

SUCCESSFUL PREGNANCY AND DELIVERY IN PATIENT WITH PREVIOUS CORPORAL UTERINE INCISION AND UTERINE RUPTURE

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Abstract: Uterine rupture is a rare complication of pregnancy and delivery, which carries a high risk of perinatal morbidity and mortality for both, the mother and fetus. Nowadays, in developed countries, it is observed mainly in pregnant women after surgical interventions on the uterus, especially cesarean section. An incision in the uterine body during cesarean section significantly increases the risk of uterine rupture in subsequent pregnancies. In these cases, stricter monitoring of the pregnancy is indicated in subsequent pregnancies, as well as earlier delivery in order to prevent repeated uterine rupture. We present a rare case of a patient with a successful pregnancy and delivery after one termination of pregnancy by corporal hysterotomy and uterine rupture in a subsequent pregnancy. In the first pregnancy, due to fetal anomaly, the patient underwent laparotomy with evacuation of the fetus and its appendages through a corporal incision of the uterus. The patient's next pregnancy ended with a planned low segment transverse cesarean section without complications. In the third pregnancy, the patient was admitted to the hospital as an emergency with evidence of acute abdomen and hemodynamic instability at 32 weeks of gestation. It was assumed that it was a case of placental abruption and an emergency surgical intervention was undertaken. During the operation, a longitudinal rupture of the uterus along the anterior uterine wall in the area of the previous scar, hemoperitoneum and a dead fetus in the abdominal cavity were found. The uterus was preserved due to the patient's desire for a second child. About 13-14 months after this event, the patient became pregnant again. The pregnancy proceeded without medical complications, but with a high level of anxiety on the part of the pregnant woman. At 34 weeks of gestation, planned cesarean section was performed. A live premature fetus weighing 2000 g was born. During the cesarean section, a severely thinned uterine wall was found in the area of the previous longitudinal incisions, but there was no evidence of uterine dehiscence or rupture. This time, the uterus was also restored, and the postpartum period proceeded without complications.

The prognosis of pregnancies after a classic cesarean section and/or uterine rupture is generally good. Perhaps the most important aspect in the follow-up of these pregnancies is determining the time for delivery. Premature births are more common, but they are mostly iatrogenic and are due to the high level of anxiety of both the pregnant woman and the medical specialists. It is necessary to carefully monitor these pregnant women, especially in the direction of the appearance of symptoms of uterine rupture, and in the presence of such, urgent hospitalization and delivery in a hospital with readiness to meet this complication and the possibility of caring for a premature newborn is required.

Keywords: Uterine rupture, Corporal cesarean section

1. INTRODUCTION

Over the years, global caesarian section (CS) rates have significantly increased from around 7% in 1990 to 21% today surpassing the ideal acceptable CS rate which is around 10%–15% according to the WHO. Currently, a lot of CS are done for medical reasons, but there is also rapidly increasing rate of nonmedically indicated CS. If this trend continues until 2030, the incidence of cesarean sections is expected to reach 29%. Cesarean section leads to a significant reduction in maternal and neonatal morbidity and mortality when indicated and, conversely, can cause

harm to the mother and fetus when there are no strict indications for its performance (Angolile CM,). When performed early in gestation, the uterus is more often incised in the corpora because of the lack of a well-formed lower uterine segment. Prior classical cesarean delivery is associated with a higher risk of uterine rupture and severe maternal morbidity in subsequent pregnancies, compared with prior low transverse cesarean delivery, even after accounting for patients' clinical, sociodemographic, and hospital characteristics.(Thompson BB,). There is evidence that performing a low vertical uterine incision does not increase the risk of uterine rupture compared to cases with a low transverse incision (Shipp TD, Zelop CM,).

The risk of uterine rupture increases when labor has begun and uterine contractions are present. Some studies have found a low risk of uterine rupture, about 1%, when there has been no attempt at vaginal delivery in patients who have undergone a classic cesarean section for preterm fetuses (Moramarco V,).

