

A case with unscarred uterus rupture during late postpartum period

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ABSTRACT

An unscarred uterus rupture is uncommon. It has non-specific symptoms and presentation differs according to the site and time of rupture. It is usually diagnosed intrapartum or shortly after delivery. Here we report a spontaneous rupture of unscarred uterus with delayed presentation and without any usual risk factors. A 33-year-old and 38 weeks' pregnant woman presented with regular uterine contractions. The labor was successfully completed vaginally without any augmentation and no intrapartum complications were observed. After 72 hours the patient complained of an abdominal distension and tenderness. She underwent emergency explorative operation. Intraoperative examination revealed a rupture area on the right posterolateral wall of the uterine fundus approximately 5-6 cm in width. The post-operative period was uneventful and the patient was discharged on 5th postoperative day. Spontaneous rupture of unscarred uterus should be kept in mind even though it is rarely seen complication at late postpartum period.

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Introduction

Uterus rupture is a rare condition that is characterized with tear of uterine wall and its serosa layer. It can be associated with perinatal maternal mortality or morbidity [1]. Major risk factor for uterine rupture is a prior uterine scar and unscarred uterus rupture is uncommon [2]. Advanced maternal age, grand multiparity, macrosomia, multiple gestations, delayed labor, uterine anomalies, abnormal placentation, trauma, obstetric maneuvers (e.g.;

internal version and breech extraction, instrumental delivery), vigorous fundal pressure, labor induction and augmentation are other risk factors for uterine rupture [3]. Clinical signs and symptoms are fetal bradycardia, abdominal pain, signs of intra-abdominal hemorrhage, maternal tachycardia and hypotension, uterine tenderness and change in uterine shape; but more often presentation and symptoms are non-specific. Uterine atony, placental abruption, placenta

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previa, uterine inversion, cervical or vaginal tear may be considered in the differential diagnosis of uterine rupture [4]. They are usually diagnosed intrapartum or shortly after delivery. We report a delayed presentation of a spontaneous rupture of unscarred uterus.

Case Presentation

A 33-year-old and 38 weeks' pregnant woman presented with regular uterine contractions. Her obstetric history revealed two uncomplicated term vaginal deliveries and she had no history of abdominal surgery or curettage. The labor was successfully completed vaginally 7 hours after admission without any augmentation and no intrapartum complications had been seen. The baby was female and had Apgar scores of 7 and 9 at one and five minutes, respectively. The placenta was delivered spontaneously and was intact. Postpartum hemoglobin concentration was revealed no decrease. In the first 24 hours of the postpartum, vital signs were stable with a blood pressure of 120/80 and there was no active vaginal bleeding. After 72 hours the patient complained of abdominal distension and no gas-gaita discharge occurred. She had abdominal tenderness and symptoms of rebound. Laboratory analyses showed 2g/dL decrease in hemoglobin concentration. Transabdominal sonography revealed an intra-

abdominal free fluid collection. An abdominal computed tomography (CT) was performed. According to CT there was free fluid in the abdomen, free air bubbles and dilated intestines could be seen behind the posterior uterus. Hypodense parenchymal contusion-laceration areas, starting from uterine serosa and extending into the myometrial muscle group were observed (Figure 1).

The patient consulted to general surgery and decided to be operated. Intraoperative exploration revealed a rupture area on the right posterolateral wall of the uterine fundus approximately 5-6 cm in width (Figure 2). Approximately 1000 mL of blood was evacuated from the abdominal cavity. Bilateral salpinx and ovaries were intact. The operation was terminated after the rupture site was sutured and two closed system drainages were placed in the abdomen. The post-operative period was uneventful and the patient was discharged on the fifth postoperative day.

