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Case Study

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CORNEAL ECTOPIC PREGNANCY: A CASE REPORT

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ABSTRACT

Objective: Cornual ectopic pregnancy (CEP) is a rare, accounting to 2% of all ectopic pregnancies. The aim of our study is to determine the clinical and ultrasound diagnosis of CEP and its treatment. **Method:** We report the case of a CEP diagnosed on a 35 year-old patient who had 8 weeks of gestation. **Results:** On clincal examination, the main symptom was severe pelvic pain with a palpable latero-uterine mass. Transvaginal ultrasound scan found an empty uterus with a 23 mm ectopic gestational sac. It was surrouded by myometrium which was 3 mm thick. There was no intraperitoneal effusion. The diagnosis of a cornual ectopic pregnancy was made and the patient underwent a successfum laparotomy with cornual resection and ipsilateral salpingectomy. **Conclusion:** The diagnosis of CEP is not always easy and requires early management to avoid the risk of hemorragic rupture.

INTRODUCTION

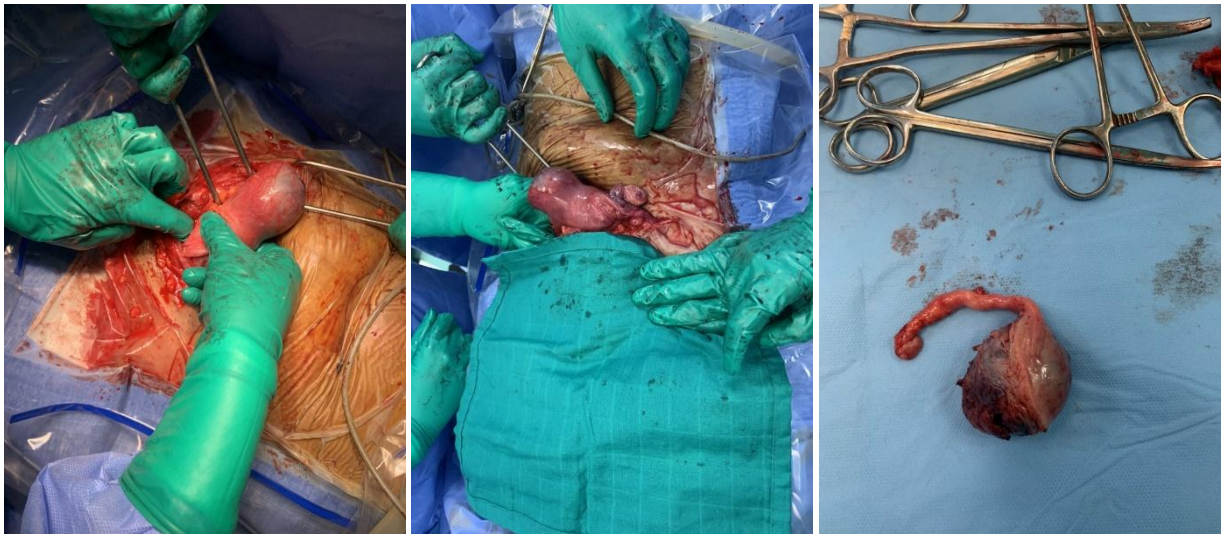
Cornual ectopic pregnancy (CEP) is defined by the implantation of a gestational sac in the horn of a uterus.[1] The term cornual was originally used to describe an ectopic implantation in a rudimentary horn in a bicornuate uterus, or in the lumen of a tubal stump.[2] Currently, this definition also extends to angular and interstitial ectopic pregnancies. Thus, an angular ectopic pregnancy corresponds to an intrauterine implantation of the pregnancy sparing the tubal connection. An interstitial pregnancy is the implantation in the tubal portion completely included in the thickness of the uterus and opening into the uterine cavity.[1]

The frequency of ectopic pregnancies is 1 to 3% of all pregnancies, of which 2% are cornual.[1] The diagnosis of CEP is difficult due to the low sensitivity and specificity of symptoms and imaging. The classic triad (abdominal pain, amenorrhea, and bleeding) occurs in <40% of patients.[3] The ultrasound scan is sometimes misleading, the implantation site in the intrauterine part of the fallopian tube and the invasion through the uterine wall making this pregnancy difficult to differentiate from an intrauterine pregnancy. MRI and 3D ultrasound are much more sensitive but are less accessible.[2]

