

Nosečnost v brazgotini po carskem rezu: prikaz primera in pregled literature

Cesarean scar pregnancy: Case report and review of the literature

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Izvleček

Namen: Nosečnost v brazgotini po carskem rezu je redka oblika izvenmaternične nosečnosti, kjer se gestacijska vrečka vgnezditi v predel maternične brazgotine po carskem rezu. Pri obravnavi je bistvena hitra diagnoza, ki jo najlažje postavimo z vaginalnim ultrazvokom. V literaturi so opisane različne oblike zdravljenja, enotnega mnenja glede najprimernejšega zdravljenja pa glede na redkost tega stanja ni.

Prikaz primera: V prispevku predstavljamo primer nosečnosti v brazgotini po carskem rezu, ki smo jo zaradi napredovale nosečnosti s 3,5 cm velikim plodom zdravili z histerotomijo.

Zaključek: Pri sumu na nosečnost v brazgotini po carskem rezu je pomembna zgodnja diagnoza za preprečitev zapletov in ohranitev plodnosti. Opisana sta tako zdravljenje z zdravili kakor tudi kirurško zdravljenje, obravnava pa je odvisna predvsem od gestacijske starosti.

Abstract

Purpose: A cesarean scar pregnancy is a rare form of ectopic pregnancy in which the gestational sac is implanted in the uterine scar after a previous cesarean section. Early diagnosis is crucial, and transvaginal ultrasound is the most appropriate diagnostic tool. Different management options have been described in the literature; however, there is no consensus regarding optimal treatment due to the rarity of the condition.

Case report: We present a case involving a cesarean scar pregnancy which was managed with hysterotomy due to the advanced stage of pregnancy (fetal crown-rump length = 3.5 cm).

Conclusion: Early diagnosis of a cesarean scar pregnancy is important to avoid complications and to preserve fertility. Various treatment modalities have been described in the literature, including medical and surgical options.

INTRODUCTION

The possible consequences of a cesarean section include ectopic pregnancy, pathologically-adherent placenta in the next pregnancy, intra-abdominal adhesions, uterine rupture, and placenta previa. A cesarean scar pregnancy (CSP) is an atypical ectopic pregnancy, and is defined as implantation of a gestational sac in the scar after a previous cesarean section (1). CSPs represent 6.1% of ectopic pregnancies in women who have undergone one or more cesarean sections, and 0.15% of all pregnancies after cesarean sections (2,3). In parallel with the rising frequency of cesarean deliveries, the incidence of CSPs has increased in recent years (3).

In many cases, women with CSPs do not experience any symptoms; in those women who are symptomatic, the most common symptom is painless vagi-

nal bleeding (4). A CSP is usually diagnosed with transvaginal ultrasound (2); three-dimensional ultrasound and color Doppler are also appropriate techniques (5). The mean gestational age of a CSP at the time of diagnosis is 7.5 ± 2.5 weeks (4). The early diagnosis of a CSP can prevent most severe complications, such as uterine rupture and hemorrhage (3). Many different treatment options have been used for CSPs; however, due to the rarity of the disease, there is no consensus regarding the most appropriate management (3,6).

CASE REPORT

A 31-year-old patient gravida 3 para 2 was admitted to our department with a suspected ectopic pregnancy. The patient had 10 weeks of amenorrhea. She was asymptomatic and did not have lower abdominal pain or vaginal bleeding. She had pre-

