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Case Report

Spontaneous uterine rupture in a term pregnancy presenting with hemodynamic stability: a case report

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ABSTRACT

Spontaneous uterine rupture is a rare but life-threatening obstetric emergency, particularly in women without prior labor or trauma but with a history of uterine surgery such as myomectomy. It is even more uncommon in primigravida women presenting with hemodynamic stability, making early diagnosis and management critical. We report the case of a 32-year-old G1P0 woman at term with a past history of open myomectomy performed three years prior. She presented with a two-week history of intermittent sharp left flank pain associated with nausea and an urge to have bowel movement. Despite being hemodynamically stable (BP 128/79 mmHg, pulse 73 bpm), clinical suspicion warranted further investigation. Obstetric ultrasound revealed uterine rupture with intrauterine fetal demise. Emergency exploratory laparotomy was performed under spinal anesthesia. Intraoperative findings revealed a complete fundal uterine rupture with the fetal trunk and lower extremities covered in amniotic membranes freely lying in the peritoneal cavity along with 200 ml of amniotic fluid. The fetal head remained trapped in a uterus contracted to approximately 22 weeks' size. There was no hemoperitoneum or blood clots. A lower uterine segment incision was made to facilitate extraction; however, full delivery was not possible. To prevent further uterine injury, fetal decapitation was performed. The uterus was subsequently repaired in layers at both the fundal rupture site and the lower uterine incision. Hysterectomy was avoided. The patient and her spouse were later counseled on the high risk of recurrence with future pregnancies and advised against conception, exploring alternative options for parenthood and contraceptive use. This case emphasizes the need for a high index of suspicion for uterine rupture in pregnant women with a prior history of uterine surgery, regardless of parity or hemodynamic presentation. Prompt diagnosis, surgical intervention, and tailored postoperative counseling are crucial in preserving maternal health and guiding future reproductive decisions.

Keywords: Uterine rupture, Myomectomy, Term pregnancy, Fundal rupture, Primigravida, Decapitation delivery, Emergency laparotomy, Fetal demise, Uterine scar, Contraception counseling

INTRODUCTION

Uterine rupture is a catastrophic obstetric complication that carries significant maternal and fetal morbidity and mortality. Although it is most commonly associated with a scarred uterus, particularly in women with a previous cesarean section, uterine rupture can also occur following other uterine surgeries such as myomectomy. The incidence of uterine rupture in a previously scarred uterus is approximately 0.5–1% depending on the type and location of the scar, with higher risk associated with fundal or vertical incisions and poor healing post-surgery.[1,2] While uterine rupture is more often reported in the third trimester or during labor, rare cases have occurred before the onset of labor or in hemodynamically stable patients, which complicates timely diagnosis and intervention.[3]

Spontaneous uterine rupture during term pregnancy is a rare but life-threatening event that requires prompt recognition and surgical intervention. The most frequently

reported signs include abdominal pain, abnormal fetal heart patterns, cessation of uterine contractions, and maternal hypotension. In cases where the rupture is incomplete or occurs away from the lower uterine segment, diagnosis may be delayed due to nonspecific symptoms such as gastrointestinal discomfort or vague abdominal pain.[4]

This case report discusses the presentation and management of a spontaneous complete fundal uterine rupture in a hemodynamically stable 32-year-old primigravida with a history of open myomectomy, at term, managed successfully with uterine repair. It emphasizes the need for heightened clinical suspicion in women with a history of uterine surgery, even in the absence of classic signs of rupture.

CASE REPORT

A 32-year-old gravida 1, para 0 woman at term gestation presented to Tumu Municipal Hospital with complaints of persistent sharp left flank pain, an urge to defecate, and nausea that began two weeks earlier. She had initially visited a polyclinic and was subsequently referred to the hospital due to worsening symptoms.

Her obstetric history included a myomectomy performed three years' prior for symptomatic uterine fibroids. She had no other significant surgical or medical history. Laboratory investigations during pregnancy showed she was blood group B+, hepatitis B surface antigen positive, negative for sickling, Venereal Disease Research Laboratory (VDRL), and glucose-6-phosphate dehydrogenase (G6PD) deficiency.

She had booked her antenatal clinic at 15 weeks and 5 days of gestation and had completed seven antenatal visits. All prior visits were uneventful, with no reported complications.

Upon arrival at the hospital, she was in obvious distress due to pain but was hemodynamically stable with a blood pressure of 128/79 mmHg and a pulse rate of 73 bpm. Physical examination revealed abdominal tenderness, particularly on the left side, but no signs of vaginal bleeding. An urgent transabdominal ultrasound revealed no free intraperitoneal fluid and a ruptured uterus with loss normal gravid uterine contour, fetal parts in abdomen with no fetal cardiac activity.

An emergency exploratory laparotomy was performed under spinal anesthesia. Intraoperative findings confirmed a complete rupture of the fundal uterine wall. The fetal trunk and lower extremities were expelled into the abdominal cavity and still covered with amnios, along with approximately 200 ml of amniotic fluid. The fetal head, however, remained stuck in a contracted uterus that had involuted to about the size of a 22-week gestation. There was no hemoperitoneum or blood clots noted.

