

# Cornual ectopic pregnancy: A rare case report

Loubna Slama, Ikram Asakak, Zaineb Chatbi, Ibtissam Bellajdel,  
Hafsa Taheri, Hanane Saadi, Ahmed Mimouni

## ABSTRACT

Cornual ectopic pregnancy is a rare and potentially life-threatening form of ectopic gestation. We report a case of a 32-year-old woman, gravida 2 para 1, who presented with acute pelvic pain and vaginal bleeding at six weeks of amenorrhea. The initial ultrasound showed an empty uterine cavity with a hematosalpinx in the right cornual region. The diagnosis was confirmed by transvaginal ultrasound and serum beta-hCG levels. Given the high risk of rupture and hemorrhage, the patient underwent laparotomic removal of the ectopic pregnancy while preserving the cornual region with meticulous hemostasis. Postoperative follow-up was uneventful, and the patient was discharged on the third day. This case highlights the importance of early diagnosis and appropriate management to reduce maternal morbidity and mortality.

**Keywords:** Beta-hCG, Cornual pregnancy, Ectopic pregnancy, Laparotomy, Transvaginal ultrasound

### How to cite this article

Slama L, Asakak I, Chatbi Z, Bellajdel I, Taheri H, Saadi H, Mimouni A. Corneal edema from amantadine toxicity in child with fetal alcohol syndrome. Int J Case Rep Images 2025;16(2):31–34.

Article ID: 101518Z01LS2025

Loubna Slama<sup>1</sup>, Ikram Asakak<sup>1</sup>, Zaineb Chatbi<sup>1</sup>, Ibtissam Bellajdel<sup>1</sup>, Hafsa Taheri<sup>1</sup>, Hanane Saadi<sup>1</sup>, Ahmed Mimouni<sup>1</sup>

**Affiliations:** <sup>1</sup>Department of Obstetrics and Gynecology, Mohammed VI University Hospital Center, Oujda, Morocco.

**Corresponding Author:** Dr. Loubna Slama, Department of Obstetrics and Gynecology, Mohammed VI University Hospital Center, Oujda, Morocco; Email: loubnaslama6@gmail.com

Received: 04 April 2025

Accepted: 21 May 2025

Published: 18 September 2025

\*\*\*\*\*

doi: 10.5348/101518Z01LS2025CR

## INTRODUCTION

Ectopic pregnancy accounts for 1–2% of all pregnancies, with cornual pregnancies representing 2–4% of these cases [1]. Due to its myometrial implantation, cornual ectopic pregnancy poses a higher risk of rupture and severe hemorrhage compared to tubal pregnancies [2].

Cornual pregnancy, also referred to as interstitial pregnancy, occurs when the gestational sac implants within the interstitial portion of the fallopian tube that traverses the muscular wall of the uterus. This unique location allows the pregnancy to grow undetected longer than typical tubal ectopics, increasing the risk of life-threatening rupture.

Risk factors include a history of pelvic inflammatory disease, previous ectopic pregnancy, assisted reproductive techniques (ART), and uterine anomalies such as rudimentary horns or prior uterine surgeries like cesarean section [3].

Diagnosis is often delayed due to non-specific clinical symptoms including abdominal pain and vaginal bleeding, which mimic other gynecologic or gastrointestinal conditions. Transvaginal ultrasound is the key imaging modality, though it requires a high level of suspicion and expertise. The “interstitial line sign” is considered a valuable sonographic marker [4].

Recent epidemiological data suggest that the incidence of cornual pregnancies is increasing due to greater use of ART and improved imaging techniques [5]. However, they still remain rare and potentially catastrophic events, underlining the importance of timely diagnosis and appropriate management.

## CASE REPORT

A 32-year-old woman, gravida 2 para 1, presented to the emergency department with severe, sharp pelvic pain rated 8/10 on the visual analog scale, and mild

vaginal bleeding at six weeks of gestation. She had no significant medical history, and her previous pregnancy was uneventful.

Upon examination, the patient was hemodynamically stable: blood pressure was 110/70 mmHg, pulse rate was 84 bpm, respiratory rate 16/min, and temperature 36.8 °C. Abdominal palpation revealed mild tenderness in the right lower quadrant without guarding or rebound tenderness. There were no signs of peritoneal irritation.

Transvaginal ultrasonography demonstrated an empty endometrial cavity with a hematosalpinx measuring 3 cm in the right cornual region, surrounded by myometrium of less than 5 mm thickness (Figure 1).

Laboratory investigations revealed a hemoglobin level of 12.5 g/dL and a serum beta-hCG level of 15,000 mIU/mL, consistent with an early viable pregnancy. White blood cell count and inflammatory markers (CRP) were within normal limits.

