

Cesarean scar pregnancy treated with methotrexate and dilatation-currettage: Case report

Metotreksat ve dilatasyon-küretaj ile tedavi edilen sezeryan skar gebeliği: Olgu sunumu

Deniz Cemgil Arıkan¹, Emre Turgut², Gürkan Kıran¹, Hakan Kıran¹

¹Sütçü İmam University School of Medicine, Department of Obstetrics and Gynecology, Kahramanmaraş, Turkey

²Istanbul Education and Research Hospital, Department of Obstetrics and Gynecology, Istanbul, Turkey

Geliş Tarihi / Received: 16.06.2010 Kabul Tarihi / Accepted: 25.11.2010

ABSTRACT

Cesarean scar pregnancy (CSP) is the rarest form of ectopic pregnancies that can cause serious complications. A 37 year-old woman with past history of gravida 4, parity 2, cesarian section, admitted to our outpatient clinic with the complaint of mild pelvic pain and 6 weeks 2 day of amenorrhea. On admission, her serum β -human chorionic gonadotropin (β -hCG) level was 26905 mIU/mL and transvaginal ultrasound revealed a 24 mm gestational sac implanted at the site of her prior cesarean section scar. Initial treatment with single-dose systemic methotrexate (MTX) (1mg/kg; 60 mg) was not sufficient so the dose of MTX (60 mg) was repeated. In the follow-up the gestational sac continued to increase in size and patient started to feel abdominal discomfort, so we performed an ultrasound-guided dilatation and curettage to obtain complete remission. MTX treatment alone or in conjunction with dilatation-curettage may avoid unnecessary laparotomy, hysterectomy and preserve fertility CSP patients.

Key words: Cesarean scar pregnancy, methotrexate, dilatation and curettage

INTRODUCTION

Cesarean scar pregnancy (CSP) is the rarest form of ectopic pregnancies with an incidence of 1:1800-1:2216 in women with an ectopic pregnancy and at least one previous cesarean section.¹ However, with rising cesarean section rates and widespread access to imaging modalities such as sonography and magnetic resonance imaging (MRI), its incidence has been rising.¹

In CSP, the gestational sac is implanted in the myometrium at the site of a previous cesarean sec-

ÖZET

Sezeryan skar gebelikleri ektopik gebeliklerin ciddi komplikasyonlara sebep olabilen en nadir formudur. 37 yaşında, geçmişinde 4 gebelik 4, 2 doğum 2ve bir sezaryen bulunan kadın hasta 6 hafta 2 gündür adet görememe ve hafif pelvik ağrı şikayetleri ile polikliniğimize başvurdu. Başvuru anında beta- insan koriyonik gonadotropin (β -hCG) değeri 26905 mIU/mL idi ve transvajinal ultrasonografide önceki sezeryan skarına uyan bölgeye yerleşmiş 24 mm boyutunda gestasyonal kese izlendi. Başlangıçta uygulanan tek doz sistemik metotreksat (MTX) (1mg/kg; 60 mg) tedavisi etkili olmadığı için MTX (60mg) dozu tekrarlandı. Takipte gestasyonal kesenin boyutları büyümeye devam etti ve hasta karın ağrısı hissetmeye başladı, bu nedenle komplet remisyon amacıyla ultrason eşliğinde dilatasyon ve küretaj işlemi uyguladık. Sezeryan skar gebeliklerinde MTX tedavisi tek başına veya dilatasyon-küretaj işlemi ile birlikte uygulandığında, gereksiz laparotomi ve histerektomiyi önleyerek fertilitiyi koruyabilir.

Anahtar kelimeler: Sezeryan skar gebeliği, metotreksat, dilatasyon-küretaj

tion. Early diagnosis of CSP is essential to avoid serious complication such as severe hemorrhage, which may require hysterectomy and endanger the woman's life, and affect negatively on future fertility.² Also, clinically stable patients have more treatment options, including conservative management. Therefore, physicians, particularly obstetricians/gynecologists and radiologists, should have a heightened awareness of this serious and potentially fatal pregnancy complication.

