

*Case Report*

Ruptured Cornual Ectopic Pregnancy at 20 Weeks Gestation: A Rare Case Report

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ABSTRACT

Cornual pregnancy is uncommon among ectopic pregnancies. A diagnosis of cornual pregnancy remains challenging, and rupture of a cornual pregnancy causes catastrophic consequence due to massive bleeding. We report a case of a ruptured cornual pregnancy occurring at 20 weeks of gestation. A 32-year-old G₂A₁ conceived after 5 years of secondary infertility, presented to our centre with complains of severe pain abdomen with features of hypovolemic shock. Subsequently she was diagnosed as ruptured ectopic pregnancy and emergency laparotomy was done which revealed ruptured right cornual pregnancy with a hemoperitoneum. Cornual resection was performed. The pathological examination confirmed a ruptured cornual pregnancy.

Key words: Cornual pregnancy, Ectopic Pregnancy, Emergency Laparotomy.

INTRODUCTION

Cornual pregnancy represents 2-4 % of all tubal pregnancies and occurs once in every 2,500 to 5,000 live births. ^[1] The increased difficulties associated with the diagnosis and management of cornual gestations has resulted in this being the most hazardous of ectopic pregnancies. ^[2,3] As a result, uterine rupture may occur in up to 20% of the cases that progress beyond 12 weeks of amenorrhoea, ^[4] resulting in massive haemorrhage due to the richness of the local vascularisation through the branches of the uterine and ovarian arteries, ^[5] leading to a higher mortality rate. ^[6] Earlier diagnosis and more experience in treating this disorder have reduced the

present maternal mortality rate to approximately 2% to 2.5% of all cornual pregnancies. ^[1] This case is presented because of its rarity where rupture cornual ectopic occurred at a late gestation with a successful conservative repair.

CASE REPORT

A 32-year-old, G₂A₁ presented to labour room with the complaint of acute abdominal pain at 20 weeks gestational age. She had severe abdominal pain 2 hours before admission associated with vomiting. There was no history of bleeding, spotting or passage of fleshy mass per vaginum. She had a non consanguineous marriage with her husband since 8 years. Her first pregnancy

was spontaneous abortion at 2 months of gestation following which suction evacuation was done. In this pregnancy there was history of ART procedure for treatment of 5 years of secondary infertility. There was no history of excessive vomiting, fever, burning micturition or pelvic inflammatory disease. A scan at 6 weeks at the ART unit confirmed a viable intra-uterine pregnancy. Her next scheduled visit for a follow-up scan was at 10 weeks, which was missed by her.

On general examination, she was afebrile with severe pallor and pulse rate being 128/min and BP 90/60 mm of Hg. Per abdominal examination revealed severe tenderness in the suprapubic area with positive shifting dullness. Pelvic examination revealed uterus retroverted with bilateral fornicial tenderness and cervical motion tenderness. Emergency Ultrasonography had done which showed empty uterine cavity with a foetus of 19⁺³ weeks gestation without cardiac activity floating among bowel loops and moderate free fluid and internal echoes suggesting hemoperitoneum. Findings were suggestive of Ruptured ectopic pregnancy. Her immediate laboratory tests included Hb-7.0 gm/dl, BT/CT within normal limits, blood group was A positive and HIV and HBsAg being negative. Emergency laparotomy was done under general anaesthesia and there was about 1500ml of blood in the abdominal cavity with 250gms of clots. Ruptured right cornual ectopic pregnancy was found with bilateral tubes and ovaries being normal (Figure 1) and a fetus weighing 600 gm with placenta removed from the peritoneal cavity (Figure 2). Resection of the right cornua of the uterus with right salpingectomy was done and repair was done with Vicryl no1 (Figure 3). Post operatively, she was transfused with 2 units of whole blood. The post operative course was uneventful and

she was discharged on day 7 in good condition.