Discussion

Spontaneous uterine rupture is a rare complication which can lead maternal and fetal death when the diagnosis is delayed. It occurs in 5.3 per 10000 deliveries [5]. The most common risk factor is previous uterine scars where the risk of rupture is 22-74 in 10000 deliveries [6]. Advanced maternal age,

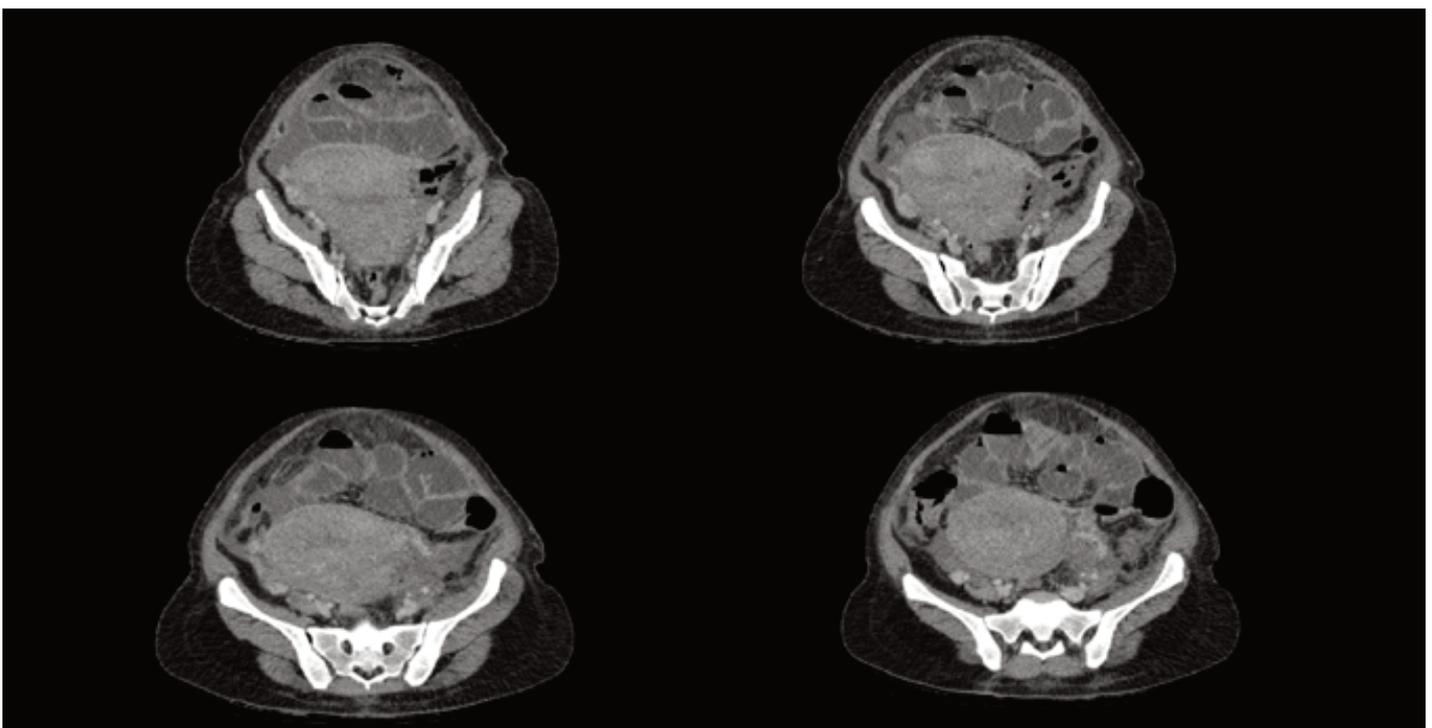


Figure 1. Preoperative CT image of the patient.