Yazışma Adresi /Correspondence: Dr. Deniz Cemgil Arıkan

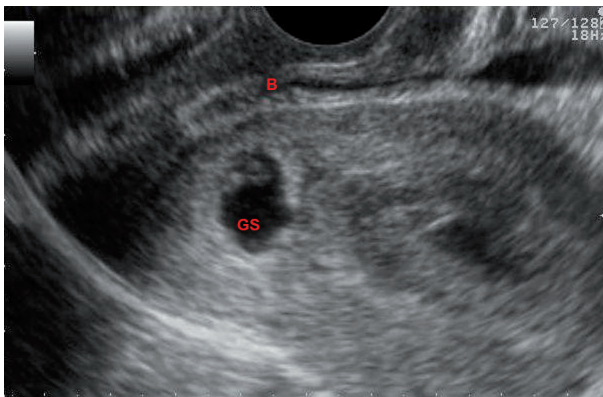
Sütçü İmam Üniversitesi Kadın Hastalıkları ve Doğum AD, Kahramanmaraş/Türkiye Email: drdenizarikan@hotmail.com
Copyright © Dicle Tıp Dergisi 2012, Her hakkı saklıdır / All rights reserved



In this case report, we present a CSP in a woman who wishes to preserve her fertility, and its treatment with the systemic administration of methotrexate (MTX), and dilatation and curettage.

CASE REPORT

A 37 year-old woman with past history of gravida 4, parity 2, cesarian section 1, admitted to our outpatient clinic with the complaint of mild pelvic pain and 6 weeks 2 day of amenorrhea. Her past obstetrical history included 2 (11 years and 9 years ago) previous lower segment cesarean sections. On admission, her serum β -human chorionic gonadotropin (β -hCG) level was 26905 mIU/mL. Transvaginal ultrasound revealed a 24 mm gestational sac within a fetus with cardiac activity measuring 5.4 mm (6 weeks 2 days gestation) implanted at the site of her prior cesarean section scar (Picture 1). A single-dose MTX (1mg/kg; 60 mg) was administered intramuscularly. The dose of MTX (60 mg) was repeated on the 4th day of follow up, because the fetal cardiac activity was still present. Three days later fetal cardiac activity became (-) and serum β -hCG level was 50287 mIU/mL. We decided to follow-up the patient and thereafter serum β -hCG levels declined to 46686 mIU/mL and 38785 mIU/mL within 4 days respectively. Fourteen days later from the second dose of MTX serum β -hCG level declined to 12490 mIU/mL, but gestational sac continued to increase in size and patient started to feel abdominal discomfort. Therefore, we performed an ultrasound-guided dilatation and curettage. The operation was uncomplicated and serum β -hCG level declined to within normal range 56 days after initiation of the treatment.



Picture 1: Ultrasound view of cesarean scar pregnancy (B: bladder; GS: gestational sac)

DISCUSSION

The exact cause of CSP is still unknown. Several risk factors, including the number of cesarean sections, the time interval between the previous cesarean section and the subsequent pregnancy, and the indications for the previous cesarean section have been suggested, but it is uncertain whether these factors are truly related to CSP.³

As etiology, there is a challenge in treatment of CSP. Due to the relative rarity of the condition there are no optimal lines for therapy. Treatment modalities are either medical or surgical; dilatation, curettage and excision of trophoblastic tissues using laparotomy or laparoscopy, local and/or systemic MTX administration, bilateral hypogastric artery ligation, associated with dilatation and evacuation under laparoscopic guidance, and selective uterine artery embolization (UAE) in combination with curettage and/or MTX injections.⁴

Our patient received a systemic injection of MTX (60 mg) and underwent dilatation and curettage. However, because the fetal cardiac activity was still present, the dose of MTX (60 mg) was repeated on the 4th day of follow up. This was possible as the patient was hemodynamically stable. After the second dose of MTX although the serum β -hCG level declined, the gestational sac continued to increase in size and patient started to feel abdominal discomfort. So, we performed an ultrasound-guided dilatation and curettage. The operation was uncomplicated and the patient was discharged from hospital on postoperative first day.

