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Case report`

Laparoscopic salpingectomy and adhesiolysis for concomitant left-sided cornual ectopic gestation and adhesive partial intestinal obstruction: A Case Report

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ABSTRACT

Background: Cornual gestation is one of the most hazardous types of ectopic gestation. It carries a significant challenge and a greater maternal mortality risk than ampullary ectopic pregnancy. The diagnosis and treatment are challenging and frequently constitute a medical emergency. Traditionally, the treatment of cornual pregnancy has been hysterectomy or cornual resection at laparotomy. However endoscopic approach is a viable option and consists of conservative techniques such as laparoscopic cornual resection, laparoscopic cornuostomy, laparoscopic salpingectomy or hysteroscopic removal of interstitial ectopic tissue. **Case presentation:** We report a case of a 28-year-old multipara who had an unruptured left cornual ectopic gestation with moderate pelvic adhesions and concomitant partial intestinal obstruction. She was managed via laparoscopic adhesiolysis and left total salpingectomy. **Conclusions:** Cornual pregnancy occurs rarely, there is a need for early and prompt diagnosis to prevent potentially fatal complications.

Keywords: *Ectopic, cornual, laparoscopy*

Introduction

Ectopic pregnancy is one in which the fertilized ovum implant and develops anywhere outside the normal endometrial cavity.[1] In the tropics most patients usually present with the ruptured variety, however with the recent availability of ultrasound, a lot of patients also present with the unruptured type. It is one of the commonest causes of maternal death in sub-Saharan Africa.[2] The incidence in sub-Saharan Africa varies from 1.1% to 4%.[3] The incidence of ectopic pregnancy was found to be 1.5% in Sokoto[4] and 1.29% in Kano.[5] About 95% of extrauterine pregnancies occur in the fallopian tube, where it can implant in the ampulla (55%), isthmus (25%), fimbria (17%) and cornua or interstitium (2%).[3,6] Cornual gestation is one of the most hazardous types of ectopic gestation. The diagnosis and treatment are challenging and frequently constitute a medical emergency.[7,8] Cornual pregnancy accounts for 2–4% of ectopic pregnancies and is said to have a mortality rate in the range of 2.0–2.5%. [8] It carries a significant diagnostic and therapeutic challenge and also a greater maternal mortality risk than ampullary ectopic pregnancy; because of myometrial distensibility, they tend to present relatively late, at 7–12 weeks of gestation.[8,9] Significant maternal haemorrhage leading to hypovolaemia and shock can rapidly result from cornual rupture.

Clinically, risk factors are as for other types of ectopic pregnancy: contralateral salpingectomy, previous ectopic pregnancy and in vitro fertilisation. Because of its location, early diagnosis of cornual pregnancy

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has been difficult. The eccentric position of the gestational sac and thinning of the myometrial mantle means that differentiation between eccentric intrauterine and cornual pregnancy is often difficult.[8] The rate of diagnosis can be improved, however, with transabdominal or transvaginal ultrasound. Another diagnostic aid is laparoscopy, which has the advantage of allowing both diagnosis and treatment.[8] Traditionally, the treatment of cornual pregnancy has been hysterectomy or cornual resection at laparotomy. Surgical treatment consists of conservative techniques, such as laparoscopic cornual resection, laparoscopic cornuostomy, laparoscopic salpingectomy or hysteroscopic removal of interstitial ectopic tissue, and radical operations such as hysterectomy.[8-10] Even in women with ectopic pregnancy with a significant haemoperitoneum, laparoscopic surgery has been safely conducted by experienced laparoscopists.[8] In developing countries, including Nigeria, the use of laparoscopic surgeries has been generally low due to poor availability of equipment, high cost of the procedure as well as lack of skilled personnel to perform the procedure.[7]

