ISSN: 3067-9443

Case Report

Journal of Gynecology and Womens Health Care

Suspected Placental Abruption Leading to Intraoperative Diagnosis of Rupture of an Unscarred Uterus in a Grand Multipara

Amanda D Gray*, Leatitia Samuel and Natasha France

Department of Obstetrics, Gynecology, Georgetown Public Hospital Corporation, Guyana

***Corresponding author:**
Dr. Amanda D Gray, Department of Obstetrics, Gynecology, Georgetown Public Hospital Corporation, Guyana.

Abstract

Background: Uterine rupture is a life-threatening obstetric emergency characterized by full-thickness disruption of the uterine wall. Majority of the cases occur in previously scarred uterus, spontaneous rupture in an unscarred uterus remains extremely rare but carries high maternal and perinatal mortality. Grand multiparty, obstructed labor, uterine over distension, and inappropriate use of uterotonics are recognized risk factors.

Case Presentation: A 32-year-old gravida 7 para 6 with no prior uterine surgery underwent induction of labor with oxytocin for pre-labor rupture of membranes. She progressed normally until she developed sudden dark red vaginal bleeding, maternal tachycardia, and fetal bradycardia. Laparotomy for suspected abruption revealed a complete rupture of the unscarred uterus with fetal extrusion and hemoperitoneum. An emergency hysterectomy was performed, and both mother and neonate were stabilized.

Problems Highlighted: This case demonstrates the unpredictability of rupture in unscarred uteri, the significance of grand multiparty, diagnostic difficulty, and risks associated with oxytocin augmentation.

Conclusion: A high index of suspicion and rapid surgical intervention are essential to prevent maternal and neonatal morbidity.

Keywords: Uterine Rupture, Grand Multiparious, Caesarean Section, Massive Transfusion.

Received: December 21, 2025;
Accepted: December 29, 2025;
Published: January 05, 2026

Introduction

Uterine rupture is a common complication of pregnancy in developing countries. However, it is rare in developed countries. It is an obstetric emergency characterized by complete disruption of the uterine wall, resulting in maternal hemorrhage, fetal compromise, and potential expulsion of the fetus into the peritoneal cavity [1]. The reported perinatal mortality ranges from 80% to 95% [2].

Most cases of uterine rupture occur in the second and third trimesters in the scarred uterus, most commonly from prior myomectomy, Caesarean sections [3].

Spontaneous rupture in an unscarred uterus remains an infrequent but life-threatening event [4,5].

In developed countries, there is an increased risk of uterine rupture, with an estimated incidence of spontaneous rupture in unscarred uteri of approximately 12 per 100,000 pregnancies. Still, higher rates are reported in resource-limited settings due to disparities in access to obstetric care, delayed intrapartum monitoring, and variations in labor management [6].

Several risk factors have been identified, including grand multiparty, obstructed labor, uterine overdistension, fetopelvic disproportion, injudicious use of oxytocin, mismanaged inductions, uterine anomalies, gestational trauma, and, rarely, intrauterine manipulations such as internal podalic version or operative extraction [7].

Citation: Amanda Gray, Leatitia Samuel and Natasha France (2026) Suspected Placental Abruption Leading to Intraoperative Diagnosis of Rupture of an Unscarred Uterus in a Grand Multipara. J Gyne Womens Heal Care 2: 1-4.

Clinical diagnosis of Uterine rupture requires a high index of suspicion, often due to the lack of specific clinical presentation, which may result in delayed diagnosis and management. Fetal heart rate abnormalities, particularly fetal bradycardia, are the most common early indicators. Additional clinical features may include vaginal bleeding, sudden cessation of uterine contractions, abdominal tenderness, and abdominal pain. Uterine rupture can mimic conditions such as placenta abruption, as seen in this case.

Given the high maternal and perinatal mortality associated with delayed recognition, maintaining vigilance in high-risk patients is paramount.

This case emphasizes the unpredictability of spontaneous uterine rupture in a young grand multiparous woman, highlighting essential clinical, diagnostic, and systems-based challenges that remain relevant even in modern obstetric practice.

Case Presentation

A 32-year-old female, Gravida 7 Para 6 woman with no prior uterine surgery and no known medical comorbidities, presented at 38 weeks and 5 days with pre-labor rupture of membranes (PROM). On admission, her Bishop score was 3, prompting induction of labor with low-dose oxytocin, in accordance with institutional guidelines for high-parity patients. Initial cervical assessment and contraction patterns indicated satisfactory early labor progression. Baseline laboratory values included a hemoglobin of 12 g/dL and a platelet count of 252,000/µL.

As labor progressed, the patient was transferred to the birthing suite at 8 cm dilation. One hour later, she was found to be fully dilated (10 cm), 100% effaced, at –1 station, with a category I fetal heart rate tracing. Her bladder appeared distended; a Foley catheter was inserted, draining 300 mL of clear urine. The patient subsequently commenced active pushing with each contraction. Continuous cardiotocographic monitoring was maintained as per protocol for grand multiparous inductions.

