Family Medicine and Primary Care: Open Access
Al-Zaher FM, et al. J Family Med Prim Care Open Acc 7: 234.
www.doi.org/10.29011/2688-7460.100234
www.gavinpublishers.com

Case Report

Right Cornual Pregnancy: A Case Report and Review of Literature

Fatima M Al Zaher[1], Salah M Al Dahan[2*], Lujain M Al Nasser[3], Mohamed R Mohamed[4]

[1]Obstetric and Gynecologist Consultant, Qatif Central Hospital, Saudi Arabia

[2]Family Medicine Consultant, Prince Sultan Military Medical City, Saudi Arabia

[3]Medical Intern, King Abdulaziz University, Jeddah, Saudi Arabia

[4]Medical Intern, Wenzhou Medical University, China

[*]**Corresponding author:** Salah M Al Dahan, Family Medicine Consultant, Prince Sultan Military Medical City, Saudi Arabia

Citation: Al Zaher FM, Al Dahan SM, Al Nasser LM, Mohamed MR (2023) Right Cornual Pregnancy: A Case Report and Review of Literature. J Family Med Prim Care Open Acc 7: 234. DOI: 10.29011/2688-7460.100234

Received Date: 14 September, 2023; **Accepted Date:** 21 September, 2023; **Published Date:** 25 September, 2023

Abstract

An uncommon form of ectopic pregnancy known as a cornual pregnancy occurs when an embryo implants between the fallopian tube and uterus. Its prevalence is between 2 and 4% of all ectopic pregnancies. Such pregnancies are difficult to diagnose and treat, and they represent an urgent medical condition. A successful management by diagnostic laparoscopy converted to laparotomy for right cornual ectopic salpingectomy with right cornual myomectomy was done for a case of a 32-year-old female with right cornual pregnancy presented with vaginal spotting in 10 weeks of gestations with suspected ultrasound finding.

Introduction

The term "ectopic pregnancy" refers to the implantation of a fertilized ovum outside of the endometrium [1]. Ectopic pregnancies are more common in the fallopian tube's ampullary region [2]. However, cornual gestation is one of the most dangerous types of ectopic pregnancy, as the embryo implants in the small junction between the fallopian tube and the uterus where uterine wall musculature measures only 1.2 cm in length and 0.7 cm in width [*]why most dangerous[*]. This type accounts for 2-4% of all ectopic pregnancies and has a 6-7% mortality rate compared to ectopics in general [3]. It can lead to several complications.

Cornual ectopic pregnancies account for 1 in 2,500-5,000 live births and 2-6% of all ectopic pregnancies [1]. They carry a significant mortality rate of 2-2.5% and account for 20% of all deaths due to ectopic pregnancies. Problems arise with cornual ectopic pregnancies because they are difficult to diagnose early, in addition to that, it is difficult to distinguish from an intrauterine pregnancy on ultrasound due to its location of implantation in the intrauterine portion of the fallopian tube and invasion through the uterine wall [4]. Because of myometrial stretchability, they usually appear late in pregnancy, between 7 and 12 weeks and could potential to progress into the second trimester due to the rich blood supply from branches of the uterine and ovarian vessels in addition to distensible myometrium surrounding the pregnancy. The consequences are often catastrophic leading to cornual rupture, which results in significant maternal hemorrhage and, thus, hypovolemia and shock [3].

The treatment of choice for this condition is usually hysterectomy or cornual resection, but many cases have recently been successfully treated by successful endoscopic surgeries without apparent complications in the hands of experienced surgeons [1].

Case Presentation

A 32-year-old female, primigravida, presented to the emergency department on 22/11/2020 at 10+4 weeks of amenorrhea complaining of vaginal spotting for two weeks. Her menstrual period was regular and of a normal pattern, and her past medical and surgical history was unremarkable.

Upon examination, she was looking well alert and oriented, not in pain or distress, and was vitally stable with a blood pressure of 100/56 and a pulse rate of 88. Her abdominal examination showed mild tenderness on the left iliac fossa with no guarding and no palpable masses. A vaginal examination revealed a cervix that was close, thick, and long with no vaginal bleeding, but there was mild cervical motion tenderness.

Upon admission, the Serum beta-human chorionic gonadotropin (beta-HCG) level was 18303 IU/liter, and the hemoglobin level was 11.8 gm/dl. A transabdominal and transvaginal ultrasound examination was done (Figure 1) and showed evidence of a round echogenic ring structure with central an echogenicity seen at the right adnexa measuring 3 x 3.6 cm with peripheral vascularity giving the appearance of a ring of fire associated with adjacent mild free fluid and no intrauterine or ovarian gestational sac; furthermore, there was a small, well-defined heterogeneous posterior intramural lesion measuring 1.1 x 1 cm, suggestive of fibroid. So, the impression was right cornual ectopic with a small fibroid.

