

A Case Report of First Trimester Spontaneous Uterine Scar Rupture

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ABSTRACT

Rupture uterus during early pregnancy is very rare and will cause life-threatening compromise to mothers and fetal life. Rupture of the uterus is a disastrous complication, occurring mostly in the second and third trimesters. Spontaneous rupture uterus in early pregnancy is a rare event. The uterine rupture risk increases with previous surgeries on the uterus and uterine anomalies. Termination of early pregnancy, in women with a scarred uterus, using sublingual misoprostol can lead to uterine rupture. Placenta percreta and scar pregnancy are predisposing factors of spontaneous mid-trimester uterine rupture. Rupture uterus in early pregnancy is non-specific clinically and should be differentiated from other acute causes of abdominal emergency conditions like ectopic pregnancy. The clinical signs and symptoms of rupture uterus are nonspecific and give a very small duration for instituting definitive management, making rupture uterus during pregnancy a much dreadful situation. Herein, we report a patient with spontaneous uterine rupture in early pregnancy with serious bleeding and shock.

Key words: Rupture uterus, hemoperitoneum, exploratory laparotomy

INTRODUCTION


Rupture uterus is said to occur when there is a disruption of the uterine wall involving the visceral peritoneum of the uterus. It occurs during late pregnancy or active labor. Uterine rupture occurs most often along healed scar lines in women who have had prior uterine surgeries. Other causes involve congenital anomalies of uterus, trauma, over distention of uterus such as twin gestation, polyhydramnios, and anomalous fetus, external version of fetus internal fetal version, disproportionate use of uterotonics, failure

to diagnose labor dystocia with hypertonic uterine contractions, lower segment uterine constriction ring, and prostaglandins used for induction of labor.^[1]

Many symptoms of rupture uterus are noted but may not occur in all uterine rupture cases. Symptoms of uterine rupture are bleeding per vagina, pain in between contractions, hematuria, siezation of uterine contractions and intense pain in abdomen. Signs of rupture uterus are severe tenderness at the site of uterine scar, loss of the fetal station i.e baby's head displacing back into the abdomen, suprapubic bulge i.e fetal head coming out of the uterine scar, uterus may become flabby because of loss of uterine tone, tachycardia and fall in blood pressure.^[2] Diagnosis becomes definitive by exploratory laparotomy. Treatment of uterine rupture is immediate laparotomy with repair of uterine rupture, and if necessary, hysterectomy.^[3]

CASE REPORT

A 25 years old, G3P2L1 with 2 months of amenorrhea with sudden onset of severe abdominal pain and

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unconsciousness brought to the emergency room in a state of shock with poor general condition. Her PR was 154/min, systolic blood pressure was 70 mm of Hg, tenderness and guarding rigidity were present all over abdomen, and resuscitative measures were immediately instituted. She had complaints of intermittent per vaginal spotting since 10 days. She was a case of previous two cesarean deliveries, and last childbirth was 3 years back. An ultrasonography revealed gross free fluid in the abdomen (blood present on tapping) with single intrauterine pregnancy with absent cardiac activity corresponding to 10 weeks. On admission her hemoglobin was 5.3g% and serum beta-HCG was 44040mIU/ml. A provisional diagnosis of scar rupture or heterotopic pregnancy with rupture of concomitant ectopic pregnancy or uterine anomaly was considered. After consent she was posted for emergency exploratory laparotomy. Adequate blood was reserved.

Intraoperative Findings

There was around 1 cm rent seen over the anterior uterine surface at the site of the previous scar. Products of conception were seen through the rent, active bleeding was observed at the rent, blood clots measured up to 700 g, and fresh blood around 1700 ml was suctioned. Suction and evacuation were done through open os (despite the scar rupture). Uterine rent was sutured in two layers with Vicryl. The patient was shifted to ICU postoperatively, and 5 units of blood and 2 units of fresh frozen plasma transfusion were given. The patient recovered well postoperatively, and she was discharged on 13th post-operative day after check ultrasonography which showed normal study [Figure 1a and b].

DISCUSSION

The incidence of spontaneous rupture of uterus ranges from 1/8000 to 1/15000 pregnancies.^[4] According to a review of the literature on uterine rupture, most cases had rupture uterus during pregnancy in the previously scarred uterus.

Rupture often occurs intrapartum, and with careful and close monitoring, early diagnosis may be possible. However, when it occurs in the first trimester, it is difficult to diagnose as occurred in the present case.

