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Late diagnosis of a cesarean scar pregnancy: Rare form of an ectopic pregnancy case

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Abstract
Caesarean scar pregnancy (CSP) is a rare form of ectopic pregnancy, which occurs with the placement of pregnancy to the defective myometrium area in the old cesarean scar. The incidence of CSP has been increasing in recent years because of the increasing cesarean rates and the more frequent use of transvaginal ultrasonography in early pregnancy all over the world. We present here our clinical approach in the cesarean scar pregnancy diagnosed at the 14th week of pregnancy at the age of 39, who had previously undergone 3 cesarean section operations.

Keywords: cesarean scar pregnancy, ectopic pregnancy, transvaginal ultrasonography

Introduction

Caesarean scar pregnancy (CSP) is a rare form of ectopic pregnancy that occurs with the placement of pregnancy to the myometrium in the old cesarean scar. The first CSP case reported in the world by Larsen and Solomon in 1978 [1]. In the literature, the incidence rates of CSP are 1/1800 and 1/2216. The incidence of CSP has been increasing in recent years because of the increasing cesarean rates and the more frequent use of transvaginal ultrasonography in early pregnancy all over the world [2, 3].. Increased risk factors for scar pregnancy in old cesarean section; history of dilatation and curettage, placental pathology, history of ectopic pregnancy and the use of assisted reproductive techniques [4].

The CSP is diagnosed by transvaginal ultrasonography. Diagnostic criteriaes in transvaginal ultrasonography; the absence of a gestational sac in the uterine cavity, absence of a gestational sac forming a mass image in the cervical canal, decreased myometrial thickness between the bladder and the gestational sac located at the uterus isthmus level, interruption of the continuation of the anterior uterine wall in the sagittal image [5].

Due to its rarity, the information in the literature is a case report. Therefore, although not a standard treatment, the main purpose of treatment is to preserve fertility. Treatment options include local or systemic methotrexate injection, uterine artery embolization, dilatation and curettage, hysterotomy and hysterectomy [6, 7]. CSP is a condition that can cause life-threatening complications such as uterine rupture and hemorrhage. Early diagnosis and treatment is necessary.

In this case report, we aimed to present our clinical approach in CSP that diagnosed due to abandoned vaginal bleeding after spontaneous abortion.

Case Report

A 39-year-old woman with Gravida 9, Parity 6, Abortus 3, Living 6 and 3 cesarean section(CS) after 3 normal vaginal deliveries was admitted to our emergency department with vaginal bleeding. In medical history, she was hospitalized for diagnosis of 14th weeks single live pregnancy and abortus imminens.

Although spontaneous abortion developed during the 2-day follow-up in the clinic, placental inserts were not aborted. Upon the development of vaginal bleeding, foley catheter with inflating 50cc was placed in uterine cavity for the purpose of tamponade and referred to the tertiary health center. In clinical examination, foley catheter was not in uterine cervix and vaginal bleeding continued. Transvaginal ultrasonography showed that the placenta was localized in the uterine lower segment, isthmus anterior, caesarean scar region and the uterine contours were distorted and irregular.(Figure 1). The patient's general condition was moderate / poor, pale, and perspiration was evident, but she was conscious. Her arterial blood pressure was 70/50 mmHg, pulse was 135 / min, and her clinical findings were consistent with hemorrhagic shock. The hemoglobin value was measured as 4 mg / dl. The patient underwent emergency laparotomy considering uterine rupture secondary to cesarean scar pregnancy. During pelviabdominal exploration, active bleeding in caesarean section scarring was observed in the uterine lower segment after aspiration of 100 ml clotted blood in the abdomen (Figure 2) The patient underwent a hysterectomy and bilateral salpinjectomy considering the patient was a 39-year-old mother with 6 children and the repair of the uterine defect could take a long time and the chance of the remaining uterus to be healthy in terms of function was low. Preoperative 5 units of erythrocyte suspension and 5 units of fresh frozen plasma and 2 grams fibrinogen, 4 ampoules transamine,500 cc voluven,2000 cc isotonic mai andwere given. Postoperative homoglobin 9.8 mg/dl, hematocrit 29.4%, The patient was discharged with full recovery on 5 postoperative day.

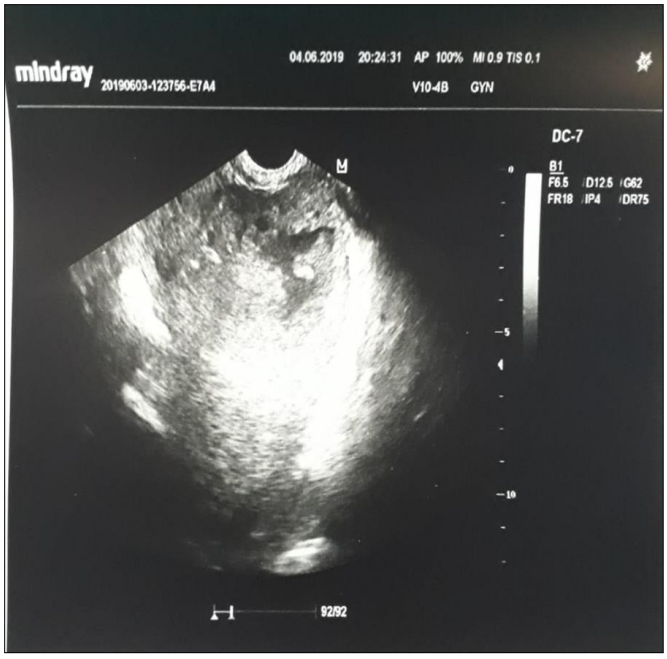

Fig 1: After fetal abortion in 14 weeks cesarean scar pregnancy, transvaginal ultrasonography image of the placenta invading from the scar site to the base of the bladder.

