



## Silent Presentation of Uterine Rupture: A Case Report

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**Abstract**

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### Introduction

A uterine rupture is the complete division of all three layers of the uterine muscle: the endometrium, myometrium, and perimetrium. Most uterine ruptures occur during late gestation. The increasing rate of elective cesarean sections worldwide has led to new pathologies and management challenges. The number of patients undergoing a trial of labour after cesarean section (TOLAC) is also increasing. TOLAC and vaginal delivery success rate as reported by the largest studies is between 60% and 77%. Uterine rupture is by far the most dangerous possible complication that can occur during TOLAC. Typically, uterine rupture occurs suddenly and requires immediate critical emergency care for mothers and neonates. (1)

The overall incidence of uterine rupture in patients with a prior cesarean birth is approximately 0.3 percent (3 ruptures per 1000 deliveries), regardless of the mode of delivery in the pregnancy in which the rupture occurs. The authors of a systematic review estimated that 468 uterine ruptures would occur in a hypothetical group of 100,000 patients of any gestational age planning TOLAC compared with an estimated 26 uterine ruptures among 100,000 women planning PRCD (Planned Repeat Cesarean Delivery).

Uterine rupture is more prevalent in VBAC-2 patients (1.59%) in contrast to VBAC-1 (0.72%) due to the

unrecognized uterine muscle incomplete dehiscence during the first VBAC, and this may have contributed to the extensive dehiscence during the subsequent TOLAC.(2)

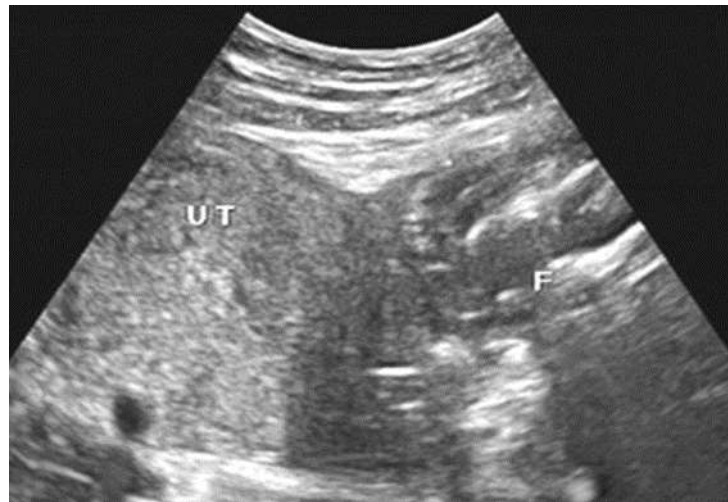
### Case Report

A patient, G2P1L1 with 38.2 weeks gestation, with a previous lower segment cesarean section 4 years back, came with an ultrasound suggestive of an intrauterine fetal demise in a transverse lie with the placenta completely covering the os.

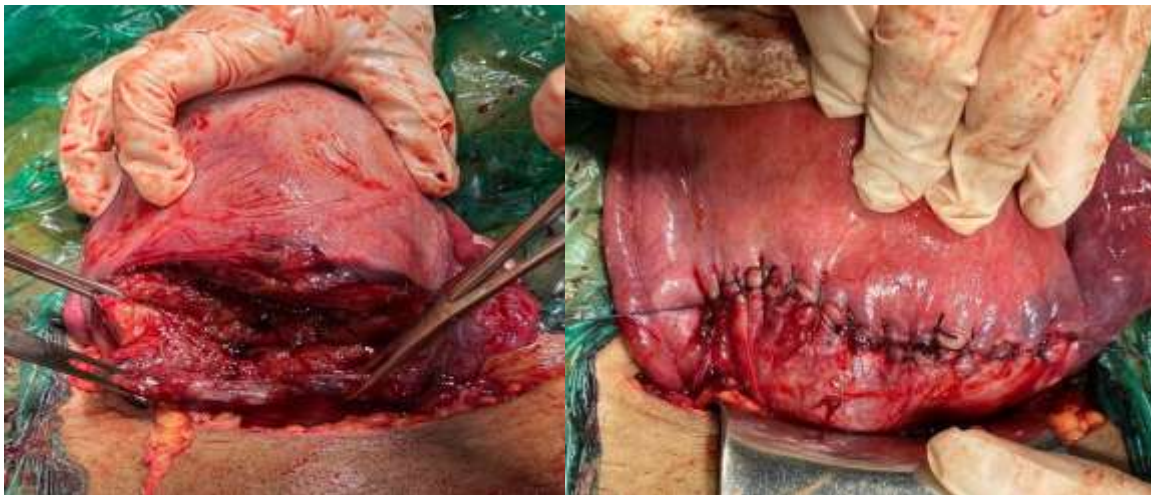
The patient complained of pain since 12 hours, not associated with any vaginal bleeding. On initial evaluation, the patient was afebrile with a heart rate of 84 beats per minute and blood pressure of 120/80 mmHg.

