

## Ovarian Ectopic Pregnancy

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### I. Introduction:

Ovarian ectopic pregnancy is a rare variant of ectopic implantation (1). It ends with rupture before the end of first trimester (2). Risk factors include advanced maternal age, IVF, prior ectopic pregnancy, previous tubal ligation, PID, IUCD, smoking, history of subfertility (3). Although the ovary can accommodate more readily than the fallopian tube to the expanding pregnancy, rupture at an early stage is the usual consequence(4).

### II. Case Report:

24 years old female admitted in our facility as

- Primigravida at 5 weeks gestation with history of bleeding Per vaginum for 2 days with soakage of 2-3 pads per day with passage of clots with UPT positive with regular cycles with LMP-23/12/22.
- On examination - vitals stable, pallor present, no icterus / pedal oedema.
- Per abdomen examination - soft, non-tender.
- Per speculum examination - cervix and vagina healthy.
- Per vaginal examination - Uterus normal size, anteverted, cervix long, os closed, boggy in right fornix {+} with left fornix empty.
- Beta HCG of this patient was 9750 IU.
- Ultrasound findings - Uterus normal sized, anteverted. ET: 6.4mm with no intrauterine gestational sac. Left ovary was normal, no evidence of adnexal mass. Right ovary showed a well-defined heterogenous echogenic lesion, measuring 3.3 x 2.5 cm with few cystic areas within showing vascularity on colour doppler. No free fluid.
- Procedure - Laparotomy followed by excision of right ovarian ectopic followed by ovarian reconstruction and peritoneal lavage under spinal anaesthesia.
- OT findings - 3x4 cm mass involving postero-medial part of (R) ovary with increased vascularity (well defined). (R) ovary, (L) ovary + fallopian tubes normal. Histopathological examination confirms the ovarian ectopic pregnancy.

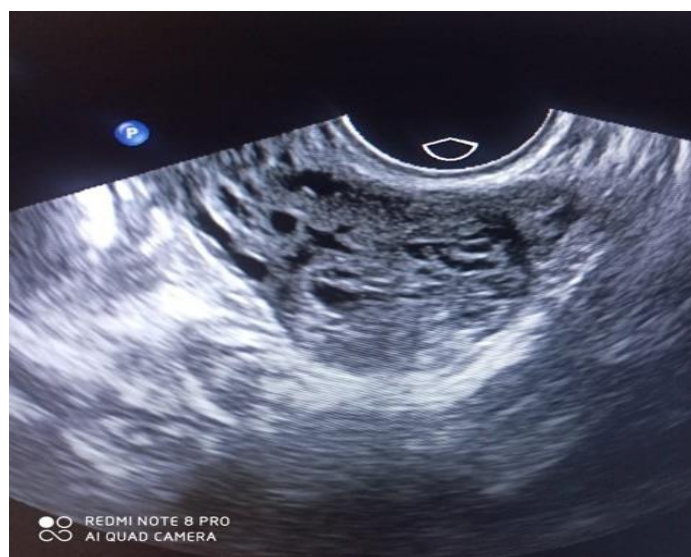
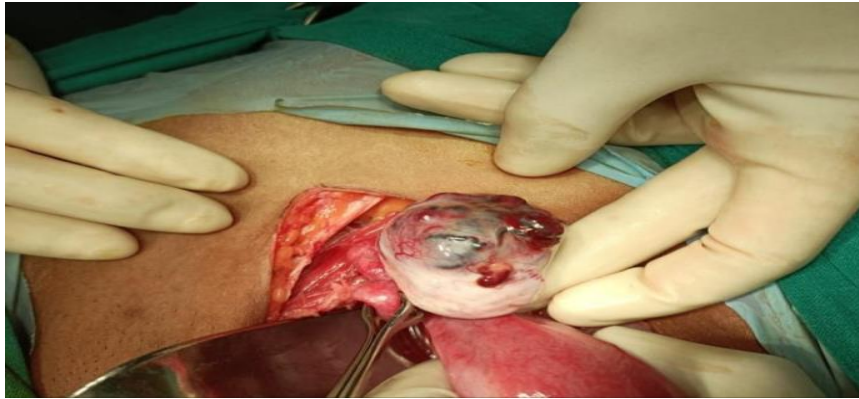


Figure 1. The Transvaginal Ultrasonography Of An Echogenic Mass In Right Ovary



**Figure 2 : Intra-Operative Image Of Right Ovarian Pregnancy**

### III. Discussion:

Ovarian pregnancy is uncommon form of ectopic pregnancy with an incidence of 1/7000 – 1/40000 live births and 0.5 -3% of all ectopic gestations (5). Spielberg criteria a) fallopian tube at the affected site must be intact, b) foetal sac must occupy the position of ovary, c) the ovary must be connected to the uterus by ovarian ligament and d) ovarian tissue must be located in the sac wall- are essential for confirmation of early ovarian pregnancy (6). These criteria combined with biochemical and USG findings which include – a) serum  $\beta$ HCG level > 1000 IU/L, b) no gestational sac in uterine at transvaginal ultrasound (7), c) ovarian involvement should be confirmed on exploration, with bleeding, visualization of chorionic villi or presence of atypical cyst as the ovary, d) normal tubes, e) absence of serum  $\beta$ HCG after treatment of ovary (8). The diagnosis of ovarian pregnancy is not specific and ovarian pregnancy should therefore be considered in all women suspected of extrauterine pregnancy with or without vaginal bleeding. The diagnostic accuracy of imaging such as Ultrasound or MRI is insufficient to exclude an ovarian pregnancy, and most are unexpectedly found during surgery. Most ovarian pregnancies are diagnosed in the first 8 weeks of pregnancy but surprisingly, some occur before a missed period, and some are diagnosed as late as after 44 weeks of gestation. Occasionally, an ovarian pregnancy can result in choriocarcinoma. Ultrasound may suggest the diagnosis, Surgery (laparoscopy / laparotomy) remains the best method for differential diagnosis and management which is confirmed by histopathological examination. Trophoblastic disease may persist following conservative surgical management and requires postoperative  $\beta$ HCG monitoring.

### IV. Conclusion:

The diagnosis of ovarian pregnancy remains not specific, and surgery is the treatment of choice. Incidence of ovarian pregnancy is on rise due to increased incidence of infertility and use of assisted reproductive techniques. Ultrasonography can detect ovarian gestations in unruptured cases but cannot easily differentiate ovarian from other tubal gestation in ruptured state. In our case, our patient presented with unruptured ovarian ectopic pregnancy, Conservative Surgical approach remains the management of choice confirmed by histopathological examination. However, clinicians should be aware that ovarian pregnancies have to be suspected in all women with abdominal bleeding since ovarian pregnancies can occur before a delay in menstruation, even in women with blocked tubes. Since they occur in association with intra-uterine pregnancy, care has to be taken not to interrupt an eventual intrauterine pregnancy with a uterine cannula and not to damage the corpus luteum during surgery.

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