Approximately 45 minutes into the second stage, the patient developed non-reassuring fetal heart rate changes, characterized by persistent fetal bradycardia, accompanied by active vaginal bleeding of dark red blood. Maternal findings included tachycardia and profuse diaphoresis, raising a strong clinical suspicion for acute placental abruption. Given the rapidly deteriorating fetal and maternal status, the decision was made to proceed with an emergent exploratory laparotomy.

Intraoperatively, a complete rupture of the previously unscarred uterus was identified, with extrusion of fetal parts into the peritoneal cavity and approximately 500 mL of hemoperitoneum. The rupture was extensive, involving the left lateral uterine wall, extending through the full thickness of both the anterior and posterior walls. The defect tracked superiorly toward the left cornual region, involving the broad ligament and continuing inferiorly into the left vaginal fornix.

The bladder remained intact. The left ovary was actively bleeding and could not be salvaged despite hemostatic attempts. Massive hemorrhage ensued, with an estimated blood loss of 3 liters. The Massive Blood Transfusion Protocol was promptly activated, and appropriate resuscitation measures were initiated. Due to the severity and extent of the rupture, and to achieve hemostasis, an emergency subtotal hysterectomy was performed. The neonate, delivered through the uterine defect, exhibited severe birth asphyxia and was immediately transferred to the neonatal team for advanced resuscitation.

Both mother and neonate were stabilized postoperatively following aggressive resuscitation, damage-control surgery, and multidisciplinary critical care management.

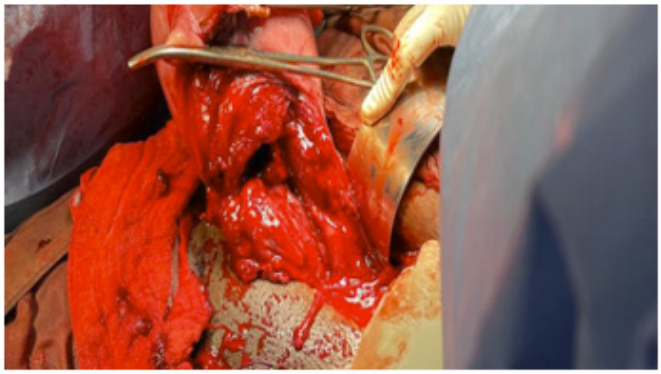

Figure 1: Complete left-sided uterine rupture with extension into the vagina and posterior uterine wall, demonstrated intraoperatively

Figure 2: Intraoperative view of a left uterine rupture with extension into the vagina and posterior uterine wall; a hysterectomy is being undertaken due to the severity of the defect

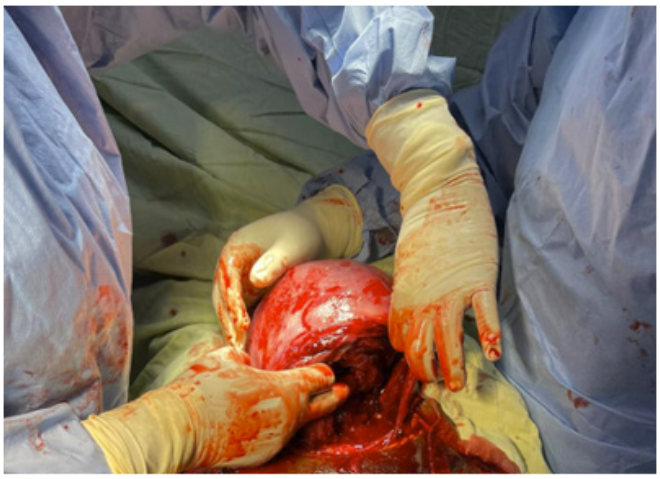

Figure 3: The surgeons' hands are seen stabilizing and elevating the exteriorized uterus to expose the full extent of the rupture along the lower uterine segment, with surrounding hemoperitoneum evident before definitive surgical management

Discussion

Uterine rupture is a rare but life-threatening obstetric emergency, most commonly associated with a previous scar to the uterus following previous cesarean delivery or uterine surgery. Rupture of an unscarred uterus, as illustrated in this case, is particularly uncommon and often associated with delayed diagnosis due to its mimicking symptoms.

This patient is grand multiparous, which is a well-recognized independent risk factor for uterine rupture even in the absence of prior uterine surgery. Grand multiparty is associated with myometrial thinning, reduced uterine tensile strength, and abnormal contractility, predisposing the uterus to rupture under stress. In addition, labor induction with oxytocin, although appropriately administered at a low dose via infusion pump in accordance with institutional protocols, likely contributed to increased uterine wall stress. Both grand multiparity and labor induction are consistently cited in the literature as significant risk factors for rupture in unscarred uterus.

The clinical presentation in this case emphasizes the none specific of nature of uterine rupture. Initial labor progression and fetal monitoring were reassuring, with a category I fetal heart rate tracing until late in the second stage. The sudden onset of persistent fetal bradycardia, dark vaginal bleeding, maternal tachycardia, and diaphoresis were critical warning signs. While placental abruption was appropriately suspected, this case underscores that uterine rupture must remain a differential diagnosis in any laboring patient with sudden fetal compromise and maternal instability, regardless of uterine scar status.

