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Case Report

Medical management of ovarian ectopic pregnancy- a case report

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ABSTRACT

Primary ovarian ectopic pregnancy is a rare type of ectopic pregnancy which has an estimated prevalence ranging from 1:7000 to 1:70,000 accounting for almost 3 % of all ectopic cases. A 37-year-old woman was referred to our hospital intermittent vaginal spotting, recurrent abdominal pain that was getting worse, and 3 days of vaginal bleeding with clot passage. Her general condition was good and her vital signs were normal. She felt tenderness in an abdominal examination and had a small amount of vaginal bleeding. Transvaginal ultrasonography showed an ectopic gestational sac, in her right ovary. Our final diagnosis was ectopic ovarian pregnancy and we successfully treated her with methotrexate. After 3 doses of methotrexate administration her beta human chorionic gonadotropin was negative and a sonographic examination was completely normal. Approximately 3% of all ectopic pregnancies are located in the ovaries. Preoperative diagnosis of this extremely rare condition is challenging, because the ectopic pregnancy often resembles cysts of the corpus luteum.

Keywords: Ovarian ectopic pregnancy, Methotrexate, Spiegelberg criteria

INTRODUCTION

The estimated prevalence of primary ovarian ectopic pregnancy, which accounts for about 3% of all ectopic cases, ranges from 1:7000 to 1:70,000.[1] Due to the increased vascularization of the ovarian tissue, it typically ends in a rupture, in the first trimester, which causes internal bleeding and hypovolemic shock condition. Histopathological analysis and emergency laparotomies are typically used to make the diagnosis.

Diagnosis is made using the Spiegelberg criteria which include: the gestational sac is located in the region of the ovary, the ectopic pregnancy is attached to the uterus by the ovarian ligament, ovarian tissue in the wall of the gestational sac is proved histologically, and the tube on the involved side is intact.[2]

The most frequent type of ectopic pregnancy is a tubal pregnancy, followed by ovarian pregnancies.

CASE REPORT

A 37-year-old lady who had previously undergone two vaginal deliveries was referred to our hospital with a 6-week menstrual delay, intermittent vaginal spotting, recurrent abdominal pain that was getting worse, and 3 days of vaginal bleeding with clot passage. She had a regular menstrual period before the symptoms. Prior to the symptoms, she had a regular menstrual cycle. Intrauterine device (IUD) use, endometriosis, or pelvic inflammatory disease were not noted in her medical history. This was her third spontaneous pregnancy and there was no abortion.

Her vital signs, including blood pressure of 110/70 mmHg, a pulse rate of 80 beats per minute, and a body temperature of 36.5 °C, were all within normal limits. A physical examination showed minimal tenderness in all sides of her abdomen with an increase in left lower pelvic section on deep palpation. A speculum examination revealed mild cervical haemorrhage and pain in the left adnexal area.

Transvaginal ultrasound (USG) revealed an empty uterine cavity with a thickness of 11 mm. An ectopic gestational sac and yolk sac seemed to be inside her left ovary, and were identified close to the midline, which correlated with her 6 weeks' delay of menstruation (Figure 1). The fetal heart beat was not clearly seen. Minimal free fluid was noted in post-operative day (POD). Her right ovary and tubal structures seemed to be normal. She declared her previous menstrual periods were regular but that her last period was 2 months ago. Laboratory analysis showed a white blood cell count (WBC) of 11,600/mm^3, red blood cell count (RBC) of 400000/mm^3, hemoglobin (Hb) of 10.3 g/dl, hematocrit (Htc) of 36 %, beta human chorionic gonadotropin (hCG) of 994 in the first week and then increased to 1058 in after 28 hours. Her condition was considered to be an ectopic pregnancy. The stability of her illness was disclosed to her and her family, and methotrexate (MTX) medical therapy was scheduled. Along with injectable folinic acid, a three-dose schedule of 1 mg/kg body weight intramuscular MTX was given on alternate days. She was stable. Her beta hCG levels gradually dropped (615 after the first week, 95.44 at the second, and 9.22 at the third week), free fluid in POD shrank, and her symptoms significantly improved.

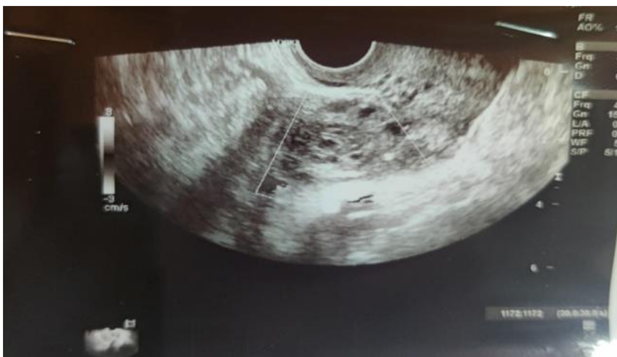

Figure 1: Ectopic gestational sac in left ovary.

DISCUSSION

Ectopic pregnancies have a history that is as old as humanity. The first successful ectopic pregnancy operation was done in the USA in 1759, but up until the 1800s, medical care was still the norm, with a maternal mortality rate as high as 60%. An uncommon type of ectopic pregnancy is one that occurs in the ovary.[3] It happens when an ovum that has been kept in the peritoneal cavity is fertilised, resulting to implantation on the ovarian surface.[4] Women with ovarian ectopic pregnancies usually present with lower abdominal pain, menstrual irregularities as in other ectopic conditions and corpus luteum cyst. Preoperative and occasionally intraoperative diagnosis can be challenging, despite the importance of early identification and treatment. The diagnosis of ectopic ovarian pregnancy is typically made by pathological evaluation, hence the Spiegelberg criteria are crucial. Usually, elevated beta hCG levels indicate a prediagnosis.

According to the latest research, the majority of occurrences happen during the first trimester. Early-onset rupture can cause severe intra-abdominal bleeding and hypovolemia, both of which pose a serious risk to life.

It is unclear what causes implantation abnormalities in ovarian ectopic pregnancy. There are many theories, including: ovum liberation delay, tunica albuginea thickening, tubal dysfunction, and intrauterine devices for birth control (for example, IUDs).

In recent years, medical and conservative therapies have also been developed to stop ovarian tissue loss, pelvic adhesions, and to maintain the patient's fertility. These include administering mifepristone to patients with conditions identified by transvaginal USG, administering parenteral prostaglandin F2a, and administering MTX to patients with non-ruptured conditions identified by laparoscopy.

A 37-year-old patient who had previously undergone two caesarean sections and had used an IUD was treated with multidose MTX, and Di Luigi et al were successful in doing so.[5] She was identified as having an ectopic pregnancy at six weeks by use of a transvaginal USG. They noted that early stage ovarian ectopic cases can be treated medically while maintaining the normal anatomy necessary for reproduction with careful clinical evaluation and transvaginal inspection.

CONCLUSION

Even though ovarian ectopic pregnancy is a rare disorder, while choosing a medical therapy, especially for young patients, it is important to consider the preservation of fertility.

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