

Ovarian ectopic pregnancy treated with maximum conservative surgery of the ovary in a patient with a copper intrauterine device

Gravidez ectópica ovárica tratada com cirurgia conservadora do ovário numa paciente com um dispositivo intrauterino de cobre

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Abstract

The authors present a case of an ovarian ectopic pregnancy in a patient with an intrauterine copper device. Ovarian pregnancies are rare and account for three percent of ectopic pregnancies and the presence of an intrauterine device appears to influence its risk. The sonographic diagnosis of an ovarian pregnancy is difficult and, therefore, its diagnosis is only typically made during surgery and must be confirmed through histopathological analysis. As shown through our case, maximum conservative surgery of normal ovarian tissue can be attempted successfully.

Keywords: Ovarian ectopic pregnancy; Intrauterine device

The patient was a 30-year-old female, gravida 2, para 2, that presented to our emergency department complaining of a progressively worsening lower abdominal pain starting five days previously. She had an intrauterine copper device (IUD) for two years and reported last menses 17 days prior to her visit. Nevertheless, she admitted that, in the previous month, her menses had a delay and were less abundant than usual. Upon physical examination, she was hemodynamically stable and had uterine and adnexal tenderness specially on the left side. Laboratory results showed a hemoglobin level of 8.5g/dL and a human chorionic gonadotrophin (hCG) level of 11925mUI/mL. Ultrasound examination found a correctly positioned IUD and, on the left side of the pelvis, a normal ovary. Adjacent to it, an adnexal mass with an hypere-

choic contour and an anechoic center containing a yolk sac and an embryo with a heart beat, free fluid and abundant blood clots were observed.

Based on these findings and the lack of practice in laparoscopy of the surgical team, we decided to perform an exploratory laparotomy that unveiled a moderate hemoperitoneum, normal aspect of the uterus, right ovary and both fallopian tubes. The left ovary had a peripheral formation compatible with the presence of an ovarian ectopic pregnancy (Figure 1). Ovarian wedge resection with removal of the abnormal mass and a thin layer of normal ovarian tissue was performed and histopathological analysis confirmed the diagnosis. The hCG levels progressively decreased to negativity following surgery.

Ovarian pregnancies are rare and account for three percent of ectopic pregnancies¹. A reflux of the fertilized egg through the fallopian tube and into the ovary, more specifically into the follicle opening, rich in fibrin and blood vessels, appears to be in its origin. The sonographic diagnosis of an ovarian pregnancy is difficult as it can be mistaken for a corpus luteum, an hemorrha-

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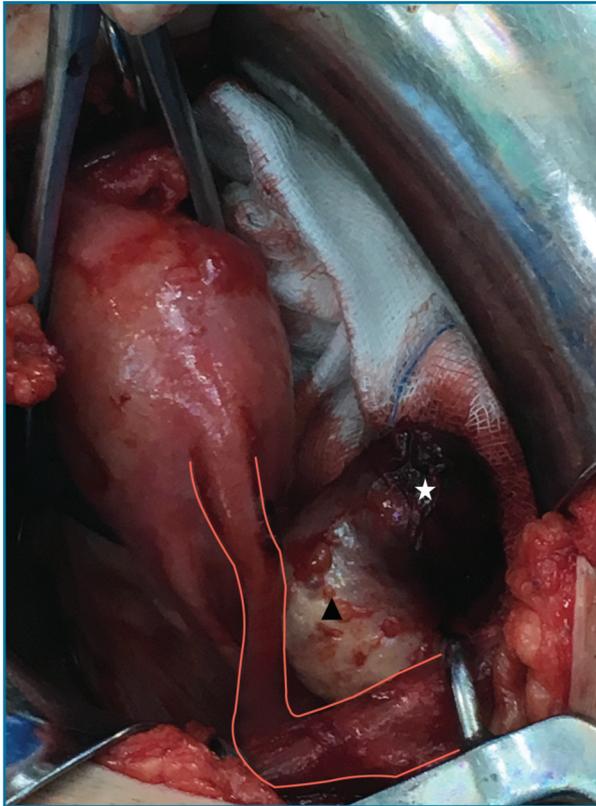


FIGURE 1. Intraoperative macroscopic aspect of an ovarian ectopic pregnancy. Trajectory of the normal fallopian tube (limited by the red lines); Ovary (black triangle); Ovarian pregnancy (white star).

gic cyst or a tubal pregnancy. They usually appear on or within the ovary as a cyst with a wide echogenic outside ring and, less commonly, an embryo can be found as in our case². Due to its rarity, the diagnosis of an ovarian pregnancy is only typically made during surgery and must be confirmed through histopathological analysis. As demonstrated through our case, maximal conservative surgery of the ovary attempting to remove only the trophoblastic tissue and a minimum of normal ovarian tissue can be successfully performed. This is of the most importance specially if the patient desires a future pregnancy.

Albeit a low absolute risk, the presence of an IUD increases the probability of an ectopic location when a pregnancy occurs³. Intrauterine devices induce chronic inflammatory changes of the endometrium and fallopian tubes that have spermicidal effects and inhibit fertilization and implantation but they do not have a preventive effect on ovarian implantation⁴. The true impact of copper IUD on the prevalence of ova-

rian pregnancies remains controversial. Joseph *et al.*, in their review of 250 cases of ovarian pregnancies, found that 19.3% were associated with the use of a copper IUD and that risk factors normally associated with ectopic pregnancy, such as a previous history of pelvic inflammatory disease, were not present⁵.

The authors chose to present this case as, due to its rarity, many medical professionals have probably never seen an ovarian ectopic pregnancy. Its diagnosis should always be considered and, normally, is only established during surgery.

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