Given the risk of rupture, a laparotomic approach was preferred. Intraoperatively, a distended right cornual mass was visualized without signs of rupture. The ectopic pregnancy was carefully removed while preserving the cornual region. Hemostasis was successfully achieved, and the procedure was well tolerated (Figures 2 and 3).

The patient recovered uneventfully and was discharged on postoperative day three with a beta-hCG follow-up plan.

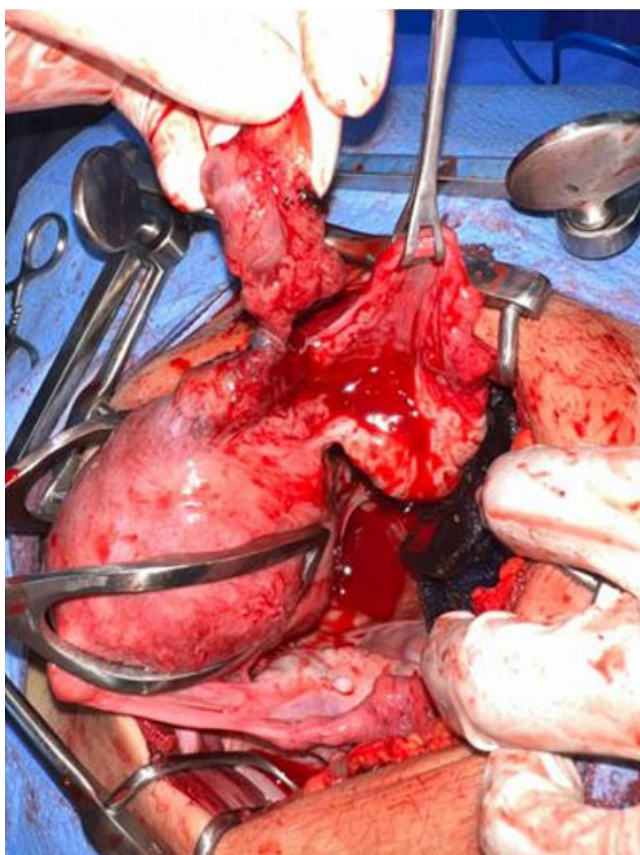


Figure 1: Transvaginal ultrasonography demonstrated an empty endometrial cavity with a hematosalpinx measuring 3 cm in the right cornual region.



Figure 2: Intraoperative view of a right cornual ectopic pregnancy during laparotomy. The gestational sac is visibly implanted in the right cornual region, while the right adnexa (fallopian tube and ovary) appear macroscopically normal.



Figure 3: Expelled fetus following surgical removal from the right cornual region. The specimen demonstrates the gestational sac with embryonic structures, confirming the diagnosis of a cornual ectopic pregnancy.

## DISCUSSION

Cornual pregnancies are rare but associated with high morbidity and mortality due to their late presentation and risk of catastrophic hemorrhage [6].

Management strategies include medical treatment with methotrexate, surgical removal via laparotomy or laparoscopy, and interventional radiology in select cases [7, 8]. Laparotomy is often preferred in cases where laparoscopic management is not feasible or when uterine preservation is prioritized [9].

Several case reports have documented the successful management of cornual pregnancies using minimally invasive techniques, including laparoscopic cornual resection or ultrasound-guided local injection of methotrexate [6, 7]. However, in cases where there is significant risk of rupture or hemodynamic instability, laparotomy remains the safest approach. In our case, laparotomy was chosen due to the advanced gestational age, the need for direct visualization, and the desire to minimize intraoperative bleeding and preserve future fertility.

Recent guidelines suggest that early diagnosis using transvaginal ultrasound and timely intervention are key to reducing maternal morbidity and mortality. Conservative surgery that preserves the uterus is recommended for women desiring future pregnancies, provided that hemostasis and uterine integrity can be maintained [8, 9].

From a diagnostic standpoint, cornual pregnancy must be differentiated from angular pregnancy, which occurs within the uterine cavity but near the cornual region, and from interstitial pregnancy, which involves the intramural segment of the fallopian tube. The distinction is critical as the management and prognosis differ.

Moreover, in women with a history of prior abdominal or pelvic surgery, rare conditions such as gossypiboma (retained surgical sponge) should also be considered. These may present with non-specific abdominal pain or mass and can mimic ectopic pregnancy on imaging. As noted by Sheikh et al., retained surgical materials can remain undetected for years and should not be overlooked when establishing differential diagnoses [10, 11].

This case emphasizes the importance of individualized treatment planning and the role of conservative yet safe surgical intervention. Fertility counseling and follow-up are also crucial components of comprehensive care.

## CONCLUSION

Cornual ectopic pregnancy remains a diagnostic and therapeutic challenge. Early recognition using transvaginal ultrasound and prompt surgical intervention are crucial in preventing life-threatening complications.

This case highlights the importance of conservative surgical management through laparotomy as a safe and effective treatment option, particularly when uterine preservation is a priority.

