

## Silent Rupture of the Uterus in a Woman with One Previous CS, A Rare Case

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### Abstract

### Case Report

**Summary:** Uterine rupture is a very rare complication in pregnancy. Most of the cases it increases both fetal and maternal morbidity and mortality. **Case presentation:** A 30-year-old woman para 1, gravida 2, with a H/O of previous one Caesarean section was admitted in our department at her 40 weeks and 0 days gestation for elective c-section. During the surgery we found uterine rupture with an amniocele. A healthy female baby was delivered with Apgar score 7 at 1min and 8 at 5 min. Both Maternal and neonatal condition were good. There was no PPH. The woman was recovered well in postnatal period and was discharged at 6th postoperative day. **Conclusion:** Silent uterine rupture may occur at late pregnancy in asymptomatic woman without any labour pain. **Objective:** To raise awareness for taking extra precautionary measure for checking uterus rupture through a real-life rare case presentation.

**Keywords:** Uterine rupture pregnancy amniocele asymptomatic.

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## INTRODUCTION

Silent spontaneous rupture of the uterus without labour pain, with amniocele, and without any maternal or neonatal complication, and delivery of a healthy neonate is very uncommon. Spontaneous uterine rupture whether it is silent or with any S/s is a life-threatening Obstetric emergency for both mother and baby. The uterine rupture is defined when there is separation of all the uterine layers including serosa. Usually it occurs during labour with a previous H/O uterine scar specially after classical Caesarian section 1. It also may occur after D& C, Myomectomy, Hysterotomy, and or LUCS. The incidence of uterine rupture varies depending on the type and location of the prior uterine incision. The American College of Obstetricians & Gynecologists (ACOG) Practice Bulletin reports the risk for uterine rupture is 0.5 to 0.9 percent for women with prior cesarean undergoing trial of labor [1]. However, the overall rate is about 1% to 2% of mothers with one low transverse scar who went for vaginal birth after C-section.

There are severe maternal and neonatal complications secondary to uterine rupture. Maternal complication includes hemorrhage, blood transfusion, hysterectomy, and maternal death. Although rare, but the incidence of maternal death is 0.02% of uterine

rupture [2]. In a population-based cohort study in Netherlands [3], shows that the risk of perinatal death after uterine rupture was 8.7%. IN another study, it was reported that perinatal mortality ranges from 74% to 92% in less developed countries [4]. But it is very rare after asymptomatic uterine rupture. Sometimes it is very difficult to diagnose clinically, especially in asymptomatic cases where abdominal pain, vaginal bleeding, maternal hypovolemic shock, or hemorrhage are absent. There are several studies to develop prediction models for uterine rupture, including sonographic evaluation of uterine scar, unfortunately those studies could not prove their reliability [5, 6].

## CASE PRESENTATION

A 30-year-old lady from Khalishpur, Khulna was admitted in our department at her 40 weeks and 0 days gestation for elective c-section. She was para 1 (one living issue), gravida 2, with a H/O of previous one Lower segment Caesarean section done in a secondary Medical center, 2 years back. She had uncomplicated pregnancy with one episode of UTI which was completely resolved with medication. Her last follow up was 1 week before when CTG showed no abnormality and USG showed single pregnancy with cephalic presentation, posteriorly attached placenta, adequate liquor volume. After admission, her pulse was

84bpm, BP 120/70 mm of Hg, Respiratory rate was 18 beats/ min, Lungs are clear, no Cardiovascular system abnormality, On Per abdominal examination there was Pfennensteil incision, slight abdominal tenderness, SFH was 36 cm, FHR 145 bpm, regular. Non-stress test was done which showed normal reactive pattern with no uterine contraction. Everything was normal except mild abdominal discomfort which occurs 1 day back and we did her urgent caesarian section due to that.

The abdomen was opened through Pfennensteil incision, and we saw complete uterine rupture at the old incisional scar and an amniotic sac protruding through the scar into the abdominal cavity, Figure: 1. Fetal hairs were seen through the amniocele. The uterine walls were fibrotic, very thin but there was no active bleeding. Amniotomy was done and the baby was delivered with the aid of a single blade forceps in cephalic presentation. A healthy female baby was delivered with Apgar score 7 at 1min and 8 at 5 min. Birth weight was 3250 gm. There was no PPH and uterus was contracted well. Uterine wall was sutured in layers and the surgery was completed as usual. Both Maternal and neonatal condition were good. The woman was recovered well in postnatal period without any abnormal bleeding. Her hemoglobin was 10.5 gm/dl and both the mother and baby were discharged home at 6th postoperative day with good condition.

