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#### RESEARCH ARTICLE

## OVARIAN ECTOPIC PREGNANCY- A RARE CASE REPORT

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## Manuscript Info

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## Abstract

**Background:**Ovarian pregnancy is classified as a rare cause of non tubal pregnancy wherein maximum ends in rupture in early months of pregnancy. Sign and symptoms often mimic tubal rupture. To distinguish between the two based on presenting complaints and ultrasonography findings is difficult. Generally confirmation of ovarian pregnancy is done only after histopathological examination due to its similarity in presenting complaints to tubal pregnancy. Medical management has also been tried for unruptured ectopic pregnancy.

Case: Presenting a rare case report of ruptured left ovarian pregnancy. pt was 26yrs old multiparous with previous two cesarean 7yrs and 4 yrs back with one MTP kit taken 6 months back with pain in left iliac fossa. USG findings were suggestive of tubal rupture, however during laparotomy ruptured left ovarian pregnancy was diagnosed followed by left oopherectomy later on confirmed by histopathological examination.

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## Introduction:-

Ectopic pregnancy is defined as implantation of embryo elsewhere outside the uterine cavity. It is a gyanecological emergency for which prompt diagnosis and management is required to prevent life threatening complications (1). About 95% occurring ectopic pregnancies are tubal in nature, rest 5% account for non tubal origin such as abdomen, ovary, cervix. Ovarian ectopic pregnancy is a rare entity with an incidence rate of approximately 0.5-3% of all diagnosed ectopics (2). The risk factors of include history of IUCD use, sexually transmitted infections (STIs), endometriosis, use of assisted reproductive technologies, pelvic inflammatory disease (PID), previous ectopic pregnancy, maternal age >35yrs, prior pelvic surgery, multiparity, and more rarely, infertility. Dr. Otto Spiegelberg in 1878 formulated The Spiegelberg criteria (2,3) for the diagnosis of Ovarian ectopic pregnancy at the time of surgery and include: (1) an intact ipsilateral tube that is clearly separate from the ovary; (2) a gestational sac occupying the position of the ovary; (3) a gestational sac connected to the uterus by the ovarian ligament; and (4) histologically proven ovarian tissue located in the sac wall. The criteria helps in differentiating ovarian ectopic from other forms. Diagnosis on ultrasonography is difficult and confirmation of the above mentioned criteria can only be done laproscopically. Generally majority of ovarian pregnancies terminate in early stage (75%), while about 12.5% in second trimester and rarely patients reaches till term. First ovarian pregnancy was diagnosed in 1624 by Mercerus. (2)

## Incidence of ectopic pregnancy as follows-

- Tubal pregnancy
- 2. Ovary-1.5- 3%

- 3. Abdomen-1.3%
- 4. Cervical -0.15%
- 5. Heterotopic 1-2%
- 6. Caesarean -6%
- 7. Interstitial -2.5%

#### **Case Report**

Our patient was 26 yrs old G4P2L2MTP1 with previous two cesarean section 7yrs and 4yrs back, with a history of taking of MTP kit not followed by D and E 6 months back presented in emergency with severe pain in left iliac fossa since morning (18/4/21). Her last menstrual period was 31/3/21. Her menstrual history has been regular with normal flow. There was no significant obstetrical and gyneacological history. Urine pregnancy test was positive. On examination she was hemodynamically stable with tenderness in left iliac fossa. Pervaginal examination revealed normal size uterus with cervical motion tenderness with no palpable adnexal mass . Transvaginal sonography was was suggestive of empty uterine cavity with left adnexal mass 3cm x2.5cm with hemoperitoneum. On investigation B HCG was 478 mIU/ml, Hb- 12.5 gm/dl.

Decision of open laparotomy was taken in due concern for patient's affordability. The left ovary was enlargedabout 3cm x3cm size, bluish black in colour, with blood oozing out from the antimesentric border. Bilateral fallopian tubes and right ovary was normal. Left ovary was cystic as well. Therefore left oopherectomy with Bilateral tubal ligation was done. Clots of about 200-300cc was evacuated, saline wash done. Complete Hemostatis was achieved and abdomen closed back. Patient responded well in postoperative period with no post operative complications and was discharged after 2 days. Histopathological examination was in the favor of ectopic ovarian pregnancy.

#### Discussion:-

Ovarian ectopic pregnancy is a rare form of extrauterine pregnancy accounting for  $0.5\text{-}3\%^{(2)}$ . It significantly contributes to maternal morbidity and mortality. The advancement in ultrasonography ease the diagnosis in unruptured state and improved medical management outcome has further reduced the maternal morbidity and mortality. With the increase in incidence of pelvic inflammatory disease, use of assisted reproductive techniques, intrauterine contraceptive device, infertility etc, there has been an escalated rise in ectopic pregnancy as well<sup>(1)</sup>. Various hypotheses have been formulated to the cause. One of this is the theory of reflux reported in various literature so as to why it is seen in IVF pregnancy. Others suggest interference in ovum release following follicular rupture, altered motility of fallopian tubes in case of IUCD, inflammation of tubes in PID etc<sup>(1)</sup>.

Diagnosis of ovarian pregnancy is a challenge because it mimics the clinical features of tubal pregnancy which is more common entity. Other differential diagnosis include ruptured corpus luteum cyst, hemorrhagic cyst or chocolate cyst.

The Spigelberg Criteria<sup>(3)</sup> can be proven intraoperatively and then confirmed after histopathology. Confirmation of ultrasonography has its limitation since no there is no sonographic features described for diagnosis of ovarian pregnancy<sup>(2)</sup>. Suspicion should arise in case of normal fallopian tube with hemoperitoneum and breached ovarian surface<sup>(3)</sup>. On USG it is seen as cyst with wide echogenic ring on or inside the ovary. Visualization of yolk sac is rarely seen<sup>(3)</sup>.

Literature on the use of medical management for treating ovarian pregnancy is limited as to their close resemblance to other ovarian cyst due to which it is left undiagnosed till late where patients presents with the features of rupture making laproscopy as the gold standard for its management<sup>(3)</sup>.

Attempt should always be made to preserve the ovarian tissue especially if the patient is desirous of fertility. However in some cases it is difficult because of extensive involvement of ovarian tissue or it is destroyed completely where oopherectomy is done. Various conservative surgeries described are Ovarian wedge resection, corpus luteum cystectomy for the trophoblast, trophoblast curettage with coagulation, ovarian pregnancy enucleation or hemostatic suture of the bed of ovarian pregnancy (3)



# **Conflict of Interest:**

The authors declare that they have no conflict of interest.

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