Postoperative follow-up is essential, including serial beta-hCG monitoring to ensure complete resolution. Patients should also receive appropriate counseling regarding the risk of recurrence in future pregnancies and the potential need for early transvaginal ultrasound in subsequent gestations to confirm intrauterine implantation.

## REFERENCES

1. 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.
2. Barrenetxea G, Barinaga-Rementeria L, de la Fuente A, et al. Cornual and interstitial ectopic pregnancy: Report of three cases and review of the literature. *Eur J Obstet Gynecol Reprod Biol* 2007;128(1–2):229–34.
3. Timor-Tritsch IE, Monteagudo A. Unforeseen consequences of the increasing rate of cesarean

- deliveries: Early placenta accreta and cesarean scar pregnancy. A review. *Am J Obstet Gynecol* 2012;207(1):14–29.
4. Ackerman TE, Levi CS, Dashefsky SM, Holt SC, Lindsay DJ. Interstitial line: Sonographic finding in interstitial (cornual) ectopic pregnancy. *Radiology* 1993;189(1):83–7.
5. Cacciatore B, Stenman UH, Ylöstalo P. Early screening for ectopic pregnancy in high-risk symptom-free women. *Lancet* 1994;343(8896):517–8.
6. Lau S, Tulandi T. Conservative medical and surgical management of interstitial ectopic pregnancy. *Fertil Steril* 1999;72(2):207–15.
7. Mohr C, Lange J, Heinze A. Conservative treatment of a cornual pregnancy by ultrasound-guided injection of methotrexate. *Arch Gynecol Obstet* 2005;271(3):246–8.
8. Petersen KB, Hoffmann E, Larsen CR. Interstitial pregnancy: A clinical review. *Clin Obstet Gynecol* 2014;57(2):193–202.
9. Bledsoe SE, Gilbert SA, Larkin SP, Erturk EN. MRI of interstitial ectopic pregnancy. *AJR Am J Roentgenol* 2005;185(6):1605–9.
10. Wang Y, Zhao L, Yuan P, Wang L. Clinical characteristics and management of interstitial pregnancy: A report of 37 cases. *Medicine (Baltimore)* 2021;100(30):e26734.
11. Goynumer G, Tasci Y, Wetherilt L, et al. Successful surgical management of a ruptured cornual pregnancy: case report and review of literature. *Clin Exp Obstet Gynecol*. 2009;36(1):51–2.

\*\*\*\*\*

## Author Contributions

Loubna Slama – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Ikram Asakak – Conception of the work, Design of the work, Acquisition of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Zaineb Chatbi – Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Ibtissam Bellajdel – Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Hafsa Taheri – Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Hanane Saadi – Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Ahmed Mimouni – Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

**Guarantor of Submission**

The corresponding author is the guarantor of submission.

**Source of Support**

None.

**Consent Statement**

Written informed consent was obtained from the patient for publication of this article.

**Conflict of Interest**

Authors declare no conflict of interest.

**Data Availability**

All relevant data are within the paper and its Supporting Information files.

**Copyright**

© 2025 Loubna Slama et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on  
other devices



Access PDF of article on  
other devices





INTERNATIONAL JOURNAL OF  
CASE REPORTS AND IMAGES



VIDEO JOURNAL OF  
CLINICAL RESEARCH



VIDEO JOURNAL OF  
BIOMEDICAL SCIENCE



INTERNATIONAL JOURNAL OF  
HEPATOBIILIARY AND  
PANCREATIC DISEASES



INTERNATIONAL JOURNAL OF  
BLOOD TRANSFUSION AND  
IMMUNOHEMATOLOGY



EDORIUM JOURNAL OF  
OPHTHALMOLOGY



**Submit your manuscripts at**  
[www.edoriumjournals.com](http://www.edoriumjournals.com)



EDORIUM JOURNAL OF  
MEDICINE



EDORIUM JOURNAL OF  
CARDIOTHORACIC AND  
VASCULAR SURGERY



JOURNAL OF CASE REPORTS  
AND IMAGES IN ORTHOPEDICS  
AND RHEUMATOLOGY



EDORIUM JOURNAL OF  
PSYCHOLOGY



EDORIUM JOURNAL OF  
CELL BIOLOGY



JOURNAL OF CASE REPORTS AND IMAGES IN  
DENTISTRY



EDORIUM JOURNAL OF  
CANCER



EDORIUM JOURNAL OF  
PSYCHIATRY



JOURNAL OF CASE REPORTS AND  
IMAGES IN INFECTIOUS DISEASES



EDORIUM JOURNAL OF  
ANATOMY AND EMBRYOLOGY



EDORIUM JOURNAL OF  
SURGERY



JOURNAL OF CASE REPORTS  
AND IMAGES IN PATHOLOGY



EDORIUM JOURNAL OF  
ANESTHESIA