

CORNIAL ECTOPIC PREGNANCY: CASE REPORT

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ABSTRACT

The cornual pregnancy occurs in approximately 2-4 percent of ectopic pregnancies. Diagnostic criteria is an eccentrically located gestational sac more than 1 cm from the endometrial stripe and gestational sac surrounded by a thin layer of myometrium less than 5-8 mm. The management of interstitial pregnancy should pay much attention, based on a 2-fold increase of mortality. Non-surgical management by methotrexate is the first choice for unruptured IP and hemodynamically stable patients. Surgical management includes cornual resection and salpingectomy by laparoscopy or laparotomy. In this case, the patient had a ruptured cornual pregnancy which was managed by performing a cornual resection and salpingectomy by laparotomy without any complication.

KEYWORDS: unruptured IP and hemodynamically stable patients.

INTRODUCTION

Ectopic pregnancy, defined as a pregnancy that occurs outside the normal uterine cavity, for example, such as the tubal, interstitial, cornual, cervical, caesarean scar, ovarian, or abdominal location, is one of the most common emergencies and a potential life-threatening situation occurring in women during the reproductive age.

The incidence of ectopic gestation is approximately 20 per 1000 pregnancies.

Interstitial ectopic pregnancy, also referred to as a cornual ectopic pregnancy, is a rare form of ectopic pregnancy. Cornual pregnancy occurs when the embryo implants in the intramural portion of the Fallopian tube. It is rare, accounting for around 2% of ectopic pregnancies.^[5]

In this study, report a rare case of ruptured right cornual pregnancy. On ultrasound the gestational sac of 11 weeks on the right horn with a massive hemoperitoneum. We performed a laparotomy and resection of the right cornua and right salpingectomy.

CASE REPORT

A 23-year-old female primigravida of around 10 weeks of amenorrhoea with an uneventful history was seen for

abdominopelvic pain, Physical examination found: blood pressure 110/50 mmHg; heart rate 120 bpm; Abdomen was tender without vaginal bleeding. Speculum examination revealed an enlarged uterus of 8–10 weeks size, with forniceal tenderness. Serum -HCG test was positive. haemoglobin 10 g/dl.

The abdominal ultrasound found an eccentric gestational pregnancy at the level of the right uterine horn surrounded by a myometrium less than 5 mm and a massive hemoperitoneum in CDS of Douglas and in the Morison 'pouch.

The patient was therefore transferred to the operating room urgently for a probable ruptured interstitial pregnancy with massive hemoperitoneum.

Intraoperatively, we encountered a left cornual ectopic pregnancy. A right cornual resection and right salpingectomy was done successfully by laparotomy.



Figure 1: right ruptured cornual pregnancy with foetus outside of the cornua.



Figure 2: right cornua resected with the foetus of the cornual pregnancy.

DISCUSSION

An ectopic pregnancy is one in which the embryo implants outside of the endometrial cavity. Ectopic pregnancies account for 1.5% to 2% of all pregnancies.

The most common presenting symptoms of ectopic pregnancy include lower abdominal/pelvic pain (99%), delayed menses (74%), and vaginal bleeding (56%).^[1]

The vast majority of ectopic pregnancies, 98%, are located in the fallopian tube, with 70% in the ampulla,

12% in the isthmus, 11% in the fimbriated end, and 2% in the interstitial (cornual) segment.^[2]

Complications related to this disorder are the most common cause of maternal death in the first trimester of pregnancy.^[3]

Incidence of ectopic pregnancy has been reported to be progressively increased in the recent decades, and the chief reasons may be partly explained by increased use of assisted reproductive technologies, increase in caesarean section rates worldwide, and sequelae of pelvic inflammatory diseases.^[4]

Cornual pregnancy is a rare variety of ectopic gestation that are found in the interstitial region between the proximal portion of the fallopian tube and the musculature of the uterus.

It occurs in approximately 2-4 percent of ectopic pregnancies.^[5]

The terms such as “interstitial” and “cornual” pregnancy are frequently used synonymously.^[6]

The management of interstitial pregnancy should pay much attention, based on a 2-fold increase of mortality compared with other tubal ectopic pregnancy, because this type of ectopic pregnancy often involves the damage of the uterine vessels, resulting in heavy bleeding especially for those women with ruptured interstitial pregnancy.^[4]

Risk factors are assisted reproductive technologies, previous salpingectomy or any other tubal surgery, rudimentary horn, history of reproductive tract infection, previous tubal pregnancy and proximal intratubal adhesions are the factors associated with the increased incidence of cornual ectopic pregnancy.^[7,8]

Cornual pregnancies show fewer early symptoms due to the stretching potential of the uterine wall.^[9]

The site of implantation also makes the pregnancy difficult to differentiate from an intrauterine pregnancy on ultrasound.^[10]

Cornual ectopics are associated with a high risk of rupture that could occur as late as 10 –16 weeks gestation.^[11]

Ultrasound diagnosis of interstitial pregnancy is accurate in 71.4% of cases, which allows conservative treatment either medically or with laparoscopy.^[8]

On ultrasound, an interstitial ectopic pregnancy can appear as an incomplete formation of myometrial mantle that surrounds the gestational sac and measures less than 5 mm.

