CASE REPORT

Cornual Ectopic Pregnancy: A Threat to the Life of Mother

Khalida Nasreen[1], Samreen Iqbal[2], Atiya Fasih[3]

ABSTRACT:
Cornual (interstitial) ectopic pregnancy, an uncommon variant of ectopic pregnancy often poses a diagnostic and therapeutic challenge with a significant risk of rupturing and bleeding. Early diagnosis and treatment of interstitial ectopic pregnancy is very crucial, as they carry a very high risk of morbidity associated with the rupture. If they continue without diagnosis, a life-threatening situation may occur even when surgical intervention with laparotomy is performed. We present a case who reported with lower abdominal pain and 2 months amenorrhea. The patient was diagnosed with a cornual ectopic pregnancy and managed timely.

Keywords: Ectopic pregnancy, Cornual ectopic pregnancy, Trans-vaginal ultrasound

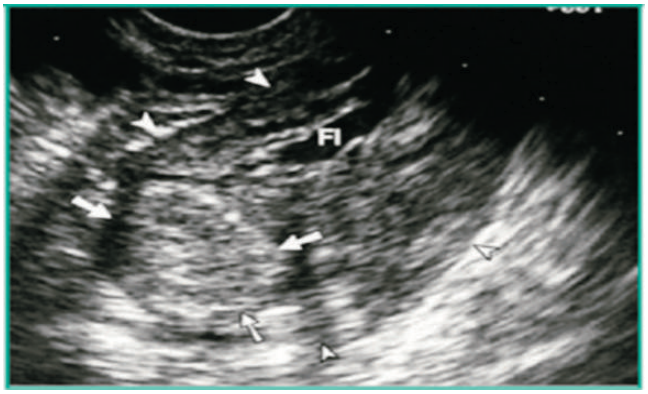
INTRODUCTION:

Ectopic pregnancy, defined as the placement of an embryonic sac somewhere other than the uterine wall, is the most common life-threatening emergency seen during early pregnancy.[1] Interstitial ectopic pregnancy is a rare tubal ectopic pregnancy form, characterized by the attachment of the gestational sac to the intramural side of fallopian tubes. This type of ectopic pregnancy is seen in 1/2500-1/5000 of all pregnancies and 2-4% of all ectopic pregnancies.[2-5] The interstitial part of the fallopian tube contains more vascularized and muscular tissue. Due to this vascular and connective tissue support and anatomic localization, diagnosis and treatment is usually late. For this reason, the mortality risk is 2-5 times more than other ectopic pregnancies. Ectopic pregnancy is the second major cause of maternal mortality in the United States and a leading cause of maternal morbidity and mortality in the world[3]. The typical rupture of these ectopic pregnancies within the myometrium usually occurs later than 9 weeks and as late as 20 weeks[1]. It is difficult to diagnose an interstitial ectopic pregnancy before rupture. Due to the high risk of rupture with serious or fatal bleeding, there is no role for the expectant management. Surgery is the most common management option[2].

CASE REPORT:

A 24-year-old, married since 3 years, P0+2, last miscarriage 10 months back, presented to gynaecology OPD of National Medical Center on 2nd December, 2016 with history of 2-month amenorrhea and low backache, and pain in lower abdomen for past 1week. She looked pale, her pulse-92b/m, BP-100/60 mm Hg, while temperature was normal. On abdominal examination, lower abdomen was tender. Trans-vaginal ultrasound done 2 days back, showed impression of chronic left cornual ectopic pregnancy with both slightly enlarged ovaries (Figure-1). No free fluid in cul-de-sac was present. Initial laboratory reports included Hb: 11.0 g/dl, HCT: 35%, Platelets: 306,000/mm^3, RBS: 98 mg/dl, serum ß-hCG 21.36 mIU/ml, Hepatitis B & C: nonreactive. She had been diagnosed as a case of endometriosis on ultrasound and MRI 6 months back but proper treatment was not done. An emergency laparotomy was performed under general anesthesia. There was 200ml blood in peritoneal cavity, left cornual ectopic pregnancy of about 6 X 4cm was seen, tissues were found necrotic and only amniotic sac was intact (Figure-2 & 3), right tube was healthy, both ovaries were slightly enlarged, polycystic and had thickened capsule. Left cornual ectopic pregnancy was removed and sent for histopathology followed by cornual repair and ovarian drilling. There was no blood transfusion during operation and post-operatively, the patient's recovery was smooth. She was discharged on 3rd postoperative day in good condition. Histopathology report was collected after 10 days, which showed cornual ectopic pregnancy.

Figure: 1
Cornual ectopic pregnancy at 6-week gestation



Dr. Khalida Nasreen
Professor& Head
Department of Gynecology & Obstetrics
Bahria University Medical and Dental College
Karachi

Dr. Samreen Iqbal
Assistant Professor
Department of Gynecology & Obstetrics
Bahria University Medical and Dental College
Karachi
Email: drsam222@yahoo.com

Dr. Atiya Fasih
Associate Professor
Department of Gynaecology & Obstetrics
Bahria University Medical and Dental College
Karachi

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Figure: 2
Left cornual ectopic pregnancy at 8 weeks gestation near to rupture