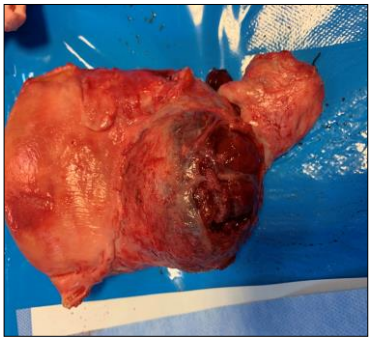

Fig 2: Histerectomy specimen

Discussion

The morbidity and mortality of cesarean scar pregnancy (SSG) is high when the diagnosis is not performed early and left untreated [1]. In our case, hypovolemic shock secondary to intra abdominal and vaginal bleeding due to delayed diagnosis has caused the increased mortality risk. Since there is no nitabusch layer forming a natural barrier of fibrin between trophoblast invasion and endometrial layer in the caesarean scar region, trophoblast invasion cannot be limited in this region..Increased abnormal vascularization and varicosity in the lower segment of the anterior wall of the uterus is observed during the following weeks of gestation due to trophoblast invasion from the scar region to the bladder base [2].

CSP cases may remain asymptomatic until the end of first trimester, and even further until the end of full term. Patient may present with groin pain or vaginal bleeding. But with the advancement of the pregnancy, it may cause uterine rupture and accompanying severe intra abdominal and vaginal bleeding [4].

In some cases the pathology may progress until term by turning into placenta acreata. But no current parameter capable of predicting which cases will progress into a vaginal invasion anomaly exists [8]. In the case we are presenting reason for hospital admission was vaginal bleeding. Patient was under monitorization because of abortus imminens risk. Spontaneous abortus occurred in 14th week caused to clinic to become an emergency. In this stage a hysterectomy was performed in order to stop acute bleeding.It is important to differentiate CSP from cervical, service-isthmic pregnancies and incomplete abortuses in order to reach an early diagnosis and set a treatment plan. MRI is golden standart in diagnosis of CSP [2]. But primarily transvaginal USG is used. Diagnosis criteria of transvaginal USG includes; empty uterine cavity, empty cervical canal, gestational sack located between lower segment of uterus and urether, and trophoblastic activity in Doppler USG (3). Performed in the first few weeks of conception, endovaginal ultrasonography, with a sensitivity of 84.6%, has dramatically reduced maternal morbidity, enabling medical management in an increasing number of cases [5]. After 7 weeks, if the patient continues the pregnancy, the sac slowly ‘moves’ towards the uterine cavity and gradually changes shape and assumes an intracavitary position that may lead to its misdiagnosis as an intrauterine pregnancy.Because the patient refused transvaginal USG procedure in the clinic she was getting treatment before being referred to us; we think the patient had not received an appropriate analysis in accordance with previously mentioned diagnosis criteria.As the past cesarean number increases; so does the likelihood of caesarean scar pregnancy and placenta acreata, increate and percreata spectrums. This concept is further fortified with the fact that our patient has a history of 3 previous CS. In our current age the diagnosis of placental invasion abnormalities can be identified in earlier stages of pregnancy [8]. As Timor Trisch *et al.* reports it is agreed upon that CSP and placenta acreata shares a common histology [9]. If CSP diagnosis can be made in the earlier stages of the pregnancy CSP rupture and occurrence of placenta acreata can be prevented [10] In case it can’t be prevented rates of maternal mortality morbidity increases. Because of these reasons in cases with past CS histories, especially in those with pregnancy sack located close to istmus area, it is important to evaluate the pregnancy’s relation with the caesarean scar. In our case pathology

results of samples acquired from lower segment were reported as “structures belonging to placenta were observed”.

In CSP cases if diagnosis can be made before abondan vaginal bleeding or rupture findings occur; expectant and conservative treatment options are available. These methods include local or systemic methotrexate injection, local KCl injection, utherine artery embolization, USG guided dilatation or curettage [6, 7]. Akdemir and Cevrioğlu, used Bakri balloon in tamponade to control vaginal bleeding occurred after in utero termination of a 19 week old fetus in a case of a patient aged 38 and diagnosed with placenta acreata. The balloon had to be left in place for 7 days because of the increased bleeding after removal attempts. In the intermittent USG follow ups after the removal of the balloon a regression of placenta within 3 months was observed [11]. Just like in this case we mentioned in cases with no danger of intraabdominal bleeding and in early second trimester, USG guided Bakri balloon tamponade can be used in order to stop acute bleeding. In our case we decided to perform hysterectomy since the patient was hemodynamically stable and abondan vaginal bleeding was present.

In conclusion early diagnosis in CSP is important in order to prevent maternal mortality and morbidity and in order to maintain patient fertility. We believe that in all cases with a history of previous CS it is necessary to locate pregnancy sack in uterine cavity while considering the possibility of CSP; and in case of suspicion performing an Doppler transvaginal USG examination, with patient patient consent, will provide healthier data for differential diagnosis and prognosis.

Informed Consent: Informed consent was obtained.

Conflict of Interest: No conflict of interest was declared by the authors.

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