Successful methotrexate treatment of an abdominal pregnancy in the pouch of Douglas

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Summary

Abdominal pregnancy is a rare localization of ectopic pregnancy. Early diagnosis and treatment are advised and the choice of treatment is crucial. A successful case of conservative treatment with combined systemic and intra-amniotic methotrexate is presented. This treatment option should be considered in the management of this potentially life-threatening condition.

Key words: Abdominal pregnancy; Ectopic pregnancy; Local methotrexate; Systemic methotrexate; Douglas pouch.

Introduction

Abdominal pregnancy occurs in approximately one in 8,000 births and 1.4% of ectopic pregnancies [1]. Primary abdominal pregnancy is rarely suspected due to the infrequency of this condition and the lack of specific symptoms. Delay in diagnosis is common and often an emergent laparotomy is required.

Case Report

A 26-year-old pregnant woman, gravida 2, para 1, was admitted to the emergency department of our hospital because of pelvic pain. Her last menstrual period was unknown. Bimanual pelvic examination revealed a tender normal-sized anteverted uterus with a close external cervical os and no adnexal masses. The rectal examination was painful. Ultrasound (US) examination revealed an empty uterus with normal adnexa and a gestational sac in the pouch of Douglas containing a yolk sac and a 12 mm embryo with positive cardiac activity corresponding to seven weeks menstrual age; no free intraperitoneal fluid was noted in either the pelvis or upper abdomen.

The patient was treated with transvaginal intra-amniotic instillation of methotrexate (MTX) 50 mg under sonographic guidance followed by systemic MTX in a single dose intramuscularly (50 mg/m^2). The electrolytes, glucose, leukocyte count, hematocrit, renal and liver function tests were all within normal limits. She required minimal analgesia post-procedure and was discharged the next day after confirming the absence of embryonic cardiac activity.

Her beta human chorionic gonadotropin (β-hCG) level was 28; 110 mUI/ml at diagnosis. Quantitative β-hCG was followed each week and became undetectable seven weeks after the procedure.

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Discussion

Pregnancies have been reported in every part of the peritoneal cavity, including the liver, spleen, omentum and Douglas pouch. Most abdominal pregnancies probably occur after tubal abortion or rupture, with subsequent reimplantation of the conceptus on a nearby peritoneal surface. Although the possibility to carry the pregnancy to term has been described, the prognosis is poor with an estimated maternal mortality rate of 5.1 per 1,000 cases, and a 7.7-fold higher risk than that of other ectopic pregnancies [2]. Because of the high maternal morbidity and mortality, early diagnosis is essential to avoid massive hemorrhage.

The presenting symptoms of abdominal ectopic pregnancy are similar to tubal ectopic pregnancy, with lower abdominal pain, amenorrhea, and vaginal bleeding the most common presenting symptoms in most series. In addition, early satiety, nausea, vomiting, diarrhea, rectal bleeding, or constipation are also common due to gastrointestinal irritation or obstruction [3].

The advanced modalities of vaginal US and sensitive β-hCG assays have greatly facilitated the diagnosis of early abdominal pregnancy. The optimal treatment of patients with abdominal pregnancies is dependent on numerous factors and will need to remain highly individualized. While the traditional treatment of advanced abdominal pregnancy was laparotomy, an early diagnosis has enabled new management by laparoscopy and recently, medical treatment by MTX. Few cases of abdominal pregnancies successfully treated only with MTX have been reported [4-6]. If an abdominal pregnancy is diagnosed early, combined systemic and transvaginal sonographically guided MTX treatment is effective as the definitive therapy. We would suggest consideration of conservative treatment with MTX as the first-line treatment of early abdominal pregnancy.

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