Per abdomen examination, the uterus contour was not palpable, and fetal parts were felt (? uterine rupture). Fetal heart sounds were not recorded on a handheld doppler. Her abdomen was soft, and non-tender without peritoneal signs. Per speculum examination revealed altered discharge not associated with any bleeding.

The patient was sent for an ultrasound examination which was suggestive of an empty uterine cavity and the fetus (F) expelled to the left side of the uterus (UT).



The patient was then taken for an emergency exploratory laparotomy after due consent during which 500 cc of hemoperitoneum was drained out and fetal parts were felt in the abdominal cavity. The fetus's head was grasped and delivered through an abdominal incision. The placenta was removed manually from the abdominal cavity. The uterus was traced and a full-length rupture of the previous uterine scar site with clean margins was seen and hence the decision was taken to repair the uterus, which was then sutured in double layers.



Her postoperative course was uncomplicated, and she was discharged home on postoperative day 5. Our patient presented to the clinic one week later for follow-up and continued to do clinically well.

### Discussion

The NICHD (National Institute of Child Health and Human Development) study 18 showed that planned VBAC, compared with PRCD, had a higher risk of uterine rupture (0.7% versus 0%). Reports of the risk of recurrent rupture vary widely (range 0 to 40 percent). The risk of recurrent rupture appears to be highest when the previous rupture was in the fundus or longitudinal (3 out of 3) versus (2 out of 9) with transverse rupture.

The weakest part of the uterus is the posterior wall of the fundus. The left lateral wall of the uterus is more prone to rupture than the right. The explanation for this may be that passive venous congestion develops more readily in the left broad ligament because of the 90° angle of entrance of the left ovarian vein into the left renal vein. The dextrorotation of the uterus which occurs in up to 80% of cases may accentuate this predisposition. (3) Analysis of a large series of cases of uterine rupture indicates that ruptures during

labour usually involve the lower segment, and those before labour the upper segment.

Typical uterine rupture symptoms are abdominal pain that begins with a “ripping” sensation, chest pain that may occur if blood enters the peritoneum, heavy vaginal bleeding, and loss of station of the presenting part of the fetus with cessation of uterine contractions. However, the pathological CTG (showing FHR abnormalities) pattern is by far the most frequent (and sometimes the only) symptom. (2).

**Warning signs of an impending uterine rupture**

<b>Signs of uterine rupture</b>
Prolonged, persistent, or profound fetal bradycardia
Other abnormalities on CTG
Abdominal pain, acute onset scar tenderness
Abnormal progress in labour, prolonged first or second stage of labour
Vaginal bleeding
Cessation of previously efficient uterine activity
Loss of station of the presenting part
Maternal tachycardia, hypotension, or shock

Uterine rupture can be fatal if not recognized and managed promptly.

**Conclusion**

Even though uterine rupture is rare, its accompanying complications like peritonitis can be fatal if not

recognized and managed promptly. This is the first case reported to us with subacute presentation of uterine rupture. The patient presented at an unknown time after the rupture. This case poses unique challenges for the diagnosis and management of the rupture.

There is no standard for surgical management of complete uterine rupture. The patient's hemodynamic stability, the size and location of the uterine opening, the patient's future desire for fertility, and intraoperative findings are some of the factors that will help us decide the line of management. (4)

It is necessary to consider the risk of rupture when attempting VBAC and to follow up on the patient to prevent complications, even when the symptoms indicative of either rupture or infection are observed to be mild.

**References**

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