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Ruptured Ovarian Pregnancy

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Abstract: *Primary ovarian pregnancy is a rare entity, Ovarian ectopic pregnancy incidence after natural conception ranges from 1 in 2000 to 1 in 60,000 deliveriesandconstituting about 3% of all ectopic pregnancy.A 23yr old patient presented with severe hypogastric abdominal pain and vomiting to causality, MIMS, VZM, Andhra Pradesh. The laparotomy suspicion of right ovarian ectopic pregnancy was finally confirmed by histopathologic evidence of the presence of degenerated chorionic villi in a background of ovarian tissue.*

Keyword: *Ovarian ectopic pregnancy, Ruptured, Chorionic villi.*

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I. Introduction

Implantation of embryo outside the uterine cavity is ectopic pregnancy. It is a rare entity, constituting about 0.5% to 1% of all ectopic pregnancies. It ends with rupture before the end of the first trimester. The First case of ovarian pregnancy was reported by St. Maurice in 1689. Hertig estimated that the ovarian pregnancy occurs in one in 25,000–40,000 pregnancies.[1]

The incidence has increased in the last 50 years with causes attributable to better diagnostic modalities, increased use of intrauterine devices, ovulatory drugs, and assisted reproductive techniques. Ahistoryofpelvicinflammatorydisease(PID)hasbeen implicated in the increase, aswell. It is usually terminated by a ruptureinthefirsttrimesterandbecauseoftheincreased vascularization of the ovarian tissue it leads to internal hemorrhageandhypovolemicshock status [2].

II. Case Report

A 22yr old nulliparous, presented to casualty with right lower abdominal pain and vomiting for 1 day. There was no history of bleeding per vaginum and fever. She was married for 6 months, her last menstrual period(LMP)was21days backand her previous menstrual cycles were regular with an average flow. There was no history of contraception. Urine pregnancy test was done and was positive. Ultrasonography (USG) done**,** the uterus measured 72 mm × 32 mm × 31 mm. Mild collection in the endometrial cavity was present along with moderate free fluid in the pouch of douglas, andshowed heterogeneous lesions with ill-defined hyper echoic area within right adnexal region [Figure 1].

Figure 1
Transabdominal Scan shows an irregular mixed echogenic lesion 44 mm × 35 mm abutting the right ovary

On examination, patient was conscious and well-oriented, pallor was +++, pulse was 132 beats/min (irregular) and blood pressure (BP) was 134/80 mm of Hg. On abdominal examination, guarding was ++ and tenderness was + in the lower abdomen. On per speculum examination, vagina was pale and Culdocentesis was

positive. On per vaginum, uterus was anteverted, exact size could not be assessed due to tenderness, cervical motion tenderness was present and tenderness was present in all the fornices.

On investigations, haemoglobin was 10.6 gm/dl, total leucocyte count was 9,100/mm^3, platelet count was 1.72 lakh/mm^3, blood group was O positive, random blood sugar was 98 mg/dl, serum creatinine was 0.6 mg/dl. Urine analysis was within normal limits.

The patient was posted for emergency laparotomy procedure. Intraoperatively, the uterus was of normal size, both fallopian tubes and left ovary were normal. The right ovary was enlarged 4.5 cm × 4 cm and is the seat of ectopic and is found rupturedwith adherent blood clots and visible oozing on the surface of the ovary. There was hemoperitoneum of about 350 ml.Right oophorectomy was done and specimen was sent for histopathology. The postoperative period was uneventful, and the patient was discharged on 3rd day, and advised for review and follow-up [Figure 2,3].

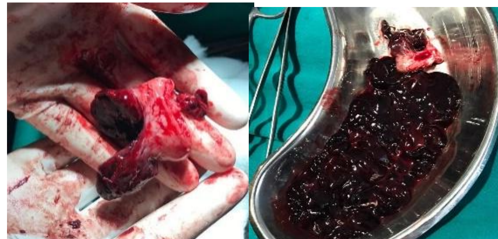

Figure 2 Figure 3Ruptured ovary and irregular blood clots

On histopathological examination, the gross specimen showed smooth, bosselated, greyish-brown ovary 4 cm × 3.5 cm. [Figure 4].

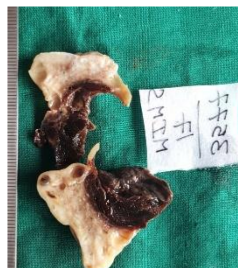

Figure 4
Gross cut specimen of ovary

Histology showed primordial follicles, corpus luteum, large areas of recent haemorrhages within the blood clots and chorionic villi syncytial giant cellsembedded within the ovarian parenchyma, which were confirmatory of primary ovarian pregnancy.[Figure 5].

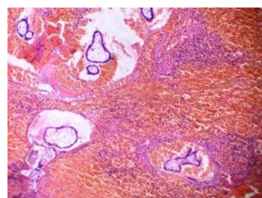

Figure 5

Section shows trophoblastic villi embedded in ovarian parenchyma, corpus luteum and haemorrhages (H and E, ×400)

The intraoperative findings and the histopathology satisfied the Spiegelberg's criteria for ovarian pregnancy[3] It includes:

- Intact fallopian tubes including fimbria, separate from the ovary
- Ectopic pregnancy occupying normal position of the ovary
- Ectopic gestational sac must be attached to uterus through the utero-ovarian ligament
- Presence of ovarian tissue in the wall of gestational sac in specimen.

DISCUSSION

The cause of primary ovarian pregnancy remains obscure. Some theories conclude that it may be dueto interference in the release of ovum from ruptured follicle, malfunction of the tubes and the inflammatory thickeningoftunicaalbuginea.Intrauterinecontraceptive deviceusemayalsobeacause [2].Ovarian pregnancy

usually ends in rupture during the first trimester in 91% cases, 5.3% in the second trimester and 3.7% in the third trimester [4].
The diagnosis of ovarian pregnancy can be difficult using ultrasound, with ovarian pregnancies often confused with corpus-luteum cysts, or chocolate cyst or tubal ectopic pregnancy [5]. Diagnostic laparoscopy is frequently required to make the diagnosis, which is late confirmed by histological examination [6].
With criteria for the diagnosis of ovarian ectopic pregnancy, described by Speigelberg, dating back to 1878, modernisation of the criteria may be required to include histopathologic diagnosis [3].

III. Conclusion

Primary ovarian pregnancy remains a condition of low incidence rates, accounting for only 3% of all ectopic pregnancies, the incidence may be higher than reported. Many of these may resolve spontaneously after appearing as ovarian cyst is threatened or missed miscarriages.Diagnosis is difficult. High degree of suspicion, systemic ultrasound examinations, presence of ovarian cyst may increase diagnostic pick up.

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