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"Ovarian ectopic pregnancy: varied clinical presentations- 3 case reports and review of literature."

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Abstract: Ovarian pregnancy is a rare event with a reported incidence of 1/7000 - 1/40,000 pregnancies[1-2]. In spite of advances in clinical sciences diagnosis of ovarian ectopic is rarely made before surgery[3]. We present three cases with varied clinical presentation of ovarian ectopic pregnancy. In all cases a suspicion of ovarian ectopic was made during surgery and diagnosis was later confirmed by histopathology. Diagnosis of ovarian ectopic pregnancy should be suspected when a hemorrhagic mass is identified near the ovary with normal fallopian tube during surgery of tubal ectopic pregnancy.

Case1:

23 yrs old G2P1L1 was referred with complaints of 6weeks amenorrhea and pain in abdomen. On examination- patient had Pulse 110/min, B.P. 110/80, severe pallor present, per abdomen examination revealed tenderness and guarding in lower abdomen. Per Vaginum examination revealed normal ante verted soft uterus with marked bilateral cervical movement tenderness present. Urine pregnancy test was positive. Ultrasound showed normal uterus with endometrial thickness of 9mm and a heterogeneous mass attached to right ovary. Right ovary could not be separately visualized. Left ovary and fallopian tube appeared normal. Significant amount of free fluid was present in pouch of Douglas. Culdocentesis revealed frank blood which failed to clot. Hemoglobin-6.6gm%, Blood Group O Negative. A provisional diagnosis of ruptured ectopic pregnancy was made.

On Exploratory Laparotomy, hemoperitoneum present, 300 ml of clots removed. Uterus, left tube and ovary was normal. A 2x2 cms mass was seen adherent to the right ovary with hemorrhagic edges and profuse bleeding from the base. The mass was enucleated and the remaining ovary was reconstructed with 3-0 vicryl. Provisional diagnosis of ruptured ovarian ectopic was made. Histopathology showed ovarian stroma and abundant chorionic villi infiltrating the ovarian tissue (Figure 1) with focal areas of calcification and inflammation. Impression: Ovarian Ectopic Pregnancy.

Case 2:

35 yrs old P2L2 with tubal ligation done 5 yrs back came to casualty department with severe pain in abdomen and occasional giddiness since 8 hours. Last menstrual period was 15 days back scanty flow. No other significant history could be elicited. On examination she had pulse of 112/min, blood pressure 100/80, marked pallor present, per abdomen examination revealed tenderness and guarding in lower abdomen, per vaginum examination revealed a 5x6 cm left adnexal mass displacing the uterus to right, marked

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and normal. Right fornix was free. UPT positive. Ultrasound suggested normal uterus, with heterogeneous cyst 6x6 cms in left ovary with internal septae and hemorrhage suspected torsion of the ovary. Moderate fluid in pouch of Douglas present. Hemoglobin was 8gm%. Culdocentesis revealed frank blood.

Exploratory laparotomy revealed hemoperitoneum of 100ml. Uterus, right ovary and tube were normal. Left side hemorrhagic tubovarian mass 6x8 cms with evidence of torsion. Left salpingo-oophorectomy was performed. Histopathology confirmed the diagnosis of ovarian ectopic with torsion.

Case 3:

24 yrs old G2P1L1 with 1 ½ months of amenorrhea presented with pain in abdomen and giddiness. LMP was 15 days back moderate flow. No significant past history. On examination she had Pulse- 108/min, B.P. - 100/72 mmHg, marked pallor, tender lower abdomen. Per vaginal examination revealed bulky soft uterus with tender cystic mass palpable in left adnexa. Urine pregnancy test was positive. Ultrasonography revealed single live intrauterine pregnancy with CRL 6.9 mm corresponding to 6wk5d pregnancy, a gestational sac was visualized next to left ovary with absent cardiac activity and presence of corpus luteum cyst. Moderate hemoperitoneum present. Impression: Heterotopic Pregnancy with Ovarian Ectopic. Pt was given inj hydroxyprogesterone acetate. Exploratory laparotomy revealed 150 gm of clots in peritoneum, uterus, right ovary and tube was normal. Lt Ovary 4X4 cm showed ruptured ectopic with profuse bleeding. The mass was enucleated and ovary reconstructed with vicryl 3-0. Histopathology confirmed ovarian tissue with abundant sheets of trophoblast and involuting corpus luteum. The patient had a spontaneous abortion of the intrauterine pregnancy on day 10 for which a dilatation and evacuation was performed.

Discussion:

Ovarian ectopic pregnancy is a relatively rare form of ectopic pregnancy with an incidence of 1/7000 - 1/40,000 pregnancies[1-2].

The diagnosis of ovarian ectopic pregnancy is rarely made before surgery. During surgery it is suspected when any hemorrhagic mass is seen adjacent to the ovary with normal fallopian tubes. Ovarian ectopic pregnancy is mostly confused with tubal ectopic pregnancy and ruptured corpus luteum cyst as all three of the above conditions have the same clinical picture and presentation. Hallat[3], in his study of 25 cases of ovarian pregnancies, reported that the most significant finding in his study was the inability to distinguish an ovarian pregnancy from a hemorrhagic ovary or ruptured corpus luteum. A correct surgical diagnosis was only made in 28% of the cases. In the remaining cases the diagnosis was made by the pathologist. Differentiation occurs only on exploration and conformation is always on histopathology[3].

We report 3 cases with varied surgical presentation. The first case was suspected to be of ruptured tubal ectopic where the exploratory laparotomy findings were suggestive of ovarian ectopic and confirmation was made only on histopathology. The second case was suspected to be of torsion of the ovary and because the tubo-ovarian anatomy was distorted there were no conclusive evidence of ovarian ectopic. The third case presented with heterotrophic ovarian pregnancy. Since there are no specific clinical or radiological criteria for diagnosis of ovarian ectopic confirmation is only on histopathological examination. Von Spiegelberg in 1878 put forth 4 criteria for diagnosis of Ovarian Pregnancy[3]:1.

The tube on the affected side must be intact. 2. The fetal sac must occupy the position of the ovary. 3. The ovary must be connected to the uterus by the ovarian ligament. 4. Definite ovarian tissue must be found in the sac walls. The criteria defined by Spiegelberg are mostly anatomical and in some cases it is difficult to demonstrate these criteria due to altered tubo-ovarian relation.

The patient usually presents early in gestation as the ovary can accommodate the gestation for a short duration as the tunica albugenia is weakened by the invading cytotrophoblast[4]. Due to the increased vascularity of the ovarian tissue it was common to sustain massive hemorrhage with rapid circulatory collapse[4].

Management is mainly surgical[5] as most patient present with profuse bleeding and shock and diagnosis is suspected during surgery. Laparoscopic conservative surgery with repair of the ovarian tissue is the standard management. All of our patients presented in emergency hours and could not opt for laparoscopy.

There is a rising incidence of ovarian ectopic pregnancy with ovarian hyper stimulation in cases of infertility[6]. Medical management in form of methotrexate has not been evaluated as a correct clinical or radiological diagnosis is rarely certain in these cases[4-6]. Till to date there has been no recurrence in the cases of ovarian ectopic pregnancy.

Conclusion:

Ovarian ectopic have a varied surgical presentation and in spite of advances in clinical sciences correct pre surgical diagnosis of ovarian ectopic still remains uncertain. It commonly mimics tubal ectopic, ruptured corpus luteum and torsion of the ovary. The diagnosis suspected during surgery when a hemorrhagic mass is seen near the ovary with normal fallopian tubes and confirmation is made only by histopathology.

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