The treatment of CEP is most often surgical by cornuotomy or cornual resection in the event of hemorrhagic rupture. It can also be medical by intramuscular (IM) or in situ (IS) injection of methotrexate in single or repeated doses. The short-term prognosis is generally good, in the long term, it is marked by the risk of tubal obstruction as well as uterine rupture after cornual resection in subsequent pregnancies.[1]

CASE REPORT

35-year-old patient, 3rd gravida with 2 previous deliveries via c-section, presented at 8 weeks gestation with severe pelvic pain. Per vaginum examination revealed a right latero-uterine mass that was painful on palpation and no bleeding. On trans-vaginal ultrasound, we noted the presence of an empty uterine cavity with a gestational sac in the form of a right lateral ectopic mass contiguous to the uterus. The ectopic gestational sac was unembryonated and measured 23 mm (eight weeks of amenorrhea). The sac was surrounded by a 3mm hyperechoic crown (myometrium). There was no intraperitoneal fluid effusion. Both ovaries were normal with a corpus luteum within the right ovary. The serum *B*-hcg level was 32,000 mIU / ml. The diagnosis of ectopic pregnancy was made and the patient underwent a successful laparotomy.



DISCUSSION

CEP is rare and its diagnosis is not always obvious. The case we are reporting is a proper corneal pregnancy, ie on a normal uterus without malformation (bicornuate or rudimentary horn). The gestational age was 8 weeks with no signs of rupture, which is consistent with literature data which report that, unlike an ectopic tubal pregnancy, which can rupture between 6 and 8 weeks gestation, an ectopic pregnancy can progress without symptoms until it ruptures at 12-16 weeks.[4]

In our case, the ultrasound scand found a latero-uterine mass with an empty uterine cavity, which is the most common sign. According to Timor-Tritsh, the ultrasound diagnosis of CEP is based on 3 criteria: an empty uterine cavity, a gestational sac separated by more than 1 cm from the uterine cavity and a myometrial crown around this sac.[5] Although Ackerman et al[6] showed that these parameters had a sensitivity of <40%, we found that these ultrasound signs with a positive serum BHCG level were sufficient to diagnose an unruptured CEP.[2]

The treatment of CEP can be medical (by injection of methotrexate) or surgical (by laparoscopy or laparotomy). The Royal College of Obstetricians and Gynecologists recommends that the EPs that are best suited for medical treatment (methotrexate) are those with minimal symptoms and low serum BHCG levels. However, no injection number, dose, or administration mode is recommended and no consensus exists on borderline BHCG levels and / or whether the presence of cardiac activity requires a surgical treatment.[7] The main risk of medical treatment is the rupture of the horn causing a massive hemoperitoneum.[1] Our patient presented with severe pelvic pain with a BHCG level of 32000 mIU / ml and a gestational sac> 20mm. The myometrial crown was thin (3 mm) which was indicative a pre-rupture and an emergency laparotomy was indicated. Surgical exploration allowed the discovery of an interstitial ectopic pregnancy measuring ≈ 5 cm in a state of pre-rupture, a cornual resection with ipsilateral salpingectomy was performed. This attitude is consistent with the literature data, which recommends cornual resection of CEP larger > 4cm in diameter.[7]

The main risk in patients with a history of CEP treated surgically is the ante- or perpartum uterine rupture in subsequent pregnancies.[1] In our case, we performed a sectional ligation of the contralateral tube and we recommend a close and early follow-up in the event of a pregnancy.

CONCLUSION

Cornual ectopic pregnancy requires early diagnosis and adequate management to avoid the risk of hemorrhagic rupture. Although clinical signs are not very specific, the trans-vaginal ultrasound scan usually allows the diagnosis to be made. Medical treatment is not as well established as that of tubal ectopic pregnancy, therefore surgical treatment remains the treatment of choice.

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