

RUPTURED CORNUAL ECTOPIC PREGNANCY: A CASE REPORT

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ABSTRACT

Cornual pregnancy is rare. Treatment involves expulsion of the pregnancy and hemostasis of the cornus if required in case of hemorrhagic rupture. Two techniques are proposed to achieve hemostasis of the uterine cornus, cornuotomy with suture, or cornual resection with salpingectomy. We are reporting a case of 29-year-old woman who presented to the emergency obstetrical room in a state of hypovolaemic shock. The diagnosis of a ruptured ectopic pregnancy was confirmed in view of the history of 7 weeks of amenorrhoea, with a positive pregnancy test. She was shifted for emergency exploratory laparotomy. Intraoperatively, we encountered a left cornual ectopic pregnancy. A cornual resection and left salpingectomy was done successfully.

KEYWORDS: ectopic pregnancy; cornual; rupture; ultrasound; resection.**SUMMARY**

Corneal ectopic pregnancy is rare, and treatment is based on expulsion of the pregnancy and hemostasis from the uterine horn in the event of bleeding rupture. The two uterine horn hemostasis techniques are cornuotomy with suture or resection of the uterine horn with salpingectomy.

We report the case of a 29-year-old patient who presented to the obstetric emergency room in a state of hemorrhagic shock. An emergency exploratory laparotomy given the clinical picture was performed. Intraoperatively, we found an abundant hemoperitoneum secondary to a ruptured corneal ectopic pregnancy. A resection of the horn with a left salpingectomy has been performed successfully.

INTRODUCTION

Ectopic pregnancy (EG) is the ectopic implantation of the egg outside the uterine cavity, most often at the tubal level, more occasionally at the ovarian or abdominal level.

The risk factors are numerous represented mainly by smoking, a pelvic infection and a history of GEU. Maternal age, medically assisted reproduction (ART), history of abortion.^[1]

GEUs of ovarian localization represent 3.2% of GEUs against 3.4% for interstitial pregnancies.^[2]

Cornual pregnancy is similar to interstitial pregnancy. It is defined by the implantation of a gestational sac in the horn of a uterus and occurs in 3% of cases.^[2]

Its ultrasound definition according to Timor-Tritsh is based on 3 criteria.

- An empty uterine cavity with an eccentric sac to the right or left of the cavity;
- A gestational sac separated by more than 1 cm from the uterine cavity;
- And a peripheral myometrial crown <5mm thick.^[3]

Its prognosis is therefore more serious than conventional tubal GEU because the risk of sudden rupture and cataclysmic hemorrhage is high and requires an early and precise diagnosis before the rupture stage.^[4]

Its therapeutic management is not codified due to the low incidence of this pathology. The standard treatment remains surgical, the two main techniques are cornuotomy with suture or resection of the horn with salpingectomy either by laparotomy or laparoscopy^[5], but there are also more conservative techniques, namely: incision by laparoscopic route, hysteroscopic resection, injection of methotrexate or more recently selective embolization of the uterine arteries.^[6,7]

We report a case of a ruptured corneal pregnancy diagnosed by endovaginal ultrasound in a 29-year-old multiparous patient.

Clinical case

A 29-year-old patient, G4P2, with a history of spontaneous abortion and, was admitted in shock with diffuse generalized abdominal pain over 7-week amenorrhea.

On physical examination, the patient was pale with blood pressure of 90 / 50mmhg, tachycardia at 129bpm of cold extremities and discolored conjunctivae, her abdominal examination revealed pelvic defense. The blood beta-HCG level was 46,000, his hemoglobin was 5.2 g / dl

and the abdominal ultrasound found an abundant intra-abdominal effusion and an eccentric gestational sac at the level of the left uterine horn surrounded by a myometrium. whose thickness measured 4mm. The patient was therefore transferred to the operating room urgently for a probable corneal ectopic pregnancy with massive hemoperitoneum.

During the exploratory laparotomy we found a massive hemoperitoneum with a large sac.

