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Case Report

Successful outcome of an ovarian ectopic pregnancy

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ABSTRACT

Ovarian pregnancy is rare and a conspicuous variant of ectopic pregnancy and an accurate preoperative diagnosis is very challenging various advances in diagnostic modalities like Transvaginal ultrasonography has evolved in identifying an ovarian pregnancy. We report here one such case of 30 years old with severe lower abdominal pain and bleeding per vaginum following six weeks of amenorrhea confirmed as ovarian ectopic pregnancy consistent with Speigelberg's criteria on ultrasonography. This case highlights the significance of 3D ultrasonography in the diagnosis. Histopathological report concluded it to be an ovarian ectopic pregnancy.

Keywords: Ovarian pregnancy, Ectopic pregnancy, Transvaginal ultrasonography, Speigelberg's criteria

INTRODUCTION

Ovarian ectopic pregnancy is a variant of ectopic implantation.[1] It usually terminates with rupture during the first trimester.[2] Ovarian ectopic pregnancy incidence ranges from 1 in 2000 to 1 in 60 000 deliveries and accounts for 3% of all ectopic pregnancies.[3,4] Ovarian pregnancy among Intra uterine devices (IUD) users is responsible for one in nine ectopic pregnancies.[5,6] The diagnosis is complex and based on surgical and histopathological observations.[3] Risk factors for ovarian ectopic pregnancy are similar to those for tubal pregnancy but use of an IUD seems to be an important association Although the ovary can accommodate more readily than the fallopian tube to the growing pregnancy, rupture at an early stage is the usual consequence.[7]

Clinical findings are almost similar to those of a tubal pregnancy or a ruptured corpus luteum. Serious intraperitoneal bleeding is seen in approximately one third of cases. With the use of newer diagnostic modalities like 3D TVS unruptured ovarian pregnancies are diagnosed more frequently Diagnosis of ovarian pregnancy is a challenging task.[7] The correct diagnosis is most frequently made at the surgery and requires histopathological correlation. Diagnosis of ovarian pregnancy should be suspected from high β HCG values along with empty uterine cavity and a complex ovarian lesion on USG, patient's risk factors, in addition to the Speigelberg criteria, patients most often undergo surgery for either acute abdomen, suspected tubal ectopic pregnancy or due to rupture of corpus luteum.[8] This case was appropriately diagnosed as ovarian gestation due to availability of high resolution ultrasonography, and good clinical suspicion of ectopic pregnancy. This prevented potential rupture and thus a surgical emergency.

CASE REPORT

30 years old patient gravida 2 parity one presented to outpatient department of a private nursing home with complains of pain in lower abdomen & giddiness since one week She gave history of one & half months of amenorrhoea. On clinical examination her vital parameters were stable and per abdominal examination did not show any sign of acute abdomen. Per-vaginal

examination was suggestive of a fornicial mass which was 3x3 cms and cervical movements were tender hence a clinical diagnosis of ectopic pregnancy was made and patient was referred to the sinologist for a pelvic scan to rule out ectopic pregnancy. Trans-vaginal 3D sonography was done and was suggestive of ovarian pregnancy. USG report a highly vascular RT adnexal lesion 4.7 cms was seen with uterus bulky and empty uterine cavity was noted as shown in Figure 1, 2 and 3 below.

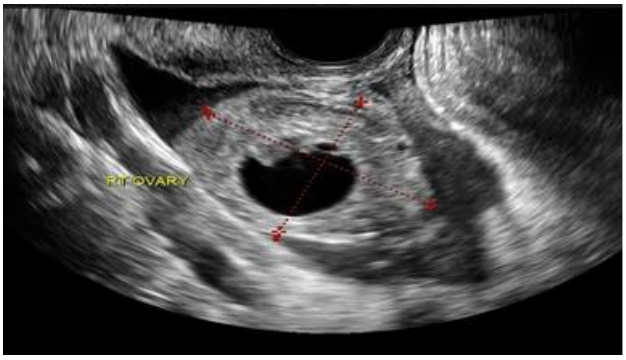

Figure 1: G Sac in RT adnexa.