Based on the previous findings, it was decided to proceed for diagnostic laparoscopy on 24/11/2020. Diagnostic laparoscopy revealed the right cornual pregnancy and uterine fibroid just below the cornual ectopic. The fibroid most probably was obstructing the passage of the fertilized oocyte, causing the cornual ectopic.

Laparoscopy was converted to open procedure, the skin was opened through a small Pfannenstiel incision, the uterus and fallopian tube were examined, and there was a right cornual ectopic pregnancy more on the interstitial site of the right fallopian tube measuring 4 × 3 cm (Figure 2), and adjacent to it there was a sub-serosal uterine fibroid measuring 2 × 3 cm. The right salpingectomy was done. An incision was made overlying the ectopic. The product of conception were removed carefully. Trimming of redundant tissue was done. Then, the cavity was closed in a double layer. Serosa was closed by layers. The right fallopian tube was removed because it was dilated, looked unhealthy, and was attached to the ectopic pregnancy. Myomectomy was done after vasopressin injection. Hemostasis was achieved, and the specimen was sent to the Histopathology.

Postoperatively, the patient was stable and discharged on the third postoperative day without any complications and was advised to follow up early in the next pregnancy.

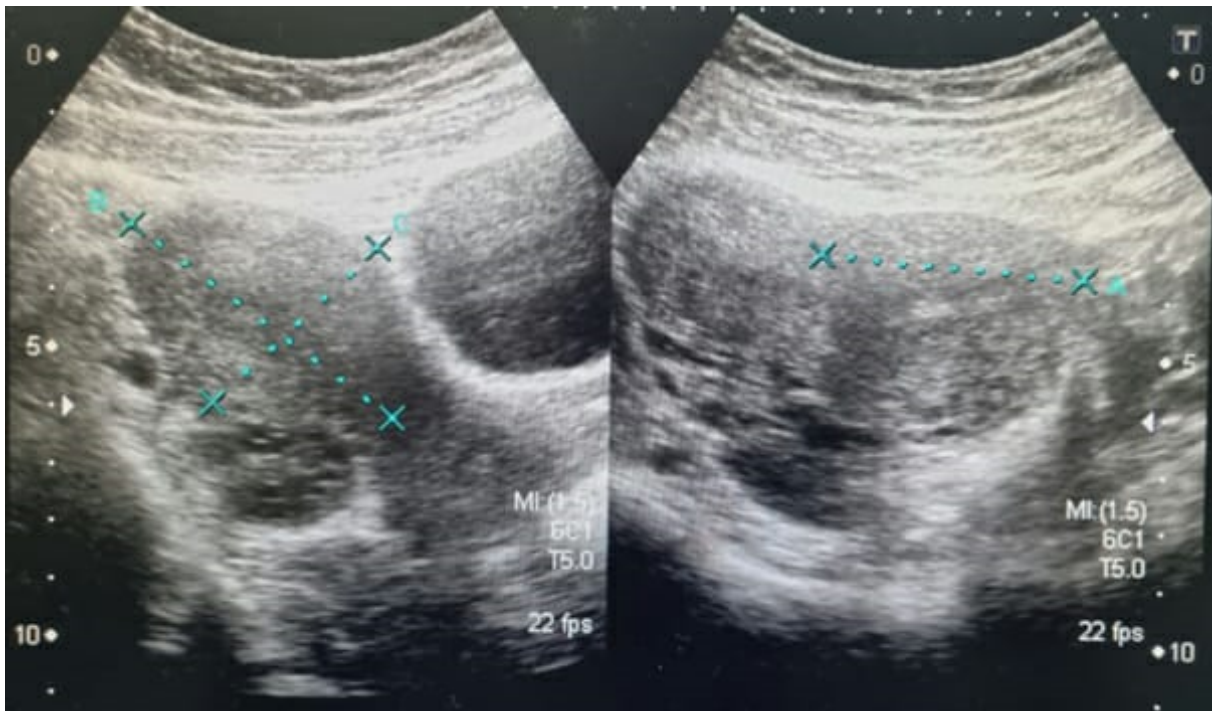

Figure 1: Abdominal ultrasound showing right ectopic with a small fibroid.

Figure 2: Showing a right cornual pregnancy measuring 4*3 cm.

Discussion

Cornual pregnancy poses significant diagnostic and therapeutic challenges; early diagnosis may aid in selecting the appropriate management and treatment based on clinical presentation, hemodynamic stability, serum b-hCG level, and ultrasound findings [5].