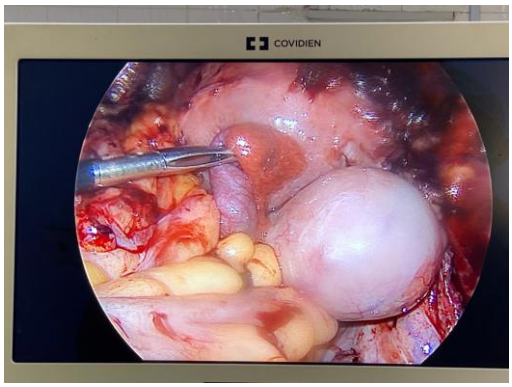
However laparoscopic management of ectopic pregnancy has been demonstrated to be a safe and effective alternative to conventional management by laparotomy.[7-12] Laparoscopic procedures are associated with less intra-operative blood loss, lower analgesic requirements, shorter hospital stay and a quicker return to normal activities.[7] Cornual gestation is one of the most hazardous types of ectopic gestation. The diagnosis and treatment are challenging and frequently constitute a medical emergency Cornual gestation is one of the most hazardous types of ectopic gestation. The diagnosis and treatment are challenging and frequently constitute a medical emergency. Cornual gestation is one of the most hazardous types of ectopic gestation. The diagnosis and treatment is challenging and frequently constitute a medical emergency.

Case report

Mrs S.L was a 28-year-old married Para 2^{+0} 2 alive at 13 weeks of gestation who presented to NOL International hospital, in Kano state with complaints of intermittent abdominal pain of 3 months duration and vaginal bleeding of 2 days duration. The pain was said to be generalized, colicky, intermittent and radiates to the thighs. There were no aggravating or relieving factors. Two days before presentation the abdominal pain was more in the suprapubic region. There was associated vaginal bleeding which was scanty in quantity. There was no history of dizziness or syncopal attack. However, she had a prior history of right-sided Salphingo-Oophorectomy 3 years before presentation on account of an ovarian dermoid cyst in another facility.

Examination revealed an anxious-looking young woman who was not pale, afebrile and anicteric. Her pulse rate was 96 beats per minute, moderate volume and regular and her blood pressure was 110/60 mmHg. The abdomen was full, with mild lower abdominal tenderness; there was no rebound tenderness, guarding, or rigidity. Pelvic examination revealed normal external genitalia with mild left adnexal tenderness and cervical excitation tenderness. Pregnancy test was positive and her packed cell volume was 32%. Transabdominal ultrasound revealed an eccentric localization of a gestational sac containing a non-viable foetus adjacent to the left uterine cornua. The gestational sac was surrounded by a thin myometrial layer. There was a mild fluid collection in her pouch of Douglas. The conclusion of an unruptured left cornual ectopic gestation was made.

She was counselled on the diagnosis and treatment options. She consented to emergency laparoscopy. Laparoscopic findings were those of extensive peritoneal adhesions involving the small intestines and an adnexal mass in the left uterine cornua. The left ovary was grossly normal. The right fallopian tube and ovary were absent. Intraoperative assessment of an unruptured left cornual ectopic gestation with partial adhesive intestinal obstruction was made. Adhesiolysis was performed using a harmonic scalpel. The left cornual gestational sac was resected with a harmonic scalpel (Figure 1). There was inadvertent rupture of the gestational sac with extrusion of the product of conception into the peritoneal cavity (Figure 2). The product of conception was removed with Johan grasping forceps. Generous peritoneal lavage was done thereafter, and the port wounds were closed with synthetic absorbable suture using the sub-cuticular pattern on the skin. The immediate post-operative condition was satisfactory. The patient was then discharged on day 3 in good condition.