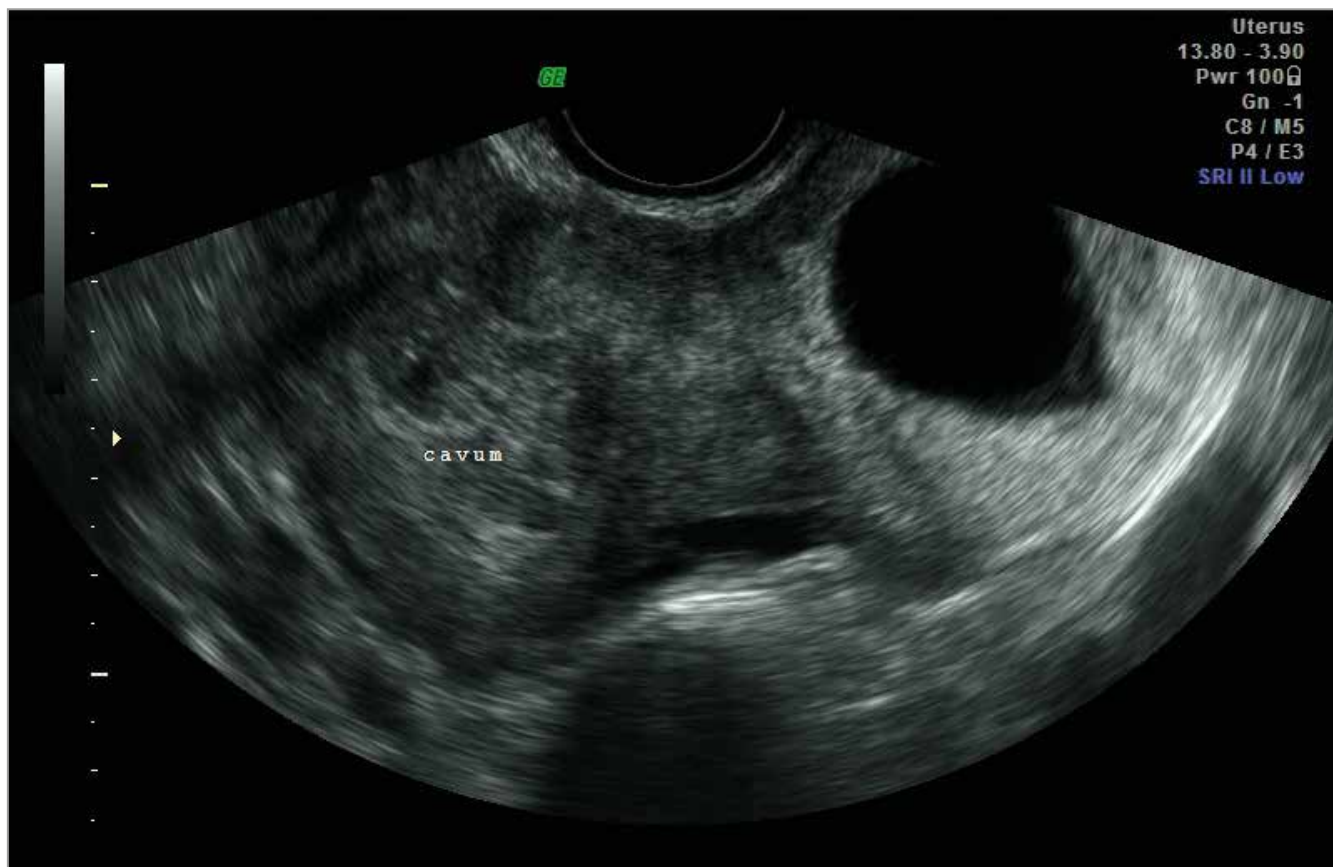


Figure 1. Ultrasound image of CSP on admission. Gestational sac is seen in the left isthmus of the uterus separate from the uterine cavity ("cavum").

viously undergone two cesarean sections (6 and 5 years ago). A vaginal ultrasound performed on admission revealed a viable pregnancy in the lateral isthmus of the uterus, which was not in contact with the uterine cavity (Figure 1). The left lateral uterine wall was very thin due to invasion of trophoblast tissue through the myometrium and bulking of the uterine serosa.

Because of the advanced stage of pregnancy (fetal crown-rump length = 3.5 cm [10 + 4 weeks gestation]), the isthmic pregnancy was managed surgically. The following day, a hysterotomy through a relaparotomy was performed. An enlarged uterus was noted intra-operatively. A tumor, approximately 5 cm in diameter, with trophoblast tissue visible through the surface was noted in the isthmus of the uterus (Figure 2); this area was dissected. The trophoblast tissue with the fetus was removed (Figure 3) and the uterine wall was sutured in three layers. Dilatation and curettage of the cervical canal and uterine cavity with evacuation of remnant placental tissue was performed. The β -subunit of human chorionic gonadotropin (β -hCG) level declined after the procedure. The patient was clinically stable and discharged on the 7th post-operative day.