Intraoperative findings revealed an extensive, complex rupture involving the left lateral uterine wall with extension into the anterior and posterior walls, broad ligament, cornual region, and vaginal fornix. Such extensive involvement explains the massive hemorrhage and the need for definitive surgical management. Although uterine repair may be considered in select cases of limited rupture with stable hemodynamics, the degree of tissue destruction, ongoing hemorrhage, and associated adnexal injury in this patient necessitated an emergency subtotal hysterectomy as a life-saving measure.

The estimated blood loss of 3 liters and activation of the massive blood transfusion protocol reflect the severity of hemorrhage associated with uterine rupture. Prompt multidisciplinary intervention involving obstetrics, anesthesia, blood bank services, and critical care was pivotal to maternal survival. The associated left ovarian hemorrhage requiring oophorectomy further emphasizes the potential for extensive pelvic injury in such cases.

Neonatal outcome following uterine rupture is often poor due to acute interruption of uteroplacental perfusion. Immediate neonatal resuscitation and advanced neonatal intensive care were essential components of post-event management as per the paediatric team.

This case underscores several clinical and system-level challenges associated with spontaneous uterine rupture in an unscarred uterus. First, the diagnostic difficulty remains profound, as symptoms such as sudden abdominal pain, vaginal bleeding, fetal bradycardia, and maternal tachycardia may closely resemble other obstetric emergencies, including placental abruption or uterine hyperstimulation, resulting in potential delays in recognition [8]. Grand multiparity is a major independent risk factor, as progressive thinning and reduced structural integrity of the myometrium predispose these patients to rupture even in the absence of prior uterine surgery [7]. The use of oxytocin, although appropriate, may still contribute to excessive uterine stress or tachysystole, further increasing susceptibility to rupture in multiparous patients [9]. This case highlights the necessity for heightened vigilance during induction or augmentation, particularly among grand multiparous women. Early recognition of atypical symptoms, rapid surgical intervention, and coordinated multidisciplinary care are essential to prevent catastrophic outcomes. Continued emphasis on systems improvement, clinical training, and adherence to evidence-based monitoring protocols remains critical in modern obstetric practice [10,11].

Conclusion

Uterine rupture is a life-threatening obstetric emergency characterized by full-thickness disruption of the uterine wall. A high index of suspicion is needed in patients presenting with sudden onset of abdominal pain with vaginal bleeding.

Ethical Issues

The author has obtained Informed consent before using patient data and images.

Conflict of Interests

We hereby declare that there is no conflict of interests.

Financial Support

None.

References

1. Rizwan N, Abbasi RM, Uddin SF (2011) Uterine rupture, frequency of cases and fetomaternal outcome. Journal of the Pakistan Medical Association 61: 322-324.

2. Haakman O, Ambrose D, Katopodis C, Altman AD (2015) Spontaneous Rupture of an Unscarred Uterus Diagnosed Postpartum: A Case Report. Journal of Obstetrics and Gynaecology Canada 37: 1021-1024.
3. Lwamulungi E, Arara C, Jeevan Marasinghe, Dam JV (2025) Spontaneous second-trimester uterine rupture in an unscarred uterus: A case report and review of literature. Case Reports in Women S Health 46: e00711-e00711.
4. Hofmeyr GJ, Say L, Gülmezoglu AM (2005) WHO systematic review of maternal mortality and morbidity: The prevalence of uterine rupture. BJOG: An International Journal of Obstetrics & Gynaecology 112: 1221-1228.
5. Ronel D, Wiznitzer A, Sergienko R, Zlotnik A, Sheiner E (2011) Trends, risk factors and pregnancy outcome in women with uterine rupture. Archives of Gynecology and Obstetrics 285: 317-321.
6. Kaur J, Goel B, Sehgal A (2012) Rupture uterus following blunt trauma at 16 weeks gestation. International Journal of Reproduction, Contraception, Obstetrics and Gynecology 1: 64-66.
7. Wan S, Yang M, Pei J, Zhao X, Zhou C, et al. (2022) Pregnancy outcomes and associated factors for uterine rupture: An 8-year population-based retrospective study. BMC Pregnancy and Childbirth 22: 1-10.
8. Revicky V (2012) Uterine rupture: A national review. Obstetrics & Gynecology 120: 1338-1345.
9. Rouzi AA, Hawaswi AA, Aboalazm M, Hassanain F, Sindi O (2003) Uterine rupture: Incidence, risk factors, and outcome. International Journal of Gynecology & Obstetrics 24: 37-39.
10. Madhuri MS, Jha N, Pampapati V, Chaturvedula L, Jha AK (2023) Fetomaternal outcome of scarred uterine rupture compared with primary uterine rupture: a retrospective cohort study. Journal of Perinatal Medicine 51: 1067-1073.
11. (2019) Delayed Diagnosis of Intrapartum Uterine Rupture. Journal of Obstetrics and Gynaecology Research 45: 1314-1320.