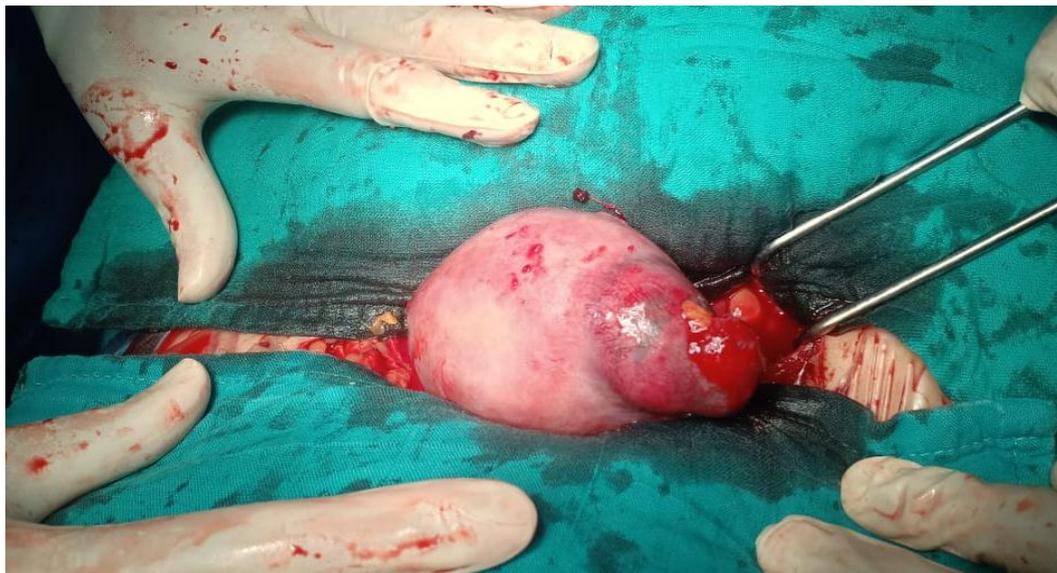


Figure 1: Intraoperative image during exploratory laparotomy showing corneal ectopic pregnancy.

A resection of the horn with left salpingectomy was performed. The postoperative course was uncomplicated. Pathological examination revealed a pregnancy in the left uterine horn surrounded by a myometrial layer

(maximum thickness 3mm). The patient's consent and the permission of the institution's ethics committee are taken for publication.



Figure 2: Image illustrating the resection of the horn and the left salpingectomy.

DISCUSSION

Cornual pregnancy accounts for 3% of all ectopic pregnancies.^[8,9] The mortality rate has been reported up to 2%.^[10]

It is the most dangerous of all ectopic pregnancies as it may not be diagnosed early due to distensibility of the cornea with the risk of rupture and massive hemorrhage.

This hemorrhage can also be severe due to the increased vascular supply from the uterine horn.

Risk factors include assisted reproduction techniques, history of ectopic pregnancy, tubal surgery, history of pelvic inflammatory disease, and sexually transmitted infections.^[11] The usual symptoms are abdominal pain and bleeding.

Hemorrhagic shock is found in a quarter of patients.^[12]

The diagnosis is based on endovaginal ultrasound which is quite specific (88-93%) but its sensitivity, around 40% [13], and quantitative plasma BHCG.

The criteria for ultrasound diagnosis according to Timor-Tritsch are as follows

- An empty uterine cavity with an eccentric sac to the right or left of the cavity;
- A gestational sac separated by more than 1 cm from the uterine cavity;
- And a peripheral myometrial crown <5 mm thick.^[3]

We found these three criteria in our patient. Our observation specifies the ectopic seat of the mass contiguous to the uterine fundus, of the sessile type. We agree with the data in the literature. According to these, cornual pregnancy gives an image of an abnormally eccentric ovular sac, surrounded by myometrium and protruding on the right or left of the uterine fundus^[14,3]

Magnetic resonance imaging is the most accurate alternative means for the positive and topographical diagnosis of rare forms of GE.^[14] However, it is difficult to perform this MRI urgently.

The plasma BHCG level is often higher compared to tubal GEU^[10], this is the case in our patient.

The standard treatment for cornual pregnancies remains surgical.

