

Case Report

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Interstitial Viable Ectopic Pregnancy Managed with Systemic Methotrexate

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ABSTRACT

A 29-year-old woman, 6 weeks and 3 days pregnant as assessed by her last menstrual period, presented to our emergency department with vaginal bleeding and pelvic pain for 4 days. She was a gravida 3 para 0 with a history of ectopic on her first pregnancy in the left tube managed by salpingostomy, her second pregnancy was unfortunately a miscarriage at 7 wks managed by medical management and ERPC. At the time of diagnosis, she had a left interstitial ectopic pregnancy with serum B human chorionic gonadotropin (β -HCG) was 20094 mIU / mL. The ectopic pregnancy was managed by intramuscular methotrexate.

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Abstract	Please complete sections using headings provided:
Presentation (Describe the condition of the patient on initial examination)	A 29-year-old woman, 6 weeks and 3 days pregnant as assessed by her last menstrual period, presented to our emergency department with vaginal bleeding and back pain for 4 days.
Diagnosis (Briefly describe the tests conducted and state the confirmed diagnosis)	Her serum (β -HCG) was 20094 mIU / mL. Ultrasonography showed an empty uterine cavity and a gestational sac implanted adjacent to the left lateral aspect of the uterine cavity, surrounded by a thin myometrial layer containing a live embryo. These findings confirmed the presence of a left interstitial ectopic pregnancy.
Treatment (Outline the treatment given to the patient)	The patient was admitted and given methotrexate IM based on her surface area.
Discussion/Conclusion (State briefly your discussion/conclusive statement outlining your core outcome of your research or report)	Interstitial pregnancy is a rare occurrence and remains one of the most difficult ectopic pregnancies to identify and treat.
Learning Points	<ul style="list-style-type: none"> • Ultrasound imaging enables early diagnosis of interstitial ectopic pregnancy but strict diagnostic criteria must be used. • Systemic injection of methotrexate is a safe and effective treatment for interstitial ectopic pregnancy.

Introduction

Cornual gestation is one of the most hazardous types of ectopic gestation. The diagnosis and treatment are challenging and frequently constitute a medical emergency. In general, the death rate associated with ectopic pregnancy has not declined since the Confidential Enquiry into Maternal and Child Health (CEMACH) report for 2000–02 and is increased on the rates for 1991–93. In the last report, there were 11 deaths from ruptured ectopic pregnancy: 7 were located in the extrauterine tube and 4 in the interstitial portion of the tube (cornual pregnancy) [1]. Cornual pregnancy accounts for 2–4% of ectopic pregnancies and is said to have a mortality rate in the range of 2.0–2.5%.

Increased incidence of cornual ectopic pregnancy is associated

with assisted reproductive technologies, previous salpingectomy or other tubal surgery, rudimentary horn, history of infections of the reproductive tract, or previous tubal pregnancy and proximal intratubal adhesions. Location makes early diagnosis difficult.

Cornual ectopic pregnancy ultrasonographic criteria include a gestational sac separate from the uterine cavity or empty uterine cavity with thin endometrium (less than 5 mm) around the gestational sac [2-4]. An echogenic line may also be seen in the central endometrial cavity that extends until the gestational sac [2-4]. Traditionally, the treatment of cornual pregnancy has been hysterectomy or cornual resection at laparotomy. As all surgical management has been associated with morbidity and unfavourable effects on fertility, more conservative approaches

have been introduced into clinical practice. Medical treatment (as with other types of tubal pregnancy) has been introduced with generally satisfactory result. Systemic methotrexate is a safe and highly effective treatment for cornual pregnancy. Surgery can be avoided in the majority of women. Early recognition of the cornual pregnancy is essential.

Case presentation

A 29-year-old woman, 6 weeks and 3 days pregnant as assessed by her last menstrual period, presented to our emergency department with vaginal bleeding and back pain for 4 days. She was a gravida 3 para 0 with a history of ectopic on her first pregnancy in the left tube managed by salpingostomy, her second pregnancy was unfortunately a miscarriage. At 7 wks managed by medical management and ERPC. Her serum B human chorionic gonadotropin (β -HCG) was 20094 mIU / mL. Other laboratory results, including full blood count and liver function tests, were normal. Ultrasonography showed an empty uterine cavity and a gestational sac implanted adjacent to the left lateral aspect of the uterine cavity, surrounded by a thin myometrial layer (Figures) containing a live embryo. These findings confirmed the presence of a left interstitial ectopic pregnancy.

The patient was admitted and given methotrexate 84mg IM based on her surface area. her serum β -HCG repeated on day 4 (18110 mIU / mL) and day 7(17623 mIU / mL) SCAN repeated showing no fetal pulsation , decision taken for a second dose of methotrexate 84 mg given IM. Serum β -HCG started declining, on day 4 post 2nd dose of methotrexate was 10817 mIU / mL. and on day 7 was 2428 mIU / mL. On follow -up on 6 weeks later, the patient was asymptomatic, her β -HCG level was negative and ultrasound resolution was achieved.



Figure 1: Transvaginal Two-Dimensional Ultrasonography Scan in Transverse View Showing Left Interstitial Ectopic Pregnancy, Left Arrow: Corneal Ectopic with Fetal Pole, Right Arrow: Empty Uterus



Figure 2: Transvaginal Two-Dimensional Ultrasonography Scan in Transverse View Showing Left Interstitial Ectopic Pregnancy, Arrow: Corneal Ectopic with Fetal Pole



Figure 3: Transvaginal Two-Dimensional Ultrasonography Scan in Transverse View Showing Left Interstitial Ectopic Pregnancy. Day 7 Post First Dose of Methotrexate

Discussion

Cornual pregnancy poses a significant diagnostic and therapeutic challenge and carries a greater maternal mortality risk than tubal pregnancy. The serious consequences of cornual pregnancy are caused mainly by rupture after 12 weeks of pregnancy, leading to catastrophic haemorrhage and even death. Early recognition of the interstitial and cornual pregnancy is essential. Appropriate individual counselling is needed regarding risks of future pregnancy and mode of delivery. Conservative management has been increasingly practised successfully. This includes medical treatment with systemic methotrexate [5-10].

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