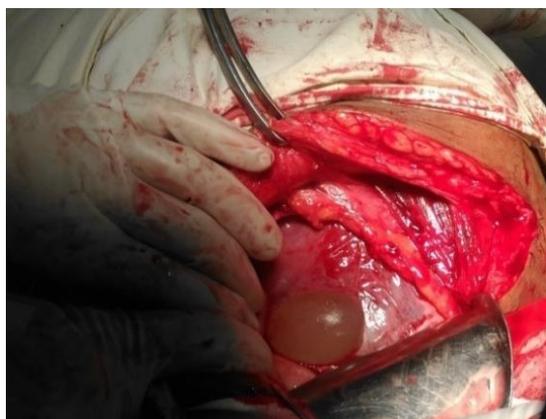


Fig-1



Fig-1 and 2: Silent uterine rupture, with extruded amniotic sac.

## DISCUSSION

Silent uterine rupture is defined as rupture of the uterus without any sign or symptom and the rupture is found during surgery or sonographically. It's a fatal obstetric emergency causing serious maternal and fetal morbidity and mortality. There are various risk factors e.g. previous scar due to Caesarian section especially classic caesarian section, Myomectomy, uterine perforation during gynaecological procedure, hysterotomy etc. Induction of labour with previous caesarian section remains the main cause for uterine rupture [7]. In our case, the patient did not experience any labour pain before surgery and was asymptomatic except mild abdominal discomfort which occurs 1 day before which might be the only sign for uterine rupture. The clinical features of uterine rupture are abdominal pain, vaginal bleeding, abnormal FHR. The dilemma that arises in diagnosis of silent uterine rupture is when the patient is asymptomatic or had unusual symptom like abdominal discomfort or vague abdominal pain. It is difficult to diagnose because of atypical sign symptom, sometime lack of expertise and skills. As in our case, although she had a History of previous scar in her uterus, the patient did not present with any typical clinical features, and had normal stress test. This is the most challenging part of silent uterine rupture before delivery.

Similar to our case, spontaneous uterine rupture was reported during a scheduled repeat classical caesarian section at 36 weeks of gestation with delivery of a healthy male infant (8). The patient had history of two prior classical cesarean sections and multiple pelvic surgeries. She did not experience any uterine contractions as well as no abnormal fetal heart rate prior to delivery. Like our case, patient had one episode of abdominal discomfort two days prior to scheduled delivery date. There are several cases reported like our case when it was very difficult to diagnose uterine rupture before surgery. Bujold and colleagues [9] has done a study whether uterine rupture could predict sonographically. They conducted a prospective cohort study of 125 women with vaginal birth after previous caesarian section. They undergone trial of labour with a cutoff of lower uterine thickness of <2.3 mm, and uterine rupture for this group was 9.1%. The limitation of this study was that they did not suggest trial of labor of most women with a lower uterine thickness <2.0 mm. In our case, we did not do ultrasound studies specifically looking for the lower uterine segment. Review of ultrasound images in our patient done at her 36 weeks of gestation does not show any abnormality.

In the United States, several studies done which showed perinatal death rate was 0.3 per 1000 during trials of labors [10] which was much lower than previous studies. This lower rate of perinatal death might be due to rapid recognition of and response to potential uterine ruptures.

Grobman and colleague had developed an analytic model that predicts individual-specific risk of uterine rupture during an attempted vaginal birth after cesarean delivery. However, the empiric probability risk of rupture derived from a wide 95% CI ranging from 0.6 to 1.8% making this model neither accurate nor discriminating [11]. Bujold [8] and colleagues developed 2 such indexes using antepartum and intrapartum factors. However, both models were neither sensitive nor specific enough for clinical use (sensitivity of 75% with false positive rate of 40%). So, there are no reliable studies to predict the rupture beforehand.

## CONCLUSION

The uterine rupture can occur without symptoms in pregnancy. A high index of suspicion and proper imaging are therefore needed in making this diagnosis.

### Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

### Conflict of Interests

The authors declare that they have no conflict of interests.

### Authors' Contribution

Prenatal care of this patient was done by Dr. K.M Islam. The cesarean section was done by Dr. I Bina, Mr. Ayman Kazi assisted and analyzed the case and conducted the literature search and review for analysis. I Bina prepared the first draft of the report. A supervised and guided on the development of the paper. All authors read and approved the final paper.

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