International Clinical and Medical Case Reports Journal
Case Report (ISSN: 2832-5788)

Rare First-Trimester Uterine Rupture in a Multi-Scarred Uterus: A Case Study on Emergency Management and Outcomes

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Citation: *Saira Waheed, Javairia Basit. Rare First-Trimester Uterine Rupture in a Multi-Scarred Uterus: A Case Study on Emergency Management and Outcomes. Int Clinc Med Case Rep Jour. 2024;3(10):1-3.*

Received Date: 24 October, 2024, 2024**; Accepted Date:** 26 October, 2024**; Published Date:** 28 October, 2024

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ABSTRACT

Background: Uterine rupture in early pregnancy is a rare and life-threatening condition, particularly in patients with prior uterine surgeries. This case report details the clinical presentation, management, and outcomes of a 32-year-old woman with an 8-week pregnancywho presented in shock.

Case Presentation: The patient, gravida 4 para 3 with a history of three prior caesarean sections, arrived at the emergency department with abdominal pain, hypovolemic shock, and signs of hemoperitoneum. Ultrasound revealed a viable intrauterine pregnancy and massive free fluid. Emergency laparotomy confirmed a 1.5 cm uterine rupture at the left uterine anglewith 2 litres of blood in the peritoneum. Surgical management involved repair of the uterine rupture and bilateral tubal ligation.

Conclusion: This case underscores the importance of recognizing uterine scarring as a risk factor for rupture in early pregnancy. Rapid diagnosis and surgical intervention are crucial toprevent fatal outcomes.

Keywords: Uterine rupture, First trimester, Previous caesarean section, Hemoperitoneum, Emergency laparotomy

INTRODUCTION

Uterine rupture in the first trimester is an extremely rare occurrence, especially in patients without a history of uterine surgery. However, in cases involving scarred uteri, particularly from previous caesarean sections, the risk of rupture increases even during early pregnancy. This report presents a case of uterine rupture in a woman with three prior caesarean sections, emphasizing the need for vigilance in early pregnancy management when uterine scarring isinvolved.

CASE PRESENTATION

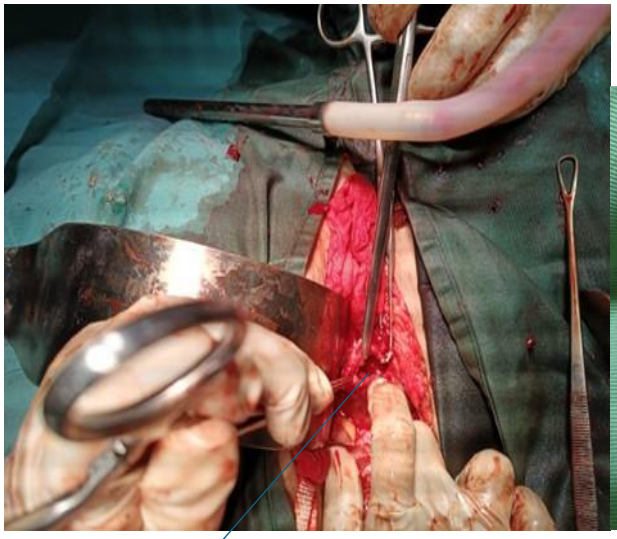
A 32-year-old woman, gravida 4 para 3, at 8 weeks of gestation, presented to the emergencydepartment with acute abdominal pain and signs of hypovolemic shock. She exhibited cold, clammy skin, sweating, a blood pressure of

60/40 mmHg, and a heart rate of 110 bpm.

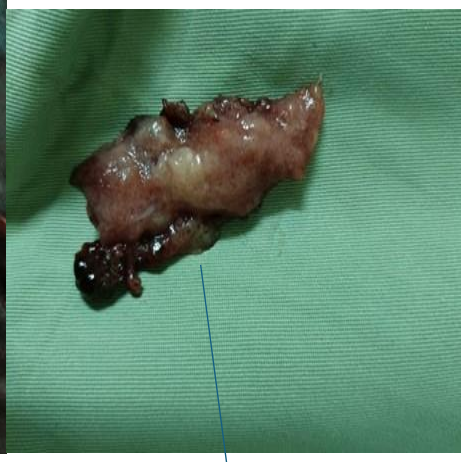
A fast-track ultrasound revealed massive hemoperitoneum along with a viable intrauterine pregnancy at 8 weeks gestation. Given the critical nature of the case, an emergency laparotomy was planned. Preoperatively, the patient provided consent for evacuation of thepregnancy and potential uterine intervention due to the suspected cause of bleeding.

Intraoperatively, a uterine scar rupture measuring approximately 1.5 cm was found at the left uterine angle. About 2litres of blood was discovered in the peritoneal cavity. The rupture site was repaired, and evacuation of the products of conception was performed as the patient had consented to terminate the pregnancy due to her clinical condition. Bilateral tubal ligation was also carried out at the patient's request.

The patient had a medical history significant for three previous caesarean sections. A reviewof her prior surgical notes indicated single-layer closure of the uterine incision during her most recent caesarean, which may have predisposed her to the rupture. She had also had an intrauterine device inserted after her last caesarean section. In early pregnancy, the patient experienced minor spotting, with a 7-week ultrasound revealing a subchorionic hematoma that was managed conservatively.



Site of uterine rupture



Products of conception

DISCUSSION

This case exemplifies the rare occurrence of uterine rupture in the first trimester, an event often associated with previous uterine surgeries. Literature indicates that most first-trimesteruterine ruptures occur at the site of prior uterine scars, particularly from caesarean sections (uterine rupture literat…). As seen in this case, the nonspecific symptoms of uterine rupture,such as abdominal pain and hypovolemic shock, can mimic other conditions like ectopic pregnancy, leading to delays in diagnosis.

Timely diagnosis and surgical intervention are crucial for favorable outcomes. In this patient,the ultrasound findings of hemoperitoneum raised suspicion of uterine rupture, and prompt laparotomy confirmed the diagnosis. As reported in similar cases, surgical repair is often the treatment of choice, though hysterectomy may be required in more severe cases. The decisionfor bilateral tubal ligation in this case was patient-driven, highlighting the importance of patient autonomy in treatment decisions.

CONCLUSION

First-trimester uterine rupture is an exceedingly rare yet dangerous complication, particularlyin patients with a history of uterine surgery. This case emphasizes the need for a high index of suspicion in pregnant women presenting with abdominal pain and previous caesarean sections. Early diagnosis and swift surgical intervention are essential to prevent maternal morbidity and mortality.

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