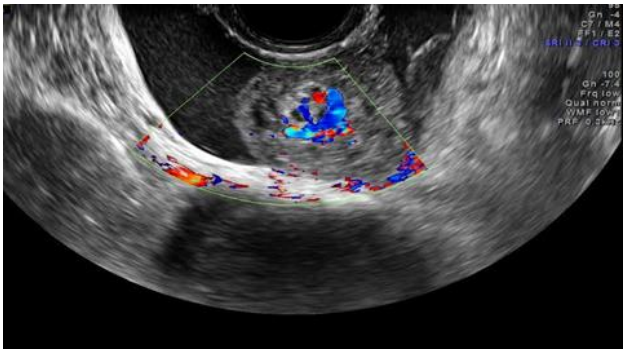

Figure 2: Vascular RT adnexal mass.

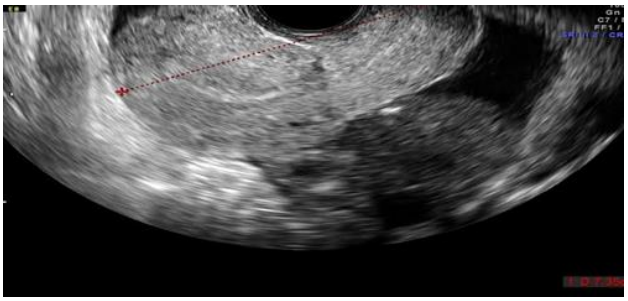

Figure 3: Empty uterine cavity.

Once the diagnosis of ovarian pregnancy was confirmed patient was posted for exploratory laparotomy on opening the abdomen there was mild haemoperitonium both the fallopian tubes were normal up to the fimbrial ends the mass on the RT ovary was 5x4 cms was seen The intraoperative findings satisfied all four of the Speigelberg's criteria:[8] (1) an intact ipsilateral tube, separate from the ovary; (2) a gestation sac in the vicinity of the ovary; (3) a gestational sac connected to the uterus by the utero-ovarian ligament; (4) ovarian tissue around the wall of the gestational sac. The mass was excised and sent for histopathology (Figure 4).

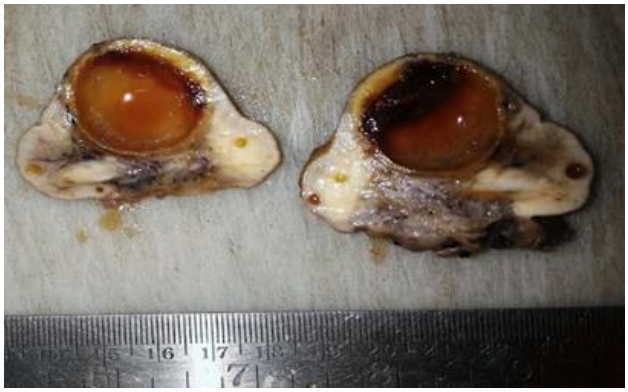

Figure 4: Surgical specimen.

Ovarian reconstruction was done, hemostasis achieved and abdomen closed in layers patient stood the procedure well and was discharged on 5th postop day. The excised ovarian lesion was sent for histopathology and diagnosis of ovarian pregnancy was confirmed as shown in Figure 5.

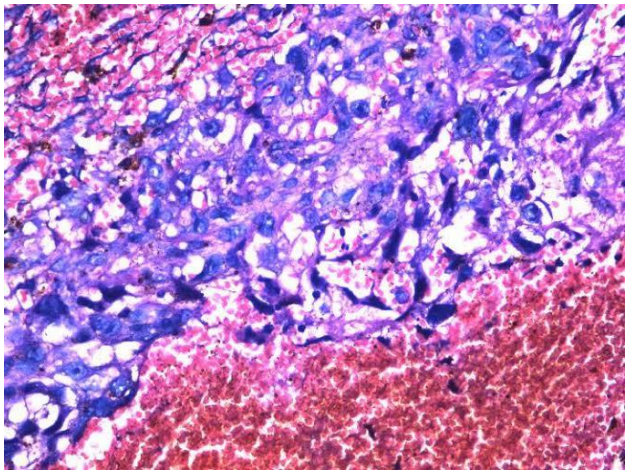

Figure 5: Sections from the ovary showed sub capsular haemorrhage with breach in the capsule and adherent trophoblastic cells.