Rotas et al. in their review of the 112 cases reported that dilation and curettage was associated with severe maternal morbidity.⁵ So, several authors recommend MTX, locally or systematically, as first line therapy for cesarean scar pregnancies.⁵ This procedure has been employed with CSP and is successful in 71-80% of cases with no related side effects.¹ In present case we performed systemic MTX prior to surgery to downgrade trophoblastic proliferation and decrease to a minimum the risk of bleeding and uterine rupture as Abadilla et al.⁶ reported. In addition Haimov-Kochman et al.⁷ thought that gestational sac bulging into uterine cavity after systemic methotrexate injection is helping to practitioner for an easier and uncomplicated dilatation-curettage procedure.

Muraji et al.¹ reported three cases of CSP that they successfully treated with MTX. In all of the cases single-dose, systemic MTX was not sufficient, so they had to perform multiple doses of MTX in two cases, and systemic and local MTX in one case for to obtain a complete remission.

Wang et al.⁸ in their study, treated 21 CSP cases with MTX only, and 50 CSP cases with MTX followed by dilatation and curettage. The success rates were 76.2% in MTX group and 90.0% in MTX + dilatation and curretage group, but the difference was not significant. They concluded that the combined therapy resulted in a shorter time of therapy and indicated a more favorable effect.

Recently some physicians prefer to use UAE in order to minimize blood loss. Zhuang et al.⁹ in their study compared the efficacy and safety of UAE with systemic MTX for CSP in 72 patients. They randomly performed UAE to 37 cases and systemic MTX to 35 cases, which all was followed by suction curettage. The primary outpoints include bleeding loss, serum beta-human chorionic gonadotropin level, and side effects. They found lower bleeding volumes and hospitalization time in UAE group compared to MTX group. Besides, there was no severe side effect in both groups. They concluded that UAE followed by suction curettage appears to have more advantage and may be a priority option in the treatment of CSP.

Although the treatment of CSP is still controversial, MTX treatment alone or in conjunction with dilatation-curettage may avoid unnecessary laparotomy, hysterectomy and preserve fertility.

Consent

Written informed consent was obtained from the patient for publication of this case report and accom-

panying images, and research ethics approval was obtained from the Ethics Committee of Kahramanmaraş Sutcu Imam University. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Conflict of interest statement: The authors declare that they have no conflict of interest.

REFERENCES

1. Muraji M, Mabuchi S, Hisamoto K, et al. Cesarean scar pregnancies successfully treated with methotrexate. *Acta Obstet Gynecol Scand* 2009; 88(6): 720-3.
2. Al-Nazer A, Omar L, Wahba M, Abbas T, Abdulkarim M. Ectopic intramural pregnancy developing at the site of a cesarean section scar: a case report. *Cases J* 2009; 2(11): 9404.
3. Ash A, Smith A, Maxwell D. Caesarean scar pregnancy. *BJOG* 2007;114(2):253-63.
4. Tulpin L, Morel O, Malartic C, Barranger E. Conservative management of a Cesarean scar ectopic pregnancy: a case report. *Cases J* 2009; 2(8): 7794.
5. Rotas MA, Haberman S, Levгур M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. *Obstet Gynecol* 2006; 107(10): 1373-81.
6. Abadilla ME, Jaspan D, Dandolu V. Scar pregnancy: a rare complication of caesarean section. *Gynecol Surg* 2008; 5(2): 253-5.
7. Haimov-Kochman R, Sciaky-Tamir Y, Yanai N, Yagel S. Conservative management of two ectopic pregnancies implanted in previous uterine scars. *Ultrasound Obstet Gynecol* 2002; 19(4): 616-9.
8. Wang JH, Xu KH, Lin J, Xu JY, Wu RJ. Methotrexate therapy for cesarean section scar pregnancy with and without suction curettage. *Fertil Steril* 2009; 92(4): 1208-13.
9. Zhuang Y, Huang L. Uterine artery embolization compared with methotrexate for the management of pregnancy implanted within a cesarean scar. *Am J Obstet Gynecol* 2009; 201(2): 152-3.