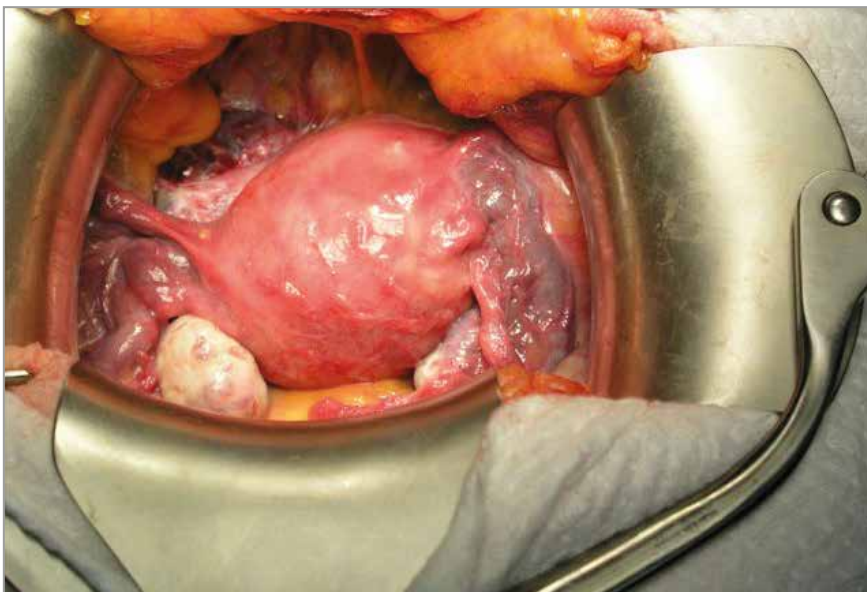


Figure 2. Trophoblast tissue is visible through the surface in the isthmus of the uterus.

DISCUSSION

The most common symptom of a CSP is vaginal bleeding, which may be severe and is not necessarily accompanied by pain; however, many patients are asymptomatic (4,7), as was the patient reported herein. Early diagnosis of a CSP is important in order to preserve fertility and avoid complications. The most appropriate diagnostic tool for evaluation of a CSP is transvaginal ultrasound (6,7). The ultrasound criteria for the diagnosis of CSP are as follows: empty uterine cavity, empty cervical canal, and the absence of contact between the uterine cavity and the gestation sac; a gestation sac present in the anterior isthmus of the uterus, and the fetus with or without cardiac activity may be seen depending on gestational age; and reduced or absent normal myometrium between the gestation sac and the bladder, and the thickness of the myometrium is <5 mm in two-thirds of cases (8).

The optimal therapy for CSP has not been established due to the rarity of the condition (7). In our case, we performed a laparotomy through the existing cesarean section scar with a hysterotomy due to the advanced gestational age. Abdelkader et al. reported that a hysterotomy is a rapid and safe treatment option (9). Similar to our case, Abdelkader et al. reported a case of CSP in which the gestation sac was situated in the lateral part of the uterine scar (9). Abdelkader et al. elected surgical treatment to avoid further development of the pregnancy and damage to the bladder and uterine artery (9).

Various other treatment modalities have been described in the literature, including surgical and medical options (7).

Local or systemic treatment with methotrexate (MTX) is the main

medical approach in the treatment of CSP (10). Systemic MTX is a suitable solution in case of hemodynamic stability and in the absence of pain (11). Adverse effects, such as alopecia, pneumonitis, and abnormal vaginal bleeding, may occur with systemic MTX (6). Timor-Tritsch and Monteagudo reported a complication rate of 62.1% with intramuscular MTX (1). When dilatation and curettage was combined with intramuscular MTX, the complication rate was 86% because the effect of MTX is slow and can take days, while the growing gestational sac and increased vascularity may indicate the need for secondary treatment (1).