Cesarean section at very early gestation is a serious risk factor for performing a classic or inverted T uterine incision. These incisions are required even when a low transverse uterine incision is performed due to difficulty in fetal extraction, although the frequency of these cases is very low. Attempting a low transverse incision does not lead to significant differences in pregnancy outcome compared with a classic uterine incision, but is associated with a shorter operative time (Kawakita T,).

2. CASE PRESENTATION

We present a case of a 28-year-old patient with a fifth current pregnancy. The patient's first pregnancy ended with a cesarean section in the fifth lunar month of a malformed fetus weighing 300 g, in which a longitudinal corporal incision of the uterus was done. Two years later, the patient had a second pregnancy, which proceeded normally and ended with a cesarean section of a fetus weighing 2300 g. In this cesarean section, low segment transverse uterine incision was made, and the postpartum period was without complications. One year later, when the next pregnancy was at 32 weeks of gestation, the patient was admitted to the Maichin dom University Hospital with acute lower abdominal pain and anemic syndrome (Hb 95 g/l). The ultrasound examination revealed a dead fetus and suspicion of placental abruption. An emergency cesarean section was performed, during which a large rupture of the uterus along the anterior uterine wall was detected, covering a section from the fundus uteri to the isthmic part of the uterus. A dead fetus weighing 1400 grams and a placenta in the abdominal cavity were detected. Due to the patient's desire for more births, it was decided to attempt to preserve the uterus. The edges in the area of the rupture were refreshed and the integrity of the uterus was restored with single sutures. The postpartum period proceeded without complications. One unsuccessful pregnancy followed, terminated in the first trimester. A little over a year after the uterine rupture, the patient became pregnant again. The pregnancy proceeded without medical complications, but with a greatly increased emotional burden on the part of the pregnant woman. Less than 2 years after the pregnancy with uterine rupture, at 34+4 weeks of gestation, a decision was made for a planned cesarean section. Intraoperatively, a severely thinned anterior uterine wall was identified in the area of the previous rupture. A longitudinal incision was made in the area of the previous scar and a live fetus weighing 2000 grams was extracted. The uterus was again reconstructed with single sutures. The postpartum period proceeded without complications.

3. DISCUSSION

The rate of uterine rupture is increasing worldwide due to increased use of cesarean section (Ofir, K., Sheiner, E., Levy,). As a result, more and more women with uterine rupture in a previous pregnancy are seeking advice about future pregnancies. Complete uterine rupture is a catastrophic obstetric event. It involves the mandatory tearing of all layers of the uterus, including the peritoneum and membranes (Al-Zirqi I, Vangen S.). Longitudinal ruptures and short intervals between rupture and subsequent pregnancy predispose to recurrence of uterine rupture with rate, reaching 33% (Usta IM, Hamdi MA, Musa AA, Nassar AH.)

Women with previous uterine rupture have a good prognosis in subsequent pregnancies when followed in a large tertiary care center where elective caesarean section can be performed at term or earlier if spontaneous preterm labor begins. A recurrent uterine scar rupture in such an aproach will be lower, reaching 8% (Houry O, Romano A, Geron Y.)

Current guidelines from the American College of Obstetricians and Gynecologists (ACOG) recommend, that elective repeat CS should be scheduled between 36 0/7 and 37 0/7 weeks of gestation for pregnant women with a history of uterine rupture or prior classical cesarean delivery (ACOG 2021).

In cases of uterine rupture, hysterectomy or uterine wall repair may be performed. The decision depends on several main factors, the most important of which are the type of rupture, the hemodynamic stability of the patient, the surgeon's ability to repair a more complex rupture, and the patient's desire for future pregnancies.

4. CONCLUSION

The prognosis of pregnancies after a classic cesarean section and/or uterine rupture is generally good. Perhaps the most important aspect in the follow-up of these pregnancies is determining the time for delivery. Premature births are more common, but they are mostly iatrogenic and are due to the high level of anxiety of both the pregnant woman and the medical specialists. It is necessary to carefully monitor these pregnant women, especially in the direction of the appearance of symptoms of uterine rupture, and in the presence of such, urgent hospitalization and delivery in a hospital with readiness to meet this complication and the possibility of caring for a premature newborn is required.

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