Rupture uterus is a very serious and dangerous incidence because of sudden and massive bleeding, Sun *et al.* reported a multiparous woman at

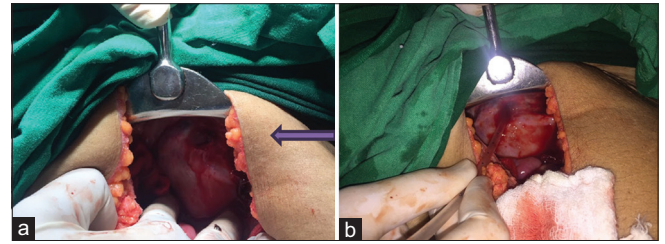


Figure 1: (a and b) Demonstrating uterine rent

the 17th week of gestation with a spontaneous uterine rupture that was admitted to hospital with hemorrhagic shock. More than 2000 mL of hemoperitoneum was removed during her laparotomy.^[5] Park *et al.* also reported a uterine rupture at the 6th week of gestation that presented with hemoperitoneum.^[6] Tola presented a case of unscarred spontaneous uterine rupture at the 13th week of gestation with serious intra-abdominal bleeding.^[7] All of the reports in the literature reported acute abdomen and emergency laparotomy because of copious intra-abdominal bleeding. However, one case reported by Mine Islimye Taskin and Ertan Adali stated that the uterine rupture did not cause any bleeding and the patient was stable, and elective surgery was planned.^[8] Although the rupture site is the lower segment in the third trimester or during labor, a common rupture site is the fundal region in the first trimester. In our case, the rupture site was on the site of the previous scar (uncommon finding during first trimester). When uterine rupture occurs, patients usually present with abdominal pain, vaginal bleeding, vomiting, and shock.

Signs of rupture uterus in the first trimester of pregnancy are not specific and should be differentiated from other causes of acute abdomen.

The differential diagnosis would be hemorrhagic corpus luteum, rupture of ectopic pregnancy, and invasive molar pregnancy.

Many times, ultrasonography has restricted value for differential diagnosis, and emergency exploration becomes necessary for definitive diagnosis [Figures 2 and 3].

Management depends on many factors such as limit of the lesion, parity and age of the patient, desire for future pregnancy, expertise of the surgeon, and general condition of the patient. Depending on the extent of lesion, the uterus can be either repaired or hysterectomy can be done. The risk of rupture in lower segment cesarean section is 0.2–1.5% for a subsequent pregnancy^[4] and this was discussed with the patient and advised to avoid future pregnancy, she was discharged on oral contraceptive pills. Husband was counselled for a vasectomy to prevent future pregnancy.

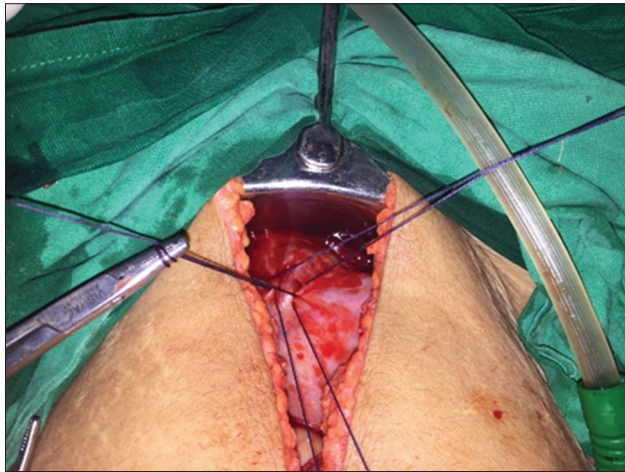


Figure 2: Demonstrating suturing of uterine rent

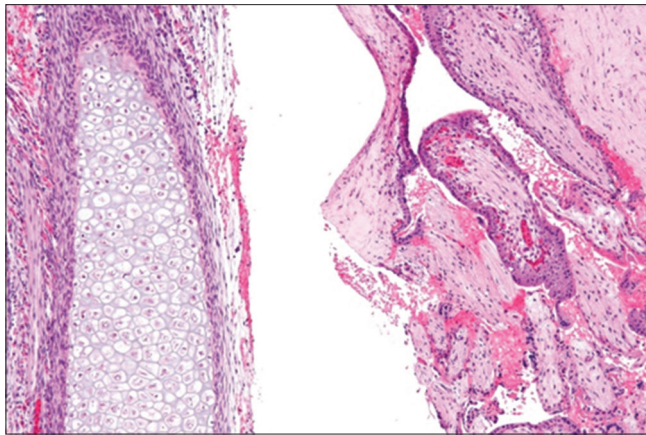


Figure 3: Histopathological report: Normal products of conception

CONCLUSION

The first trimester uterine rupture is an extremely rare condition.

Signs of rupture uterus during first trimester pregnancy are not specific and should be differentiated from other causes of acute abdomen. Laparotomy is required for definitive diagnosis and management.

Blood and blood products availability are one of the important aspect for the management of such cases. The present case reveals that previous scarred uterus is a high-risk factor for spontaneous rupture of the uterus in early pregnancy though rare.

Thus, every obstetrician must know this rare but untoward and very serious complication, because the surgeries on uterus are on rise exponentially.

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