Surgical procedures used in the treatment of CSP may be conservative or radical. Hysterectomy is performed in cases of uncontrollable bleeding. Conservative options include the combination of dilatation and curettage and evacuation of ectopic pregnancy with laparoscopy or laparotomy, removal of the gestation and repair of the uterine defect via laparotomy or laparoscopy, and bilateral ligation of the internal iliac arteries with dilatation and curettage under laparoscopy (7).

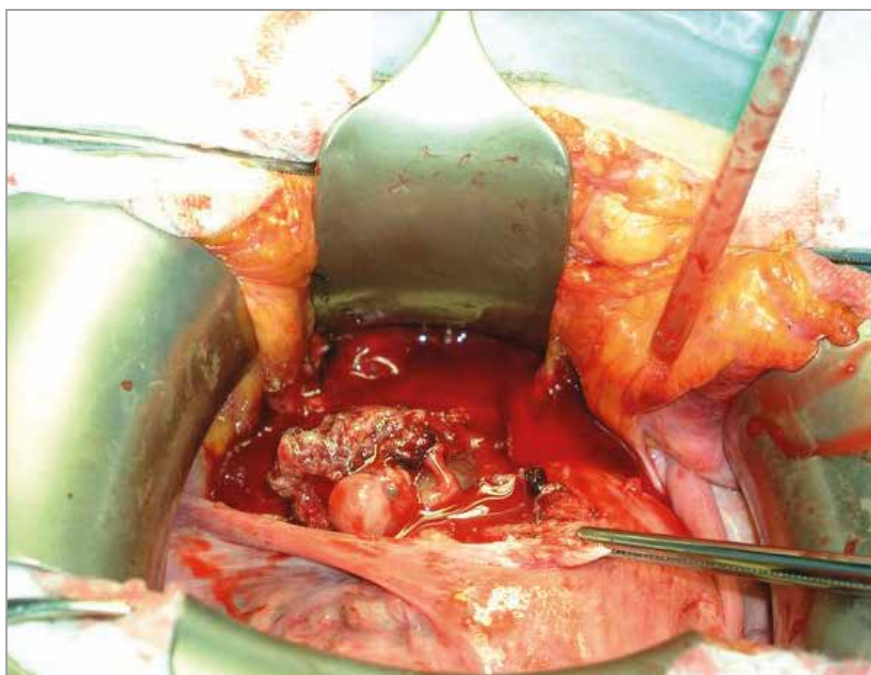


Figure 3. The trophoblast tissue with the fetus was removed and the uterus was sutured in three layers.

Laparoscopy and hysteroscopy are two possible endoscopic approaches. Laparoscopy is preferred when the CSP grows towards the bladder and the abdominal cavity, and hysteroscopy is used when the CSP develops towards the uterine cavity. Laparoscopy is possible if the patient is hemodynamically stable and the diagnosis is made early. Laparoscopy enables preservation of fertility and has a low morbidity rate (12). In contrast, Mollo et al. reported that hysteroscopic bipolar resection of CSP can be used in the early stages of pregnancy (6). No additional ultrasound or laparoscopic guidance of hysteroscopy is needed if the CSP is discovered early. CSP can thus be accurately identified. This is the only technique which enables site-specific coagulation (6).

Tekin et al. presented four CSPs treated with dilatation and curettage (3). They advised dilatation and curettage in early cases of CSP in which the myometrial thickness was >4.5 mm. The distance from the bladder and the thickness of the scar must be determined prior to the procedure (3); however, this method bears the risk of a high failure rate and a reported complication rate of 61.9%, and is generally not considered suitable as a first-line treatment (1,10).

In conclusion, the incidence of CSP is rising due to the increased frequency of cesarean deliveries. Early diagnosis of a CSP with a transvaginal ultrasound is important to avoid complications. Treatment of CSP is based primarily on gestational age and the specific anatomic conditions, and can be medical or surgical.

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