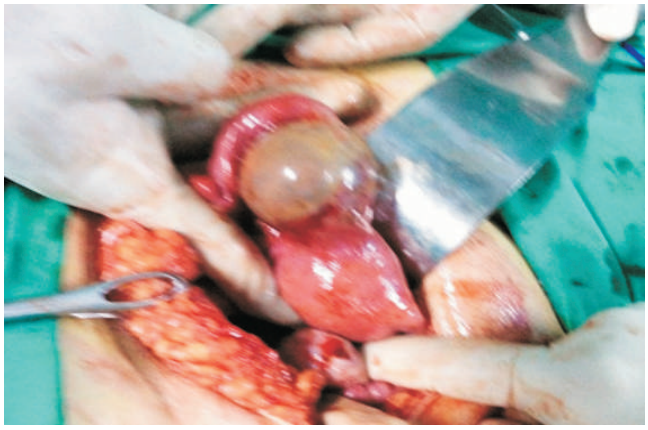

Figure: 3
Left cornual ectopic pregnancy at 8 weeks near to rupture

DISCUSSION:

Cornual pregnancy is one of the life-threatening medical situations in women, especially in developing countries. The etiologic factors for cornual pregnancy are pelvic inflammatory disease, previous ectopic pregnancy, Assisted reproductive technology, uterine abnormalities, conception after tubal ligation, history of tubal surgery and use of an IUCD; peri- and intratubular adhesions related or not related to endometriosis are an additional risk factor.[5] Despite the currently available diagnostic modalities for diagnosing pregnancy including trans-vaginal ultrasonography and beta-human chorionic gonadotropin assays, early identification of a cornual ectopic pregnancy remains a difficult task.[1] The rate of diagnosis can be improved with trans-abdominal or trans-vaginal ultrasound using three criteria[6, 7]

- An empty uterus
- A gestational sac seen separately and <1 cm from the most lateral edge of the uterine cavity
- A thin myometrial layer surrounding the sac The interstitial line sign (the echogenic line extending into the upper part of the uterine horn bordering the margins of the intrauterine gestational sac) is also helpful in diagnosing an interstitial pregnancy.[6, 7]

In experienced hands, trans-vaginal ultrasound can establish diagnosis of cornual ectopic in nearly 71% of cases with sensitivity of 80% and specificity of 99%.[4] The difference between an interstitial ectopic pregnancy and an eccentrically located intrauterine pregnancy can be ambiguous. Myometrium around the gestational sac is likely the most useful ultrasonographic feature in addressing the distinction.[6] Three dimentional ultrasound may be helpful for delineating a gestational sac's location.[7,8,9]

Various forms of ectopic pregnancy and their complications may occasionally be further evaluated with MRI or may be incidentally detected on CT or MRI when an alternative diagnosis is suspected.[7,10] Significant maternal haemorrhage leading to hypovolaemia and shock can rapidly result from cornual rupture.[6, 8] Treatment options for cornual (interstitial) ectopic pregnancy include local injection or systemic therapy with methotrexate, local injection of potassium chloride, conservative laparoscopic surgery and uterine artery embolism and, in emergency situations, cornuectomy, corneal resection or hysterectomy in case of failure of other methods. Evidence of a hemorrhagic ectopic pregnancy is an indication for laparotomy.[5-9]. As in our case, clinical findings were suggestive of ruptured ectopic so emergency laparotomy was done followed by cornual resection and repair.

CONCLUSION:

Cornual pregnancy presents a significant diagnostic and therapeutic challenge and carries a greater maternal mortality risk than tubal pregnancy. Trans-vaginal sonography can be helpful but often is not conclusive. Early clinical diagnosis aided by ultrasound or laparoscopy may help to contribute towards effective conservative management. The serious consequences of cornual pregnancy are caused mainly by rupture, leading to catastrophic haemorrhage and even death. High degree of clinical experience of operating surgeon is needed to manage these cases. Cornual excision or hysterectomy used to be the effective treatment in complicated cases. As in our case, timely diagnosis and emergency laparotomy saved the patient's life and preserved future fertility.

REFERENCES:

1. Walid SM, Heaton RL. Diagnosis and laparoscopic treatment of corneal ectopic pregnancy. Ger Med Sci. 2010; 8: Doc16.doi: 10.3205/000105
2. Birge O, Erkan MM, Ozbey EG, Arslan D, Kayar I. Ruptured cornual ectopic pregnancy: case report. Proceedings in Obstetrics and Gynecology. 2015;5(3):1-6
3. Kamrava M. Ectopic Pregnancy -Modern Diagnosis and Management - Statistics. ISBN. 978-953-307-648-5, Published 2011-10-26
4. Shendy M, Atalla R. Modern management of cornual ectopic pregnancy. INTECH Open Access Publisher; 2011

5. Mohamed B, Radhouane A, Nizar G, Samia B, Lotfi M, Mounir C, et al. A Ruptured Cornual Ectopic Pregnancy At 18 Weeks' Gestation: A Case Report. The Internet Journal of Gynecology and Obstetrics 2012; 16(3): 4 pages
6. Faraj R, Steel M. Management of cornual (interstitial) pregnancy. The Obstetrician & Gynaecologist 2007;9: 249–55
7. Rizk B, Holliday CP, Abuzeid M. Challenges in the diagnosis and management of interstitial and cornual ectopic pregnancies. Middle East Fertility Society Journal 2013 Dec 31; 18(4): 235-40
8. Rastogi R, Meena GL, RastogiN, RastogiV, Interstitial ectopic pregnancy: A rare and difficult clinicosonographic diagnosis. J Hum Reprod Sci. 2008 Jul-Dec; 1(2): 81–2
9. Lin EP, Bhatt S, Dogra VS. Diagnostic clues to ectopic pregnancy. Radiographics 2008 Oct; 28(6):1661-71
10. Kao LY, Scheinfeld MH, Chernyak V, Rozenblit AM, Oh S, Dym RJ. Beyond ultrasound: CT and MRI of ectopic pregnancy. American Journal of Roentgenology. 2014 Apr; 202 (4): 904-11