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Case Report

A rare case report: unruptured ovarian pregnancy

Shipra Sarkar*, Somenath Ghosh, Priyanka Mitra

Department of Obstetrics and Gynecology, Tata Motors Hospital, Telco Colony, Jamshedpur, Jharkhand, India

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***Correspondence:**
Dr. Shipra Sarkar,
E-mail: shiprana76@gmail.com

ABSTRACT

Ovarian pregnancy is a rare form of ectopic pregnancy. Its incidence is 0.5-1% of all ectopic gestations or 1 in 7000 to 40000 live births. The diagnosis is intricate and based on surgical and histopathological observations. In our institute in last 10 years, we have seen a single confirmed case out of 189 ectopic pregnancies. It was a spontaneous pregnancy with no history of contraception failure and diagnosed as tubal ectopic by ultrasound imaging. Laparotomy findings and histopathology confirmed it to be an Ovarian Pregnancy.

Keywords: Ovarian pregnancy, Ectopic pregnancy, Tubal ectopic, Contraception failure

INTRODUCTION

The morula enters the uterine cavity approximately 3 days after fertilization.[1]The blastocyst implants into the uterine wall 6 or 7 days after fertilization.[1]

Ectopic pregnancy constitutes 1-2% of all pregnancies and is among the leading causes of maternal morbidity and mortality.[2] Ovarian ectopic pregnancy (OEP) is one of the rarest subtypes, with an estimated incidence of 0.5-3.5% of all ectopic pregnancies, which is increasing in the past decades.[2] The etiology of OEP is not fully understood, but it has been reported to be associated with utilizing an intrauterine device (IUD) in many cases.[2]

The diagnosis is intricate and based on surgical and histopathological observations.[4]

Ovarian ectopic pregnancies occur through fertilization of an egg retained in the peritoneal cavity leading to implantation on the surface of the ovary.

Although the cause of these implantation anomalies remains uncertain, current hypotheses include reflux of the fertilized oocyte to the ovary, thickening of the tunica albuginea, and tubal dysfunction.[5]

CASE REPORT

We report a rare case of spontaneous ectopic ovarian pregnancy of 34 years old G8P3L2A4 woman reported as tubal pregnancy with live fetus with CRL=10.7mm on ultrasound thus making it unsuitable for medical management and hence treated with surgical intervention in obstetrics and gynecology department in Tata Motors hospital, Jamshedpur of India.

She presented on 15th of February 2022 with suprapubic pain abdomen (that increased for two days) with history of attempted induced abortion (without any ultrasound confirmation of location of gestational sac) by medical method on 31st January 2022 and D and E done for pain abdomen on 11th of February from an outside medical set-up. She was hemodynamically stable, without bleeding per vaginum, not associated with fever, nausea, vomiting, bladder or bowel disturbances. Ultrasound on admission diagnosed an empty uterine cavity and right sided fallopian tubal ectopic, unruptured with huge thickened gestational sac and live fetus of CRL 10.7 mm corresponding to 7 weeks gestation. She had history of all the spontaneous conceptions with 2 living issues and one intrauterine fetal death at 8 months gestation due to accidental blunt trauma; she had previous three vaginal deliveries. Last child birth was 8 years ago. After her last child birth, she got 4 MTPs

done, all by medical methods not requiring any surgical interventions.

Figure 1: Right adnexal ectopic with a live fetus of CRL 10.7 mm seen within the gestational sac.

For the present pregnancy diagnosed with a live ectopic pregnancy of 7 weeks gestation by ultrasound, she underwent laparotomy and intraoperatively found to have no hemoperitoneum, soft 6 weeks size uterus and intact healthy bilateral fallopian tubes and right ovary having a gestational sac with fetus visible inside and not attached to any fallopian tube. Left ovary was healthy. Wedge resection of gestational sac along with the ovarian tissues was attempted but resulted in hemorrhage requiring removal of right ovary, hemostasis was secured after oophorectomy. As the patient's consent for tubal ligation was already taken, bilateral salpingectomy was done. Post operatively, patient was hemodynamically stable and upon further history taking, patient did not suggest the use of any Intrauterine contraceptive devices in the past.

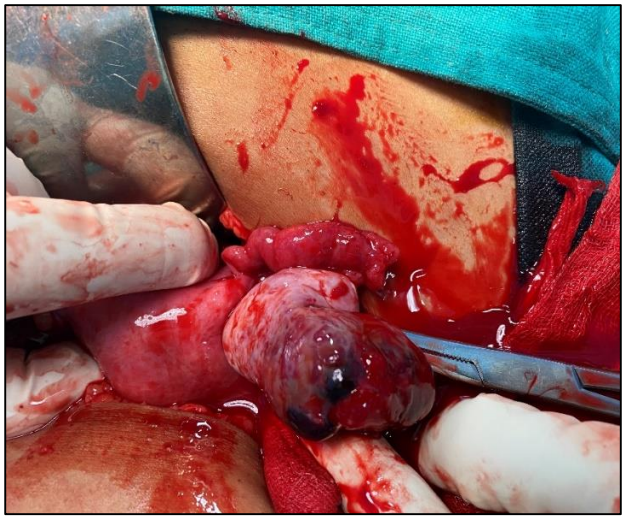

Figure 2: Intra-op image of the presence of intact fallopian tube and right ovarian ectopic pregnancy.

