

# Traumatic Uterine Rupture Sealed by a Hematoma: A Rare Case of Maternal and Neonatal Survival

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## Abstract

Uterine rupture is a severe obstetric complication associated with high maternal and neonatal mortality, requiring prompt management. We report an unusual case of complete uterine rupture in a 38-year-old patient at 38 weeks of gestation, occurring several hours after a minor trauma. The patient presented to the emergency department with persistent pelvic pain and vaginal bleeding, symptoms that she had initially neglected. Clinical and fetal assessment revealed fetal heart decelerations, prompting an emergency cesarean section. During the procedure, a complete uterine rupture sealed by a 300cc hematoma was discovered. The newborn exhibited mild respiratory distress but progressed favorably, as did the mother following successful uterine repair. This case highlights the importance of clinical vigilance in monitoring patients with a history of cesarean section and demonstrates the potential for temporary stabilization of uterine rupture by hematoma formation, offering a critical window for intervention.

**Key words:** uterine rupture; obstetric complication; cesarean section; maternal outcomes; neonatal outcomes

## Introduction

Uterine rupture is a serious obstetric complication associated with high maternal and fetal mortality. It is defined as a spontaneous tear in the uterine wall, which may occur during pregnancy or labor [1]. The prognosis depends largely on the speed and quality of intervention. We report a rare case of complete uterine rupture sealed by a hematoma, discovered several hours after a trauma. Despite the gravity of the situation, maternal and fetal outcomes were favorable.

## Case Report

A 38-year-old patient with no notable medical history presented to the emergency department at 38 weeks and 2 days of gestation with pelvic pain and persistent vaginal bleeding for one day. These symptoms were initially neglected by the patient. She had a history of cesarean section due to failure of labor progression in her first pregnancy, and prenatal care for this pregnancy was limited to two visits. On clinical examination, the patient was hemodynamically stable, with a blood pressure of 110/70 mmHg and a heart rate of 100 beats per minute. Fetal heart rate monitoring showed multiple decelerations, prompting an emergency cesarean section for suspected fetal distress.

During surgery, we discovered a complete uterine rupture sealed by a 300cc hematoma (Figure 1). The newborn had Apgar scores of 6, 7, and 8 at one, five, and ten minutes, respectively, and was transferred to the neonatal unit

for respiratory distress. The uterine rupture was successfully repaired, and postoperative recovery was favorable.

## Discussion

The incidence of uterine rupture varies significantly across countries, from a very low rate of 1.6 per 10,000 in Italy [2] to concerning rates such as 1 in 51 in Senegal [3]. This disparity reflects differences in healthcare resources and the quality of obstetric care. Uterine rupture can occur at any gestational age, though it is more common later in pregnancy, regardless of uterine scar presence [4]. It typically occurs in a scarred uterus and during labor [4]. The primary risk factor is a trial of labor after cesarean section [5]. Other risk factors include advanced maternal age, scar type, number of prior cesareans, and reduced myometrial thickness at the scar site as seen on ultrasound [5]. A few rare cases of post-traumatic ruptures have been reported in the literature [6].

Classic symptoms of uterine rupture include hemodynamic instability, abdominal pain, and palpable fetal parts outside the uterus. Fetal heart rate abnormalities are reported in 55–90% of cases involving scarred uterine rupture [7]. Vaginal bleeding is also commonly observed, though inconsistently [8]. In our case, the clinical presentation was subtle, with fetal heart rate abnormalities being the only alerting sign. It is crucial to emphasize that uterine rupture constitutes an extreme obstetric emergency that, without

rapid intervention, can be life-threatening [9]. In some rare cases, the uterine defect is sealed, delaying diagnosis [10]. In our case, the rupture was discovered several hours after trauma and sealed by a hematoma, which likely saved the patient's life.

Surgical management with pre-, intra-, and postoperative resuscitation is essential to ensure hemostasis in all cases of uterine rupture. In certain situations, conservative treatment is possible, preserving fertility in young women with low parity [11].

## Conclusion

Uterine rupture remains a serious obstetric complication requiring urgent and optimal management to minimize maternal and fetal risks. Prevention relies on thorough prenatal care and careful evaluation of risk factors, particularly for patients with a history of cesarean section. Patient education on warning signs and symptoms is crucial to avoid delays in management.

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