In an attempt to extract the fetal head, a lower uterine segment incision was made. However, due to the contracted state of the uterus and the impaction of the fetal head, complete extraction was not possible. To avoid further trauma and preserve uterine integrity, the fetus was decapitated, allowing removal of the remaining fetal parts. The uterine wall was then meticulously repaired in layers at both the fundal rupture site and the lower uterine segment incision.

A hysterectomy was not performed. Instead, the uterus was preserved successfully following the repair. Both the patient and her spouse were later counseled extensively on the risks of future uterine rupture in any subsequent pregnancy. Given the high risk, they were advised against future conception and were offered counseling on alternative options for childbearing such as adoption or surrogacy. Postoperative contraception was discussed and initiated.

The patient received one unit of whole blood intraoperatively and was monitored postoperatively in the surgical ward. Her postoperative course was uneventful, and she was discharged in stable condition on the sixth postoperative day.

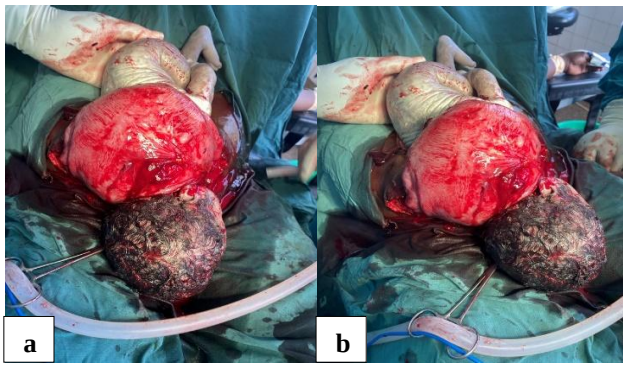

Figure 1 (a and b): Contracted state of the uterus and the impaction of the fetal head, stacked between lower uterine incision and fundal uterine rupture.

Figure 2: Fundal uterine rupture after complete extraction of fetus.

DISCUSSION

Spontaneous uterine rupture is a rare but catastrophic event that can occur during pregnancy, most often associated with previous uterine surgery. Although most documented cases present with acute abdomen and hemodynamic instability, this case illustrates an unusual and insidious presentation two weeks of intermittent flank pain and gastrointestinal discomfort in a patient who remained hemodynamically stable until diagnosis.

The patient's prior myomectomy placed her at elevated risk for uterine rupture, particularly given that fundal incisions are associated with a higher incidence of rupture compared to lower uterine segment scars. According to Parker et al, full-thickness myometrial incisions, especially at the fundus, pose significant risks in subsequent pregnancies, with rupture rates ranging from 0.24% to 5.3% depending on surgical technique and uterine healing.[5]

Intraoperatively, the complete rupture of the fundal uterine wall, with fetal parts and amniotic fluid expelled into the abdominal cavity, was evident. Interestingly, the absence of hemoperitoneum or blood clots suggested a tamponade effect due to the contracted uterus or minimal bleeding from the rupture site. This may explain the patient's preserved hemodynamic status and highlights that absence of overt hemorrhage does not exclude uterine rupture.

The fetal head being trapped in a uterus contracted to 22-week size posed a surgical dilemma. Uterine involution in response to rupture is a rare phenomenon and likely contributed to the entrapment. Despite creating a lower uterine segment incision, full extraction was not feasible, leading to the difficult but necessary decision to decapitate the fetus. While gruesome, this intervention was life-saving and aimed at preserving maternal health and uterine structure. Such maneuvers have been documented in rare cases of obstructed labor and impacted fetal parts.[8]

The uterine wall was repaired in layers at both the fundal and lower uterine segment incisions, and a hysterectomy was avoided. Conservative surgical management of uterine rupture has been associated with acceptable maternal outcomes, especially when bleeding is controlled and infection is prevented.[7] However, the long-term reproductive prognosis remains guarded. The risk of recurrence in a subsequent pregnancy is significantly elevated, estimated at 4% to 33% depending on scar integrity and uterine location.[6]

Given these risks, the patient and her spouse were extensively counselled on avoiding future pregnancies and advised to consider alternatives such as adoption or surrogacy. Postoperative contraceptive counselling was provided to ensure informed reproductive choices. Ethical and psychosocial considerations in such discussions are paramount and should be addressed with empathy and support.

This case underscores the importance of maintaining a high index of suspicion for uterine rupture in pregnant women with a history of uterine surgery, regardless of gestational age or hemodynamic presentation. It also illustrates the complexities involved in surgical decision-making when managing rare intraoperative findings such as fetal impaction and dual uterine incisions. Early recognition, timely intervention, and individualized counseling are essential in optimizing maternal outcomes.

CONCLUSION

This case underscores the complexity of diagnosing and managing spontaneous uterine rupture in women with a history of myomectomy. The hemodynamic stability of the patient on presentation contributed to the diagnostic challenge, as typical features such as hypotension or signs of peritonitis were absent. The fundal location of the rupture and the contracture of the uterus complicated fetal extraction, necessitating an uncommon but life-preserving intervention—fetal decapitation—to avoid further uterine trauma. The uterus was successfully repaired, and hysterectomy was avoided. Postoperatively, the patient and her spouse were comprehensively counseled on the significant risk of recurrence and the dangers of future conception. They were advised to consider alternative methods of childbearing and were placed on contraception. This case emphasizes the need for high suspicion and readiness for surgical intervention in pregnant women with prior uterine surgery, even in the presence of nonspecific symptoms.

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