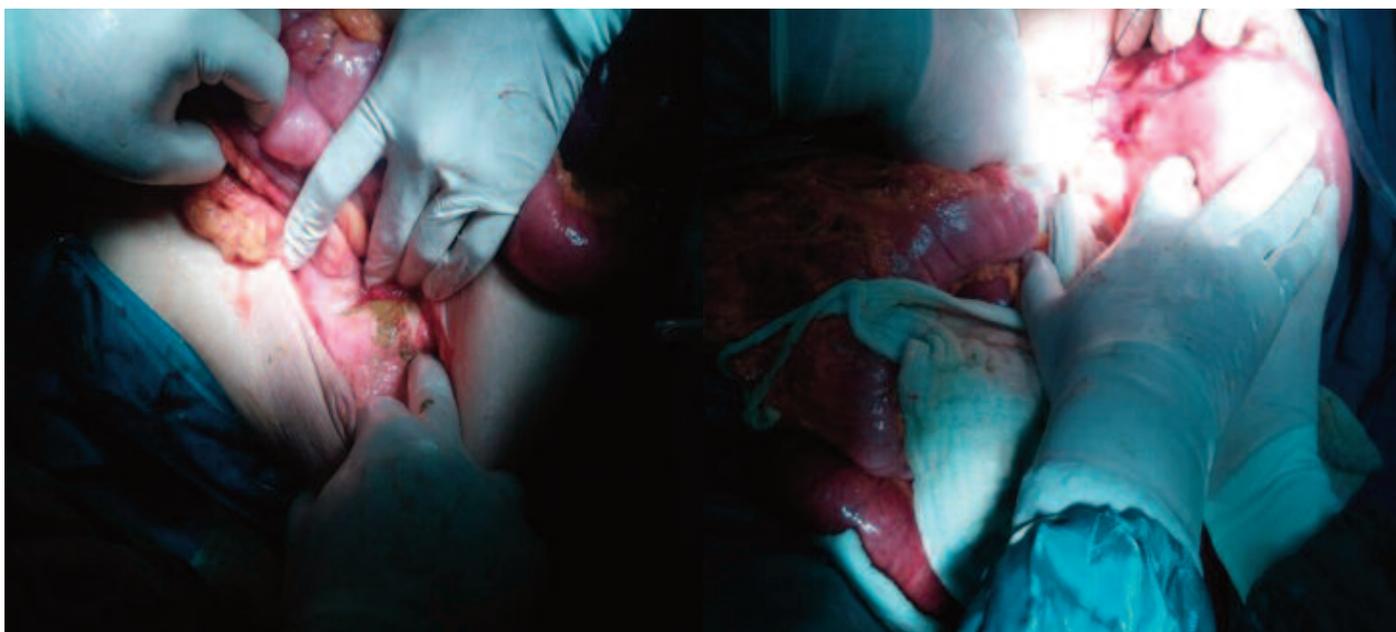


Figure 2. Intraoperative exploration and the repair of uterine rupture.

grand multiparity, macrosomia, multiple gestation, delayed labor, uterine anomalies, abnormal placentation, trauma, obstetric maneuvers (e.g. internal version and breech extraction, instrumental delivery), labor induction and augmentation are the other risk factors for uterine rupture [7]. At the same time, there are many cases reported without any risk factors [8]. In this patient the only possible risk factor was multiparity with two previous vaginal deliveries. It was reported that for a patient who had seven previous vaginal deliveries the uterine rupture risk is 20 times higher than a nulliparous [9].

Uterine rupture has non-specific symptoms and presentation differs according to site and time of rupture. The first symptom of rupture that occurs during intrapartum is generally fetal heart rate abnormalities such as bradycardia and usually the changes of the shape of uterus. Then, vaginal bleeding and maternal tachycardia may follow. Ruptures due to previous caesarian occur at the site of previous scar. However, in unscarred uterus it can be on lateral, fundal or posterior region. As in our case posterior defects need higher index of suspicion compared to lower uterine segment due to late onset of symptoms. Making a diagnosis was difficult due to lack of usual risk factors and significant clinical signs and symptoms until postpartum 72th hours in the presented case. It can be supposed that the rupture had been occurred intrapartum or just after the delivery. But intrapartum monitorization had shown no fetal bradycardia and there was no sign of abnormal

bleeding. The postpartum period was completely uneventful until postpartum 72th hours.

Conclusion

In conclusion spontaneous rupture of unscarred uterus is a serious complication that should be kept in mind even though it is rarely seen. It's also a complication that should be considered at late postpartum period. Any situations that cause hemoperitoneum and abdominal pain should be suspected as uterine rupture.

Informed consent

Written informed consent was obtained from the patient for the publication of this case report.

Conflict of interest

The authors declared that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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