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Case Report

Spontaneous uterine rupture masquerading as intestinal perforation in a primigravida with polyhydramnios

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ABSTRACT

Spontaneous rupture of an unscarred uterus in a primigravida is an exceptionally rare and life-threatening event. We report the case of a 26-year-old primigravida at 36 weeks who was referred as a suspected case of intestinal perforation. Cross-sectional imaging revealed a uterine fundal rent with hemoperitoneum. Intraoperative findings included dense pelvic adhesions, fat stranding, and a ruptured dilated vessel over the uterine rent, suggestive of chronic pelvic inflammation possibly due to endometriosis or prior subclinical pelvic inflammatory disease. This case highlights the importance of considering uterine rupture in unscarred uteri, particularly when atypical presentations occur.

Keywords: Hemoperitoneum, Uterine rupture, Chronic pelvic inflammation

INTRODUCTION

Uterine rupture is typically associated with prior uterine surgery or trauma. Spontaneous rupture in an unscarred uterus, especially in a primigravida, is extremely rare.[1,2] Although known risk factors include uterine anomalies and overstimulation, chronic pelvic inflammatory conditions may weaken the uterine wall, increasing the risk of rupture.[3-6] Chronic inflammation from undiagnosed endometriosis or prior subclinical pelvic inflammatory disease (PID) may lead to fibrosis, adhesions, and vascular fragility.[7-9] We report a case of uterine rupture in a primigravida with gross hemoperitoneum and evidence of chronic pelvic inflammation, along with a ruptured dilated vessel at the site of the uterine rent.

CASE REPORT

A 26-year-old primigravida at 36 weeks' gestation was referred with a provisional diagnosis of intestinal perforation, based on ultrasound findings of moderate ascites and clinical signs of sepsis.

The patient had complained of abdominal pain for 12 hours, preceded by fever, vomiting, and loose stools for two days. There was no history of trauma, previous uterine surgery, or known gynecologic conditions. Menstrual cycles had been regular, and there was no documented history of PID or endometriosis.

On admission, she was pale and tachypnoeic, SpO_2 94% on room air. Abdominal examination revealed diffuse tenderness and guarding. Per vaginal examination showed cervical os 2 cm dilated. Fetal heart sounds were not localised. Hemoglobin was 7.2 g/dl, and white blood cell (WBC) count was 25,000/mm³.

Ultrasound-guided abdominal tapping revealed altered blood. Contrast-enhanced computed tomography (CT) abdomen and pelvis showed: a 5 mm fundal uterine rent, gross hemoperitoneum, fat stranding posterior to uterus, and adhesion of bilateral adnexa to the posterior uterine wall. These findings were suggestive of chronic pelvic inflammation, possibly due to undiagnosed endometriosis or prior PID.[7-9]

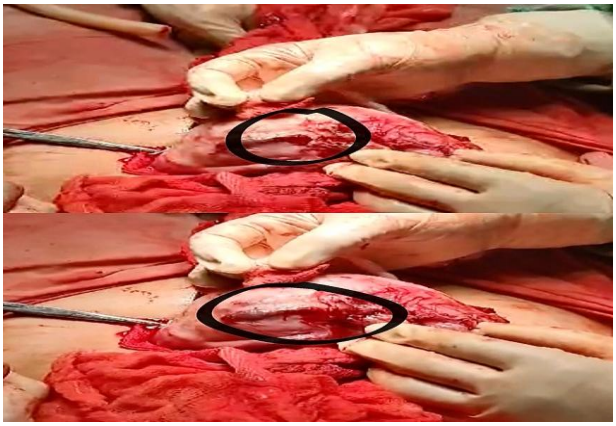

Figure 1: Intraoperative image showing fundal uterine rent (5 mm) with surrounding congestion and adhesions. The ruptured superficial vessel is visible.

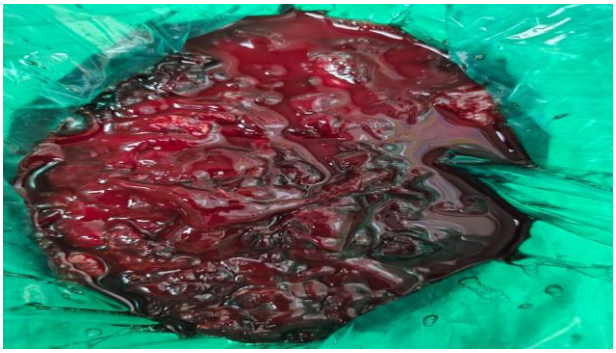

Figure 2: Collected hemoperitoneum (approximately 2 liters) showing clots and altered blood.

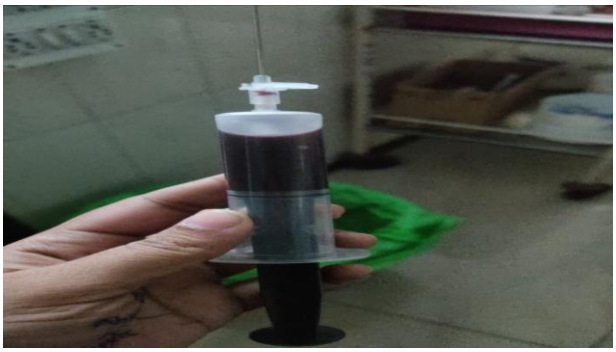

Figure 3: Syringe showing altered blood aspirated during diagnostic paracentesis.

Management

Emergency exploratory laparotomy was performed. Intraoperative findings included approximately 2 liters of hemoperitoneum, a 5 mm rupture at the uterine fundus, and a dilated superficial vessel overlying the rupture site, which had also ruptured. The fallopian tubes and ovaries were densely adherent to the posterior uterus. Surrounding tissues showed signs of chronic inflammation and congestion.

A stillborn fetus was delivered. The uterine rent was repaired with vicryl suture. The patient received blood transfusions and was managed in the ICU. Her postoperative course was uneventful, and she was discharged on the 7th postoperative day with contraceptive counselling and follow-up advice.

DISCUSSION

Spontaneous uterine rupture in a primigravida with an unscarred uterus is exceedingly rare.[1-3] In this case, initial signs mimicked gastrointestinal perforation, which delayed diagnosis. Imaging and surgical exploration revealed a small fundal rent and a ruptured dilated vessel, explaining the profound hemoperitoneum.

The dense adhesions of the adnexa to the posterior uterus, along with fat stranding, suggest chronic pelvic inflammation, possibly from previous silent PID or endometriosis.[7-9] Both conditions can cause fibrosis, adhesion formation, and compromised tissue integrity. The presence of a ruptured vessel at the site of the rent emphasizes the vascular fragility in inflamed tissues, a possible consequence of chronic inflammation.

The case also demonstrates how polyhydramnios, along with subclinical inflammation, may have synergistically increased intrauterine pressure and precipitated rupture.

CONCLUSION

Spontaneous uterine rupture in unscarred primigravidas is rare and often misdiagnosed. Underlying chronic pelvic inflammation, due to conditions like endometriosis or silent PID, may weaken uterine tissue and contribute to rupture. Early imaging and timely surgical intervention are crucial for maternal survival. Awareness of atypical presentations is essential for obstetricians and emergency physicians alike.

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