The two main techniques are cornuotomy with suture or resection of the horn with salpingectomy either by laparotomy or laparoscopy.^[5]

Sometimes a hysterectomy is done because of the bleeding. There are also more conservative treatments.

- Medical treatment with methotrexate which has less adverse effects on future pregnancies.^[15]
- Selective uterine artery embolization has been successfully performed to treat these pregnancies.^[16]

For our patient, we performed a resection of the horn with left salpingectomy.

CONCLUSION

Cornual GEU exposes in the short term, the risk of hemorrhagic rupture and, in the medium term, the risk of recurrence and uterine rupture in the event of a new pregnancy, hence the importance of its identification at the early stage.

Endovaginal ultrasound is a good means of early diagnosis which in some cases can be assisted by the determination of plasma b HCG.

The therapeutic choice is guided mainly by the clinical picture.

REFERENCES

1. Kazandi M, Turan V. Ectopic pregnancy; risk factors and comparison of intervention success rates in tubal ectopic pregnancy. *Clin Exp Obstet Gynecol*, 2011; 38 (1): 67–70.
2. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10-year population-based study of 1800 cases. *Hum Reprod*, 2002; 17 (12): 3224–30
3. Timor-Tritsch IE, Monteagudo A, Matera C, Veit CR. Sonographic evolution of cornual pregnancies treated without surgery. *Obstet Gynecol*, 1992; 79: 1044–9.
4. Jourdain O, Fontanges M, Schiano A, Rauch F, Gonnet JM. Management of other adnexal ectopias (cornual, interstitial, angular, ovarian). *J Gynecol Obstet Biol Reprod*, 2003; 32 (7): 93—100.
5. C. Prenauda, S. Scherierb, B. Malgrasa, Management of a corneal ectopic pregnancy. 10.1016 / j.jchirv.2017.07.079
6. Deruelle P, Lucot JP, Lions C, Robert Y. Management of interstitial pregnancy using selective uterine artery embolization. *Obstet Gynecol*, 2005; 106(5): 1165–7.
7. Goffinet F, Dreyfus M, Madelenat P. Recommendations for clinical practice: management of extra-uterine pregnancy. *Gynecol Obstet Fertil*, 2004; 32(2): 180–5 (discussion 180).
8. Vicino M, Loverro G, Resta L, Bettocchi S, Vimercati A, Selvaggi L. Laparoscopic cornual excision in a viable large interstitial pregnancy without blood flow detected by color Doppler ultrasonography. *Fertil Steril*, 2000; 74(2): 407-09.
9. Dilbaz S, Katas B, Demir B, Dilbaz B. Treating cornual ectopic pregnancy with a single methotrexate injection. *J Reprod Med*, 2005; 50(2): 141-43.
10. Lau S, Tulandi T. Conservative medical and surgical management of interstitial ectopic pregnancy. *Fertil Steril*, 1999; 72: 207-15.
11. Tulandi T, Al-Jaroudi D. Interstitial pregnancy: results generated from the society of reproductive surgeons registry: *Obstet Gynecol*, 2004; 103: 47-50.

12. Soriano D, Viscus D, Mashiach R, Schiff E, Seidman D, Goldenberg M. Laparoscopic treatment of cornual pregnancy: a series of 20 consecutive cases. *Journal of Reproductive Immunology*, 2008; 90: 839-43.
13. Ackerman TE, Levi CS, Dashefsky SM. Interstitial line: sonographic finding in interstitial [cornual] ectopic pregnancy. *Radiology*, 1993; 189: 83—7.
14. Poncelet E, Leconte C, Fréat-Martinez E, Laurent N, Lernout M, Bigot J, et al. Aspect échographique et IRM de la grossesse extra-utérine. *Imag Femme*, 2009; 19: 171—8.
15. Radwan Faraj, Martin Steel. Management of cornual (interstitial) pregnancy: *Royal College of Obstetricians and Gynaecologist*, 2007; 9: 249-55.
16. Dervelle P, Closset E. Management of interstitial pregnancy using selective uterine artery embolization. *Obstet and Gynecol*, 2006; 107: 427-28.