Patient had a good recovery and her postoperative hematocrit did not indicate any blood transfusion. She got discharged home on her 2nd postoperative day. Her postoperative follow up in gynae OPD after 6 weeks confirmed her ovarian ectopic pregnancy by histopathology report and her recovery found to be complete.

DISCUSSION

Diagnosis of an ovarian ectopic pregnancy was made during exploratory laparotomy, later confirmed by histopathology.

Diagnostic criteria for ovarian pregnancy described by Spiegelberg (1973) include ovarian attachment to the uterus via the ovarian ligament, location of the gestational sac in or around the ovary, intact fallopian tube but with its fimbria end separated from the ovary, and ovarian tissue in the specimen on histopathological analysis.[3]

The reported incidence of ovarian pregnancy is growing because of the evolution of transvaginal sonography and careful histological examination of the ovarian tissues. No gestational sac was observed within the uterine cavity. The hyperechoic ring or mass was more echogenic than corpus luteum and normal ovary. Ultrasonographic features of ruptured ovarian pregnancy revealed that a large irregular mass was mixed with hyperechoic and hypoechoic structures in the adnexa.[4]

Ultrasonography showing neither intrauterine nor ectopic pregnancy in a patient with a positive pregnancy test is referred to as a pregnancy of unknown location. In a desired pregnancy, β-hCG levels and serial ultrasonography combined with patient reports of pain or bleeding guide management. In an undesired pregnancy or when the possibility of a viable intrauterine pregnancy has been excluded, manual vacuum aspiration of the uterus can evaluate for chorionic villi that differentiate intrauterine pregnancy loss from ectopic pregnancy. If chorionic villi are seen, further workup is unnecessary, and exposure to methotrexate can be avoided. If chorionic villi are not seen after uterine aspiration, it is imperative to initiate treatment for ectopic pregnancy or repeat β-hCG measurement in 24 hours to ensure at least a 50% decrease. Ectopic precautions and serial β-hCG levels should be continued until the level is undetectable.[6]

CEP can manifest with low or absent serum hCG levels. It usually has a prolonged and indolent clinical course and may even resolve spontaneously. Regarding management of ovarian pregnancy, surgical treatment is often required in those cases because of the late onset of clinical symptoms which leads to later diagnosis. CEP can rupture and result in a life-threatening hemoperitoneum.[7]

Histopathologically-confirmed OEP can be classified as intrafollicular or extrafollicular, the second form having

two subtypes, however the clinical implication is controverted.[8]

CONCLUSION

OEP shares a similar clinical presentation with complicated ovarian cyst and tubal ectopic pregnancy. Clinical criteria make it difficult to distinguish a ruptured ovarian pregnancy from a fallopian tube pregnancy rupture, corpus luteum cyst rupture, or ovarian cyst torsion. In previous studies, the mean gestational age at time of diagnosis of OEP was about 7 weeks in the majority of cases. Even though ultrasound has an essential role in diagnosing EP, a high level of suspicion is still needed, as it may fail to diagnose EP in some cases. Routine prenatal assessments may help diagnose EPs in earlier stages and improve outcomes. The most commonly used surgical treatment of ovarian pregnancy is laparoscopy with gestational lesion removal or wedge resection which are all surgical procedures to preserve fertility. The difference of clinical presentation such as the time of vaginal bleeding, abdominal pain and hypovolaemia may be a reflection of timing of diagnosis and severity of disease progression, which is the important basis of clinical treatment. Despite the advantages of modern diagnostic methods, ruptured OP is still difficult to be defined by preoperative ultrasound, and there will still be patients with circulatory collapse, whose rupture may occur before or after outpatient treatment and may be life-threatening. On the other way, the unruptured OP is possible to be preoperatively diagnosed due to their ultrasonographic characteristics, especially when the sonographer be familiar with these characteristics. Early diagnosis (ultrasound diagnosis before rupture) is beneficial to the process of conservative laparoscopic surgery to preserve fertility of the patients, avoid emergency laparotomy and improve clinical prognosis. In the last 10 years at our hospital, out of 189 cases of ectopic pregnancy, only 1 has been a case of ovarian ectopic pregnancy, thereby making it an incidence of 0.0059% of ectopic pregnancies.

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