarian pregnancy was made.



Figure 1



Figure 2

Figure 1, 2 Transvaginal ultrasound shows left ovarian ectopic pregnancy.

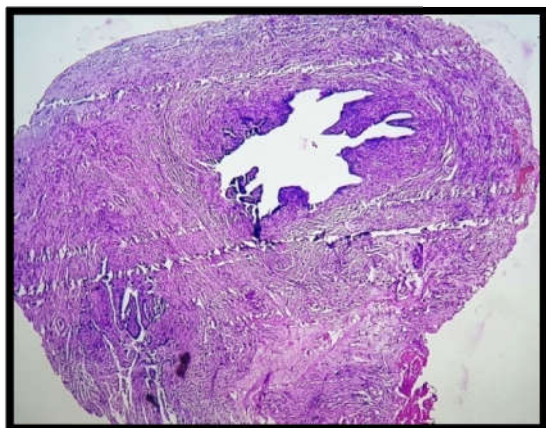


Figure 3 Left fallopian tube with patent lumen. (H&E;100x)

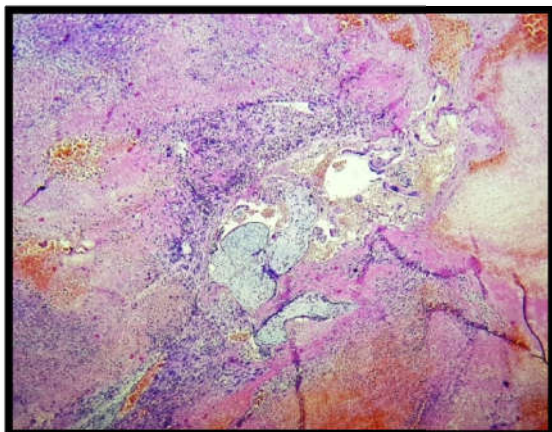


Figure 4 Microsection from left ovary showing chorionic villi embedded in blood clot. (H&E;100x)

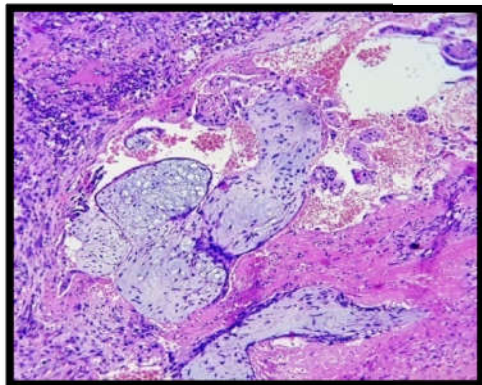


Figure 5 Chorionic villi within ovarian stroma. (H&E;400x)

## DISCUSSION

Primary ovarian pregnancy is an uncommon type of extra-uterine pregnancy. The factors contributing to its increased incidence are the use of intrauterine devices, ovulation inducing drugs, in-vitro fertilization, sexually transmitted diseases and pelvic inflammatory diseases.

The spiegelbergh criteria for diagnosing ovarian pregnancies are:<sup>1,3</sup>

- The fallopian tube on the ipsilateral side must be intact.
- The fetal sac must be intraovarian.
- The ovary must be connected to the uterus by the ovarian ligament.
- The ovarian tissue must be located in the wall of the sac.
- It is a diagnostic challenge to distinguish such cases from that of tubal ectopic pregnancy, hemorrhagic ovarian cyst and ruptured corpus luteal cyst.<sup>4</sup>

IUCD is known to be associated with primary ovarian pregnancy in 57-90% of cases. The mechanism of action includes altered tubal motility facilitating implantation in the ovary. These devices prevent uterine implantation but on the other hand facilitate ovarian implantation.<sup>5</sup>

Tehrani *et al* reported a similar case of ovarian ectopic pregnancy where the most important risk factor was the use of IUD.<sup>5</sup> Also fertility treatment has remained an important associated risk factor as supported by studies done by Bontis *et al*.<sup>6</sup>

High resolution transvaginal ultrasound (TVS) is a more sensitive (88%) diagnostic tool in case of Ectopic pregnancy than transabdominal ultrasound (TAS). However a normal pelvic TVS is known to be reported in 15-20% of patients with ectopic pregnancy therefore adequate follow up and clinical correlation with serum beta HCG is a must.<sup>1</sup>

Medical management of the condition comprises of use of methotrexate but the mainstay of treatment is laproscopic ovarian wedge resection or oophorectomy.<sup>1,5</sup>

In our case, an ovarian pregnancy was clearly seen on laparotomy and an ovarian wedge resection was done along with bilateral salpingectomy.

## CONCLUSION

A timely and accurate diagnosis of ectopic pregnancy is required with a combination of clinical, serological, radiological and histopathological examination in order to prevent maternal mortality due to this condition.

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