A Case Of Recurrent Rupture In Unscarred Uterus

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Abstract - Uterine rupture during pregnancy is an obstetric emergency. Its occurrence may implicate a high morbidity and mortality rate in both the fetus and the mother. It is most commonly associated with a history of uterine scar performed for caesarean section, myomectomy or any hysterolaparoscopic procedure followed by multiparous patients with inadvertent use of oxytocics or obstructed labor. Upper segment uterine rupture is extremely uncommon before the onset of labor and in primigravida women. In our case, the patient had fundal rupture in first pregnancy at 26 weeks of pregnancy followed by spontaneous fundal rupture at 29 weeks in second pregnancy.

Index terms - Pregnancy, Recurrent uterine rupture, Unscarred uterus, Obstetric hysterectomy

Introduction

The uterine rupture during pregnancy is a catastrophic entity resulting in maternal and perinatal morbidity and mortality. In patients with previous lower segment cesarean sections, the risk of uterine rupture is estimated up to 0.8-1%.\textsuperscript{[1-3]} and that of classical caesarean section is 4-9%.

Rupture of unscarred pregnant uterus is rare event, estimated to occur 1/5700 to 1/20000 pregnancies. The incidence of rupture in unscarred and scarred uteri was 0.7 and 4-5 per 10000 deliveries respectively, although rupture of unscarred uterus accounted for 13% of all the ruptures.

However, uterine rupture at the site of previous iatrogenic perforation which is spontaneously healed or repaired is less reported.

We present a case of uterine rupture occurring twice in the same patient, both during her antepartum period.

Case report

A 26 years old woman, G2P1IUFD1, married for 7 years with 29 weeks of gestation presented with pain in abdomen and vaginal bleeding which soaked one pad. The patient was a referred case from private hospital for antepartum rupture with shock. Patient has a history of diagnostic hysterolaparoscopy, although no reports are available.

She has a history of similar presentation in first pregnancy at 26 weeks at another hospital. She presented with abdominal pain and vaginal bleeding with tensed 26 weeks size uterus on examination and USG s/o rupture uterus. Emergency exploratory laparotomy was done. There was a transverse tear on the posterior fundal surface, 6-7 cm in length. The edges were not bleeding. There was a hemoperitoneum of 600-700 cc with 480gms clot. The tear was sutured in 3 layers. Post operative course was uneventful. 4 units blood, 4 units FFP were given.

In this pregnancy, the patient had regular antenatal checkup at another clinic and was advised planned LSCS. On presentation, the patient’s general condition was fair, vital parameters were unstable-tachycardia with hypotension, and mild pallor. On abdominal examination, the uterus was 29 weeks and tonically contracted. Fetal heart sounds were absent. There was an infra-umbilical vertical scar. On vaginal examination, os was closed and bleeding was present. Ultrasonography (USG) showed a 29-30 weeks IUFD with placenta and fetus in peritoneal cavity. Gross haemoperitoneum with 6*7 cm clots in right iliac fossa noted. Uterine rupture was confirmed and patient and relatives were counseled. Consent for exploratory laparotomy with suturing of the uterine rent and subtotal hysterectomy if required was obtained. Emergency exploratory laparotomy was done. A hemoperitoneum of 700 ml with 200 g clots was present. A female fetus of 1.12 kg was lying in the peritoneal cavity. A transverse fundal rupture of 7-8 cm was noted. The placenta had separated and was in the process of expulsion into the peritoneal cavity. The fetus and placenta were removed. The uterus contracted. There was no active bleeding from the uterine rent. Adhesions between posterior or surface of uterus and intestines were seen and they required adhesiolysis. Bilateral tubes and ovaries were normal. Subtotal hysterectomy was done as the rupture edge was ragged and it was recurrent rupture in the upper segment.
Figure1: Subtotal hysterectomy specimen. Fundal rupture is seen with ragged edges.

The patient was given 4 units of fresh frozen plasma and four units of blood transfusions. Postoperative course was uneventful. She was discharged on postoperative day 10.

Discussion

Lower segment uterine scars tend to give way in labor and the upper segment scars during pregnancy. The second common cause is myomectomy scars. Scar of previous uterine perforation which occurs as a complication of minimally invasive procedures such as hysteroscopy, dilatation and curettage and others is not even considered as a minor cause of uterine rupture during pregnancy. The risk of uterine rupture depends on the location of the scar. The general risk for the rupture of an upper segment scar is 4% to 19%. Uterine perforation is one of the most frequent complications of operative hysteroscopy, with an incidence of 0.7-3%. Uterine perforations occur most frequently during operative hysteroscopic procedures - mainly adhesiolysis, followed by myomectomy and septum resection, but can also occur during insertion of the hysteroscope.

To provide more insight in the possible risk factors for prelabor UR in primigravid women, we performed a review of the literature(Table). In almost half of them, partial wall defect was the principal recognizable risk factor for UR before onset of labor.

It is interesting to note that women with specific available information had a history of infertility. A possible explanation could be that infertile patients more frequently undergo diagnostic/operative procedures on their uterus during diagnostic investigation or treatment resulting in a likelihood of iatrogenic damage.

We propose that her uterus must have been injured primarily during the hystero-laparoscopy procedure or with an accompanying dilatation and curettage 10 years ago even though no operative records are available for the same. This site in the upper segment most likely healed inadequately with fibrosis. The scar probably gave way in the antenatal period resulting in an IUFD. This hypothesis is based on the operative notes stating that the rupture edges appeared old and they were not freshly bleeding. The repeat rupture occurred spontaneously at 29 weeks.

Literature has documented that upper segment scar rupture in antenatal period remote from labor. Her second pregnancy uterine rupture was similar. These scars rupture in a quiet uterus. The factors that may affect wound healing like method used for myometrial hemostasis and to close the myometrial defect, an actively contracting and retracting upper segment, the extent of local tissue destruction, the presence of infection or hematoma formation, individual healing characteristics may have contributed to poor scar integrity. Due to high probability of repeated rupture of the uterus in future pregnancies a subtotal hysterectomy was done in this patient.

<table>
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References


Spontaneous uterine rupture at 35 weeks' gestation 3 years after laparoscopic myomectomy, without signs of fetal distress. J Gynaecol Res 2005;31:527-30


13. Walsh CA, Baxi LV. Rupture of the primigravid uterus: a review of the literature.