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Ovarian Ectopic Pregnancy

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Abstract

Ovarian ectopic pregnancy is a rare variant of ectopic implantation. It ends with rupture before the end of the first trimester. Ovarian ectopic pregnancy incidence after natural conception ranges from 1 in 2000 to 1 in 60 000 deliveries and accounts for 3% of all ectopic pregnancies [1]. Ultrasound criteria are difficult as findings are typically a cystic ovarian mass, with a differential of corpus luteum cyst, hemorrhagic cyst, and tubal ectopic pregnancy. Many women with ovarian pregnancies are believed to have a ruptured corpus luteum cyst, and the correct diagnosis was made during the surgical procedure only 28% of the time. The hemorrhagic mass (ovarian ectopic) should be located adjacent to the corpus luteum, never within it. Ovarian pregnancy is also associated with profuse hemorrhage, with 81% of reported to have a hemoperitoneum greater than 500 mL [2].

Keywords: Ovarian ectopic pregnancy; Hemorrhagic cyst; Corpus luteum cyst

Case Report

A 34 yrs old patient G9P2L1A6 presented with positive pregnancy test, she had recurrent pregnancy loss which she was not evaluated in her home country and never had ectopic before, she had 2 vaginal deliveries, antenatal booking tests were normal except haemoglobin which was 10.4, ultrasound done to check for the viability at 6 weeks as she had multiple miscarriages. Radiologist did the scan diagnosed to have right ovarian ectopic with cardiac pulsation and corpus luteum is seen adjacent to it with mild fluid in haemoperitoneum, beta HCG was 5050 at diagnosis. After getting informed written consent posted for laparoscopy and right ovarian ectopic confirmed laparoscopically it was on the verge of rupture, proceeded with the resection of ectopic from the ovary with harmonic scalpel and the haemostasis achieved by suturing the ovarian tissue with 2-0 vicryl. Intraoperative and post-operative period was uneventful.80 mg of methotrexate given post operatively as there was a possibility of remnant ectopic tissue in the ovary, beta HCG reduced to 563 miu/ml 2 days of post operatively (Figure 1).

Discussion

Pathophysiology of ovarian ectopic pregnancy is not clear [3]. There are various hypotheses such as:

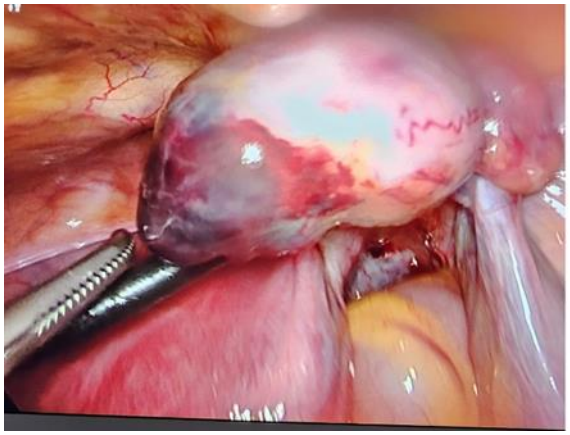
a) Delay of ovum liberation.
b) Thickening of tunica albuginea.
c) Tubal dysfunction.
d) Intrauterine contraception devices.

Two mechanisms have been proposed to explain ovarian implantation. One theory suggests that fertilization occurs normally and implantation on the ovary follows reflux of the conceptus from the tube. Reverse migration of an embryo towards the Fallopian tube and implantation on the ipsilateral or contralateral ovary are also supported by the occurrence of ovarian pregnancies after in-vitro fertilization and embryo transfer. According to the second theory, various disturbances in ovum release are responsible for ovarian implantation. Chorionic villi (arrowheads) within the cavity of the follicular rupture [4]. Alternatively, fertilization of an extruded ovum which remains adherent to the ovarian stigma may occur, by implantation into its own ruptured follicle or parts of the ovarian tissue. Second mechanism probably better explains the cases of intrafollicular

and special categories of extrafollicular pregnancy (interstitial and cortical). Predisposing factors thought to be pelvic inflammatory disease the possible (especially previous oophoritis) or an intrauterine device. Though the clinical presentation of bleeding, abdominal pain, and positive pregnancy test is similar, ovarian pregnancy is usually not associated with PID, infertility, or tubal disease like other ectopic pregnancies. The pathology diagnostic criteria were described in 1878 by Spiegelberg.

Criteria for Ovarian Pregnancy Diagnosis

1. The fallopian 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. Ovarian tissue must be located in the sac wall.



Both sonographically and at the time of surgery the clinical challenge is to distinguish an ovarian ectopic pregnancy from a corpus luteum or hemorrhagic cyst , because a cystic adnexal mass with a positive pregnancy test without clear intrauterine gestation could also indicate a corpus luteum in an early or failing intrauterine or tubal pregnancy. Decreased wall echogenicity compared with the endometrium and an anechoic texture suggest a corpus luteum. Color or spectral Doppler sonography does not seem to fulfill additional diagnostic expectations, yet Atriv [5] found that a resistive index of less than 0.39 had a specificity of 100% and a positive predictive value of 100% for diagnosing ectopic pregnancy but was present in only 15% of ectopic pregnancies. He concluded that both low and high resistive indices discriminate ectopic pregnancy from a corpus luteum cyst. Rare ovarian pregnancies can be treated by laparoscopic surgical excision. Many times this occurs when the expected surgery is for a ruptured tubal ectopic pregnancy or hemorrhagic corpus luteum. The surgical treatment alternatives include an ovarian wedge resection or unilateral salpingo-oophorectomy, the latter of which should be avoided and does not improve the subsequent pregnancy rate or lower the risk of recurrence [6,7].

Conclusion

With careful clinical evaluation and transvaginal examination early staged ovarian ectopic cases can be treated conservatively which preserves the normal anatomy crucial for fertility.

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