The gestational sac typically will be visualised eccentrically from the uterus and will be located at least 1 cm laterally from the uterine cavity's edge.^[12]

Diagnostic criteria is an eccentrically located gestational sac more than 1 cm from the endometrial stripe and gestational sac surrounded by a thin layer of myometrium less than 5-8 mm.

The traditional treatment of interstitial pregnancy was hysterectomy or cornual resection by laparotomy. Recently, several authors have advocated conservative management with methotrexate or laparoscopic treatment. Laparoscopic techniques involve cornual resection, salpingectomy and cornuostomy.^[8]

Non-surgical management is the first choice for unruptured IP and hemodynamically stable patients. The study of L. Rodriguez et al has demonstrated the efficacy and safety of systemic single-dose MTX for the management of Interstitial pregnancy.

The inclusion criteria for MTX therapy included.

1. patient reliability and willingness to conform to follow-up;
2. no pre-existing pulmonary, renal, or hepatic disease;
3. largest diameter of the ectopic less than 3.5 cm;
4. hemodynamically stable.^[13]

A cornual resection and salpingectomy is done by first ligating the ascending uterine vessels where they approach the cornua. The pregnancy site is excised in a V-shaped manner, and the myometrium is approximated with a figure of eight closure using no. 0 delayed absorbable suture. The round ligament is cut and resutured to the cornu and the uterine serosa by use of interrupted sutures. The round and broad ligaments are brought over the incision with mattress suture (the modified Coffey Suspension), and an additional interrupted sutures of no. 2-0 or no. 3-0 delayed absorbable sutures can be used to secure the serosa of the round ligament to the serosa of the uterus to maintain the operative site in a permanent retroperitoneal position.^[10]

The cornual pregnancy can be managed laparoscopically if diagnosed early especially in an unruptured state.

Despite previous concern that the cornual area might become weak after conservative treatment of interstitial pregnancy, Tulandi and Al-Jaroudi did not encounter uterine rupture during pregnancy or labor, as mentioned in their study.^[8]

Also, It is assumed that conservative management is associated with fertility conservation.^[14]

In this study, Y-l Wang et al, Laparoscopic management was successful. The total operative time ranged from 40 minutes to 120 minutes, and the total blood loss ranged from 30 mL to 200 mL. Dilute vasopressin was used to

minimise bleeding during the procedure. After blanching of the myometrium was noted, a transverse incision was made over the most prominent area of the mass. The resulting defect in the myometrium was cleaned using suction irrigation, and haemostasis was achieved using Wolf bipolar forceps at 20 W. One layer of interrupted 2-0 polyglactin sutures was placed in the uterine wall using the extracorporeal method. The gestational tissue was removed in an Endobag.^[15]

In a study where MTX was administered prior to surgery with minimal bleeding at the time of cornual incision. So, only a linear cornu incision was needed. The aetiology of the cornual ectopic pregnancy in this case was strongly believed as due to the presence of multiple myomas in the uterus so the implantation occurred in the area which was free from myoma, which was in the left cornu.^[14]

Laparoscopic Cornuostomy was associated with higher subsequent pregnancy probability and shorter operation time than that of Laparoscopic Wedge Resection. Thus, Laparoscopic cornuostomy might be a better surgical procedure for women with interstitial pregnancy. Also preoperative rupture of the cornus was a predictor of subsequent pregnancy.^[16]

Ross et al suggested that one of the drawbacks to the cornual resection is the increased risk of rupture of the gravid uterus. Another drawback is the ultimate decrease in fertility rates. Ross et al introduced a novel tubal-sparing regimen for the treatment of non-ruptured cornual pregnancies. The intervention included laparoscopic surgery, dilation and evacuation, and postoperative methotrexate injection.

The laparoscopy was performed to visually confirm a cornual gestation and ensure no placenta percreta and to ensure immediate access to the pelvis in case of acute haemorrhage caused by isthmic rupture. The dilation of the cervix and the suction evacuation of the gestation under ultrasonographic guidance were undertaken to decrease the risk of uterine perforation during the procedure. The placenta was left in situ to decrease the possible risk of cornual rupture and haemorrhage. Methotrexate was administered after operation to ensure complete resolution of the placenta.^[3]

Curettage is contraindicated in an unruptured CSP because it might result in rupture of the implanted gestation and massive haemorrhage. The trophoblastic tissue is outside the uterine cavity and thus unreachable by a curette.^[15]

CONCLUSION

Interstitial pregnancies are a rare entity.

The use of advanced ultrasonography and MRI imaging techniques in combination with ultrasensitive serum b-

hCG assays should lead to early diagnosis which allows conservative management.

Ipsilateral salpingectomy, previous ectopic pregnancy, and in vitro fertilization are predisposing factors for interstitial pregnancy.

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