Uterus

Ectopic Gestation

Figure 1: Ectopic gestation after excision

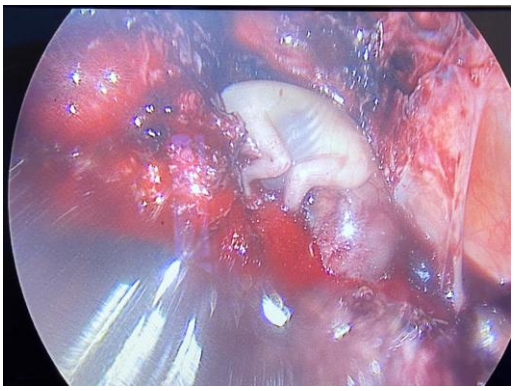


Figure 2: Foetus within the peritoneal cavity

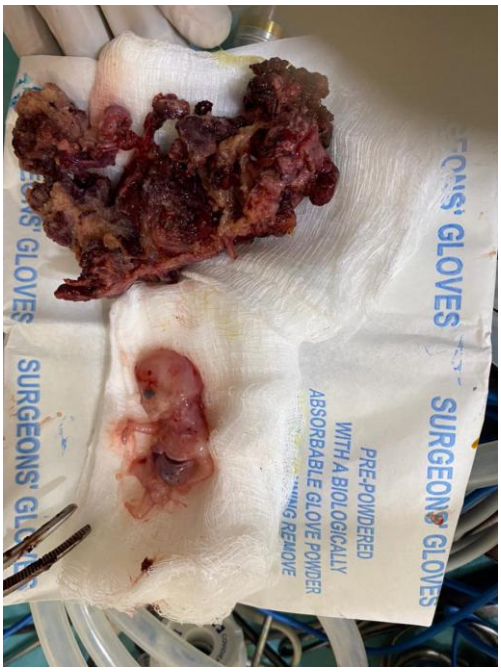


Figure 3: Foetus with placenta

Discussion

Cornual pregnancy is quite uncommon among all types of ectopic pregnancy. Risk factors are similar to that of other types of ectopic pregnancy except for previous history of ipsilateral salpingectomy, which remains a risk factor unique to interstitial pregnancy.[8,9] In this patient the possible risk factor might be the previous history of ipsilateral Salpingo-Oophorectomy she had.

Early recognition of the case is key for timely diagnosis and management. The morbidity and mortality of cornual ectopic pregnancy are directly related to the length of gestational age and this type of pregnancy, in particular, can be discovered with advanced gestational age even up to 16 weeks due to the adjacent supporting myometrial walls and good blood supply.[8,9] In the case presented herein, the patient presented at a gestational age of about 13 weeks complaining of lower abdominal pain and vaginal spotting. This is then confirmed by a serum pregnancy test and abdominal ultrasound. She was treated by laparoscopic salpingectomy which is one of the treatment options for cornual ectopic pregnancy[8,9]. Salpingectomy was considered the appropriate procedure for this patient considering the skills of the surgeons and available instruments at the hospital. After the surgery, the patient was discharged on the third postoperative day in good general condition. She, therefore, benefited from short duration of hospital stay, a decrease in the use of analgesics and decreased morbidity, when compared to laparotomy. Laparotomy is gradually being replaced by laparoscopic techniques because of its advantages.[10] Cornual wedge resection, cornuostomy, mini-cornual excision salpingectomy, placing a Vicryl loop on the uterine cornua and salpingotomy are the laparoscopic technique frequently reported.[11] Other modalities of treatment include medical treatment which involves local or systemic therapy with methotrexate or local injection of potassium chloride. The management of each case depends on the size of the lesion, patient haemodynamic stability and desire for future fertility. Laparoscopic cornual resection is a safe and effective method for the management of large cornual ectopic pregnancy and fertility outcomes are similar to patients after salpingectomy for non-interstitial ectopic pregnancy.[12] However the index case had previous Salphingo-Oophorectomy and the recent left salpingectomy made her lose both her fallopian tubes, this, however, was discussed with her before and after the surgery and the option of assisted reproduction in case she has the desire for future fertility.

The extensive peritoneal adhesions involving the small intestine were most likely responsible for the intermittent colicky abdominal pain the patient has been experiencing for months before presentation. This may be a result of adhesive partial intestinal obstruction.[13] The acceptance of laparoscopic surgery by the patient suggests increasing awareness and confidence in laparoscopic procedures in our environment.

Conclusion

Cornual pregnancy occurs rarely, there is a need for early and prompt diagnosis to prevent potentially fatal complications. The availability of high-resolution ultrasound is essential for the diagnosis which can be confirmed by laparoscopy and also treated through various laparoscopic approaches, especially in unruptured ectopic gestation.

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