Case Report

Emergency hysterectomy due to massive bleeding during termination of 15-week-pregnancy with anhydramnosis and cesarean scar implanted placenta: A case report

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Abstract

Cesarean section is the most commonly performed surgery in obstetrics, and its incidence is increasing with rates as high as 17% to 25% in some countries. In certain cases, cesarean scar dehiscence may lead to uterine rupture during pregnancy and delivery procedures. Moreover, cesarean scar dehiscence can be a site for developing ectopic pregnancy. We report a patient with one previous cesarean delivery, who admitted to our clinic at 15 weeks of gestation with anhydramnios and underwent cervical ripening by double balloon catheter for pregnancy termination that resulted with incomplete uterine rupture associated with the implantation of the placenta in the uterine dehiscence scar.

Key Words:
Cesarean section, uterine scar dehiscence, placental invasion anomaly, pregnancy

Introduction

Cesarean scar pregnancy is one of the rarest forms of ectopic pregnancy. The incidence of cesarean scar pregnancy ranges from 1/1800 to 1/2216 pregnancies [1]. In the last decade, the number of reported cases has increased significantly parallel to the increasing rate of cesarean sections. It was recently estimated that every 1 in 531 women has a cesarean scar pregnancy [2]. Several complications such as uterine rupture, placenta accreta/percreta and post-partum hysterectomy may be seen in subsequent pregnancies [3,4]. First trimester cesarean scar pregnancy has been reported as a precursor of abnormally adherent placenta later in pregnancy [5]. In this report, we presented an incomplete rupture due to uterine scar dehiscence pregnancy after the application of a transcervical double-balloon catheter for pregnancy termination at 15th gestational week.

Case Presentation

A 32-year-old pregnant woman (gravida 3, para 2), with a history of one vaginal term delivery and one cesarean section, was admitted to our clinic with anhydramnios at 15 weeks of gestation. Ultrasonography revealed an anhydramnios single live fetus compatible with 15 weeks of gestation and the placenta was located anteriorly on the previous cesarean scar. After written approval of pregnancy termination was provided, transcervical double-balloon catheter was inserted for cervical ripening prior to curettage. Four hours after the application, the double balloon was removed as the cervical dilatation was approximately 4 cm and enough for the expulsion of fetus. After the fetus was delivered, the placenta could not be removed totally and massive bleeding occurred that could not be managed by medical therapy. When the blood pressure decreased to 70/40 mmHg, with a hemoglobin level of 5.1 g/dL, an emergency laparotomy was performed with the suspicion of uterine rupture. During laparotomy incomplete uter-
ine rupture (Figure 1) and the visible placenta (Figure 2) were noted at the site of previous uterine dehiscence scar. Heavy vaginal bleeding continued even after bilateral ligation of the uterine arteries and suturing of the dehiscence, hence an abdominal hysterectomy had to be performed. Total estimated blood loss during the operation was 1500 ml; the patient was transfused 7 units of packed red blood cells and 5 units of fresh frozen plasma. The patient recovered uneventfully. The pathological examination of the specimen revealed no signs of placental invasion anomaly but the placenta located at the uterine dehiscence scar associated with previous cesarean section.

Discussion

Uterine rupture refers to complete disruption of all uterine layers, including the serosa. It is a life-threatening pregnancy complication both for the mother and the fetus. The overall incidence of uterine rupture in women with a prior cesarean delivery varies between 0.3-1% [6]. Cesarean delivery also carries possible risks for the future pregnancies in part due to the placental problems such as placenta accreta and percreta, uterine rupture and cesarean scar pregnancy [7-9]. As the cesarean rate rises, the risk of these rare but life-threatening problems also increases. Recognition of the subsequent abnormal placentation and uterine scar separation or rupture is of great importance in order to avoid possible complications. With the dramatic rise in cesarean deliveries, accurate assessment and prediction of pregnancies at risk for uterine rupture and dehiscence is needed. Previous studies suggested that cesarean scar defects could be detected by ultrasonography or sonohysterography [10,11]. Pregestational diagnosis of the defects in cesarean scar is very important as, although rare, this condition can be catastrophic during pregnancy.

In symptomatic patients, the clinical presentation ranges from persistent vaginal bleeding despite use of uterotonic agents to uterine rupture and hypovolemic shock.

![Figure 1. Uterine dehiscence on prior cesarean scar line (red arrow)](image1)

![Figure 2. Placenta on prior caesarean scar line (yellow arrow)](image2)
Adverse outcomes of uterine rupture and dehiscence include complications related to severe hemorrhage, bladder laceration, hysterectomy (14-33%) and neonatal morbidity related to intrauterine hypoxia [12-14]. Definitive surgical management includes hysterectomy. Depending on patient’s desire for future childbearing, extent of uterine damage, hemodynamic stability, and the surgeon’s skills, uterine repair may be possible. The goals of conservative surgery are to repair the uterine defect, control hemorrhage, identify damage to other organs (e.g., urinary tract), minimize early postsurgical morbidity, and reduce the risk of complications in future pregnancies. As a result, cesarean scar pregnancy is a very rare and highly complicated type of ectopic pregnancy. Early suspicion and diagnosis is essential to prevent major obstetric complications, as well as to aid management of massive hemorrhage resulting from placenta complications. In cesarean scar pregnancy, expectant treatment is rarely successful and surgical management is almost essential, as in our case.

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Conflict of Interest Statement
The authors declare no conflict of interest

References