Cornual and interstitial pregnancies can present with symptoms of a classic ectopic pregnancy, such as vaginal bleeding and abdominal pain. However, in the case presented here, the patient of 32 years of age presented early in pregnancy with a gestational age of about 10 weeks, complaining of mild lower back pain and vaginal spotting, which can be considered a presentation of cornual ectopic pregnancy.

Since implantation takes place near healthy uterine tissue, challenges with ultrasound identification can cause a delay in diagnosis [6]. A gestational sac in the uterine cornua that is encircled by a thin, highly vascularized myometrial rim may be visible on ultrasound when evaluated by Pelvic Ultrasound, an intrauterine gestational sac that is situated eccentrically could be mistaken for an interstitial pregnancy. These two can be distinguished from one another using a sonographic criterion. This list of requirements includes an empty uterus, a gestational sac that can be seen separately, a sac that is less than 1 cm from the uterine cavity's most lateral edge, and a thin myometrial layer that covers the sac [7].

In the reported case, the ultrasound showed evidence of a round echogenic ring structure with central echogenicity seen at the right adnexa and peripheral vascularity giving the appearance of a ring of fire associated with adjacent mild free fluid and no intrauterine or ovarian gestational sac. The choice of treatment, which may involve either conservative or surgical management, depends mostly on the clinical situation, the stability of the patient's health condition, and expertise.

Conservative treatment for an ectopic pregnancy consists of stopping embryo development and growth, enabling the gestational sac to resorb, and protecting the patient's fertility in the future. Methotrexate is a chemotherapeutic drug that decreases trophoblast growth by inhibiting DNA synthesis. With a success rate of 91% in early ectopic pregnancy and up to 66.7% in chronic ectopic pregnancy, Methotrexate is the most utilized conservative treatment. Women who desire to keep their fertility may benefit from systemic, intralesional, or local Methotrexate [8].

Laparotomy, laparoscopy, and hysteroscopy are some of the surgical procedures available. A laparotomy may allow either hysterectomy or cornual excision, as well as uterine artery ligation and repair of ruptured cornua, which was done successfully in the reported case. Cornual resection, salpingostomy, cornual resection and salpingectomy, endoloop, and encircling suture can all be performed laparoscopically. If there is no sign of uterine rupture, hysteroscopic endometrial excision under laparoscopic control or hysteroscopic cornual evacuation aided with polyp forceps under ultrasound or laparoscopic guidance are also viable choices [9].

Conclusion

Cornual pregnancy poses substantial diagnostic and therapeutic challenges. Maternal mortality caused by conventional pregnancy can still be reduced, mostly by early diagnosis and care. Early diagnosis may help to choose the appropriate therapy and treatment based on the clinical presentation, hemodynamic stability, serum b-hCG level, and ultrasound findings. Ultrasonography and a high index of suspicion among Gynecologist, Ultrasound specialist, Emergency and Family physicians of significant importance for early diagnosis. Therefore, a first trimester ultrasound by an expert will play an important role in early diagnosis. Further care and counselling are crucial to reducing the chance of future pregnancies after this condition.

References

1. Al-Ibrahim N (2013) Intact Left Cornual Ectopic Pregnancy: A Case Report. Oman Med J 28: e053.
2. Shetty M, Shivananjaiah C, Swarup A, Sharma N, Sharma N (2016) A Rare Case Report of Cornual Pregnancy. Obstet Gynecol Int J 5: 00179.
3. Bansal P, Aggarwal G, Bansal I (2021) A rare case report of cornual pregnancy. Int J Reprod Contracept Obstet Gynecol 10: 3986-3988.
4. Dagar M, Srivastava M, Ganguli I, Bhardwaj P, Sharma N, et al. (2018) Interstitial and Cornual Ectopic Pregnancy: Conservative Surgical and Medical Management. J Obstet Gynaecol India 68: 471-476.
5. Bayyarapu VB, Gundabattula SR (2017) Diagnosis and Management of 'Cornual' Pregnancies from 2002 to 2015 at a Tertiary Referral Centre in South India: Insights from Introspection. J Obstet Gynaecol India 67: 414-420.
6. Knight CA, Bridwell RE, Long B, Goss S. Cornual Pregnancy After Ipsilateral Salpingectomy. Cureus 13: e17244.
7. Singh N, Tripathi R, Mala YM, Batra A (2015) Diagnostic Dilemma in Cornual Pregnancy- 3D Ultrasonography may Aid!! J Clin Diagn Res 9: QD 12-13.
8. Parker BM, Gupta AK, Lymperopoulos A, Parker J (2020) Methotrexate for Cornual Ectopic Pregnancy. Cureus 12: e9642.
9. Chatterjee J, Abdullah A, Sanusi FA, Irvine L, Griffin D (2009) A rare sequel following cornual ectopic pregnancy: a case report. BMJ Case Rep 2009: bcr02.2009.1614.