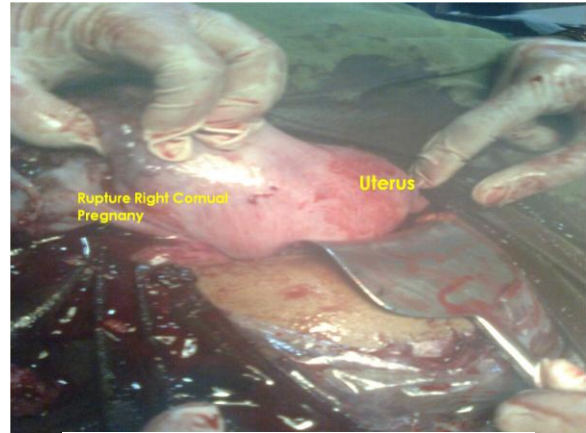


Figure 1. Ruptured right cornual ectopic pregnancy



Figure 2. Expelled foetus of 20 weeks gestation with placenta



Figure 3. Cornual resection with repair

DISCUSSION

An important feature of cornual pregnancy is that the sac is surrounded by

myometrium and even though it is poorly developed, it can contain the pregnancy for a longer period than tube or ovary. [7] In some respects cornual pregnancy resembles the interstitial type of tubal pregnancy and they can be confused at the time of operation. A distinguishing feature is the insertion of the round ligament which is always lateral to the cornual pregnancy. [7] The risk factors for cornual and interstitial pregnancy are similar to those for ectopic pregnancy in general including tubal damage including scarring, tubal epithelium or cilium damage and stenosis of the tubal lumen following pelvic inflammatory disease or previous tubal surgery, previous pelvic surgery and the use of assisted reproductive technologies (ART). [1,8] In our case previous history of spontaneous abortion followed by suction evacuation leading to PID and ART procedures in this current pregnancy were the possible risk factors. The possible mechanism in ART procedures that have been proposed to explain this include hydrostatic forces delivering the embryo into the cornual or tubal area, the tip of the catheter directing transfer towards the tubal ostia, or reflux of uterine secretions leading to retrograde tubal implantation. [9]

Cornual pregnancy is diagnosed with ultrasonographical criteria proposed by Timor-Tritsch and colleagues, [1] in presence of positive serum or urine beta-hCG indicating pregnancy. These criteria include: 1) An empty uterus 2) A gestational sac seen separately and more than 1cm from the most lateral edge of the uterine cavity 3) A thin myometrial layer surrounding the sac.

Early diagnosis of cornual pregnancy with TVS allows for first trimester conservative management with Methotrexate. Tulandi et al [2] reviewed the management of 32 reported cases of cornual pregnancy. Ultrasound revealed an ectopic cornual gestational sac in 40.6% of women and a hyperechoic mass in the cornual

region in another 25%. The diagnosis was established in 71.4% of 32 women with sensitivity of 80% and specificity of 99%. 4D volume contrast imaging can differentiate between angular and cornual pregnancy. In angular pregnancy embryo is implanted medial to the utero tubal junction and round ligament while in cornual pregnancy embryo is implanted lateral to the round ligament. [7]

Traditionally, the treatment of cornual pregnancy has been hysterectomy or cornual resection at laparotomy. As all surgical management has been associated with morbidity and unfavourable effects on fertility, more conservative approaches have been introduced into clinical practice. Conservative techniques such as laparoscopic cornual resection, laparoscopic cornuostomy or hysteroscopic removal of interstitial ectopic tissue, unilateral uterine artery ligation have been tried. Medical methods such as systemic methotrexate, ultrasound-guided methotrexate, laparoscopic-guided methotrexate (or potassium chloride) or systemic methotrexate followed by selective uterine artery embolisation are safe and highly effective treatment for cornual pregnancy, so that surgery can be avoided. Follow-up with serial serum beta-hCG is essential. The Royal College of Obstetricians and Gynaecologists recommends that women with tubal pregnancies most suitable for methotrexate therapy are those with serum beta-HCG levels of <3000 IU/litre and with minimal symptoms, [3,10] although there is some evidence to suggest that women who present with cornual pregnancies and have serum beta-HCG levels of <5000 IU/litre could be treated successfully with a single dose of methotrexate. [3]

CONCLUSION

Our patient presented in relatively late gestation with cornual rupture and in

this case the only option was cornual resection. Cornual pregnancy can cause significant maternal mortality and morbidity. Early diagnosis aided by ultrasound or laparoscopy may help to contribute towards effective conservative management.

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