DISCUSSION

The first case of ovarian pregnancy was published by Dr. Saint Monnissey. Hertig estimated that ovarian pregnancy occurs 1 in 25,000 to 40,000 pregnancies.[9] Primary ovarian pregnancy is a least common type of ectopic pregnancy, its incidence being 0.5–3% of all ectopic gestations. This incidence has increased substantially in recent years.[1] This increase is due to advances in diagnostic modalities with the evolution of transvaginal sonography, monitoring with a Beta HCG levels, laparoscopy for suspected ectopic gestation, and a remarkable increase in risk factors causing ovarian

pregnancy.[11] These risk factors include endometriosis, sexually transmitted diseases, drugs used for anovulation, tubal ligation, use of IUCD, and a history of prior laparotomy.[13] Several case reports have been published indicating that assisted reproductive technologies are seen usually associated with ovarian pregnancy due to ovarian enlargement secondary to stimulation with gonadotropins.[13] Grimes et al. reported pelvic inflammatory disease or infertility in more than 50% of his 24 cases.[10]

The patient usually presents with symptoms like abdominal pain, vaginal bleeding, and amenorrhea, almost similar to presentation of a patient with tubal ectopic pregnancy .sometimes patient may present with only complaint of pain in the lower abdomen. An fornicial mass may be palpable on pelvic examination in more than 50% of cases as in our case clinical mass of 3x3 cms was confirmed by sonography. It is characterized by a poor clinical symptomatology and a challenging ultrasound diagnosis. The criteria for ovarian pregnancy sometimes are difficult to prove.[14] Intrauterine contraceptive devices may also be a causative factor.[15] Its action could be explained by a change in tubal motility, thereby resulting in the implantation in the ovary (14). The increase in the incidence of ovarian pregnancy is likely to be due to the use of intra uterine devices. These prevent uterine implantation, but give no immunity against ovarian implantation.[16] A study showed that IUD is considered as a risk factor of ovarian pregnancy thus IUD decreases the chances of uterine implantation by 99.5%, tubal implantation in 95% and they have no effect on ovarian implantation.[17,19]

Ovarian pregnancy can be erroneously diagnosed as ruptured corpus luteum cyst in 75% of cases.[20,21] Pelvic pain insidious and dragging in nature is the most frequent clinical presentation of an ovarian gestation as in our patient, also a palpable mass in the fornix on vaginal examination.[22,23] The diagnosis is often made at surgery but also needs histopathological confirmation. An accurate diagnosis of ovarian pregnancy during surgery is possible only in few cases, because intraoperative findings are almost similar to a case of ruptured corpus luteum haematoma.[16]

Diagnosis is based on the classic description of a cystic lesion with a wide ectogenic outer ring using ultrasound.[24,25] Ultrasound can only suggest the diagnosis, surgery is the best method of diagnosis and management.[26-28]

A combination of routine ultrasound findings, along with colour Doppler done by an experienced sonologist as well as high levels of β HCG and can bring about a high index of suspicion of ovarian ectopic.[23] Primarily exploratory laparotomy has been used as a mode of treatment in case of intraperitoneal bleeding laparoscopy can also be done in case the patient is stable and BP is well maintained and in most of the cases, ovary can be conserved since implantation is usually superficial as described by Koo et al. Methotrexate therapy also has been tried successfully in many patients.

CONCLUSION

High resolution and 3D TVS showing positive fetal heart rate, a gestational sac and yolk sac is useful to make an appropriate diagnosis of an otherwise extremely rare entity. For a woman with a past history of ectopic pregnancy, it is better to avoid copper or levonorgestrel containing IUD and other methods of contraception should be advised.

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