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Case Report

Spontaneous rupture of an unscarred uterus in nongravid horn of bicornuate uterus

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ABSTRACT

Uterine rupture in pregnancy is rare and often catastrophic obstetric event with a high maternal and perinatal complication rate.1Numerous risk factors are known to increase the risk of rupture, but even in high risk groups, overall incidence of uterine rupture is low around 0.07 %.2 Rupture of unscarred uterus may be caused by trauma or congenital or acquired weakness of the myometrium. Contributing factors include exposure to uterotonic drugs, high parity, uterine anomalies, advancing maternal age, dystocia, marosomia, multiple gestation, abnormal placentation, short pregnancy interval. Most ruptures occur in women who had a previous transmyometrial incision, typically for cesarean delivery.
Spontaneous rupture in an unscarred uterus is extremely rare. We present a case of spontaneous third trimester uterine rupture in unscarred uterus with Mullerian anomaly. This is extremely rare case of its own we encountered for the first time in our department.

1. Introduction

Uterine rupture in pregnancy is rare and often catastrophic obstetric event with a high maternal and perinatal complication rate.[1] Numerous risk factors are known to increase the risk of rupture, but even in high risk groups, overall incidence of uterine rupture is low around 0.07 %.[2] Rupture of unscarred uterus may be caused by trauma or congenital or acquired weakness of the myometrium. Contributing factors include exposure to uterotonic drugs, high parity, uterine anomalies, advancing maternal age, dystocia, marosomia, multiple gestation, abnormal placentation, short pregnancy interval. Most ruptures occur in women who had a previous transmyometrial incision, typically for cesarean delivery.

Spontaneous rupture in an unscarred uterus is extremely rare. We present a case of spontaneous third trimester uterine rupture in unscarred uterus with Mullerian anomaly. This is extremely rare case of its own we encountered for the first time in our department.

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2. Case

20 year old Primigravida patient was admitted to our hospital with complain of pain in abdomen and loss of fetal movements since 2 days. She denies any history of trauma or vaginal bleeding or any history of MTP in past. She was unbooked case residing in a remote area with no antenatal checkup. Patient was 47 weeks by dates and no any ultrasound for correlating dates was available. Patient was hemodynamically stable without any abdominal tenderness or peritoneal signs.

Her investigations reveals Hb 13g/dl plts 3,54,000. On peripheral smear examination RBCs microcytic and normochromi, platelets adequate. No parasite seen. On coagulation studies her Prothrombin time(PT) was 20 seconds (normal upto 16 secs) and INR 1.25 On examination single intrauterine fetus corresponding to term gestation with breech presentation, floating high up was present.

On admission patient had ongoing uterine contractions 4-5 contractions each lasting for about 40 seconds of strong intensity in 10 minutes observation period. No

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fetal heart sound was not detected by stethoscope and hand held Doppler. Vaginal examination revealed a pulled up closed cervix posteriorly placed with no dilatation. Emergency bedside ultrasound examination confirmed a IUD baby in breech presentation with spalding sign with severe oligohydramnios. Emergency explorator y laprotomy was undertaken in view of impending rupture.

On opening abdominal cavity, bicornuate uterus was noted. Left Horn being nonpregnant one small, at the level of cervix and baby in pregnant right Horn. Low transverse incision given over distended Right horn and IUD male baby of birth weight 1.4 kg delivered by breech. Placenta was fundoposterior and very minimal liquor drained. Uterine incision closed in double layer and hemostasis achieved after giving uterotonics.

Further inspection showed full thickness oblique vertical defect in nongravid horn of uterus posteriorly measuring around 3*2 cm, extending downwards upto uterosaral ligament. The defect was repaired in double layer and hemostasis achieved. Patient and relatives didn't gave consent for hysterectomy with future desire of childbearing So decision of preservation of uterus was taken.

Maternal estimated blood loss for entire case was around 2L. Intraop 1 unit PV transfusion was given. No blood transfusion required postoperative. Patient underwent an uncomplicated postoperative course except for URTI which was medically managed and was discharged home on day 8 after suture removal with contraceptive advice and elective caesarean delivery for next pregnancy. Her postoperative ultrasound examination confirmed the diagnosis of bicornuate uterus with absent unilateral kidney on left side.

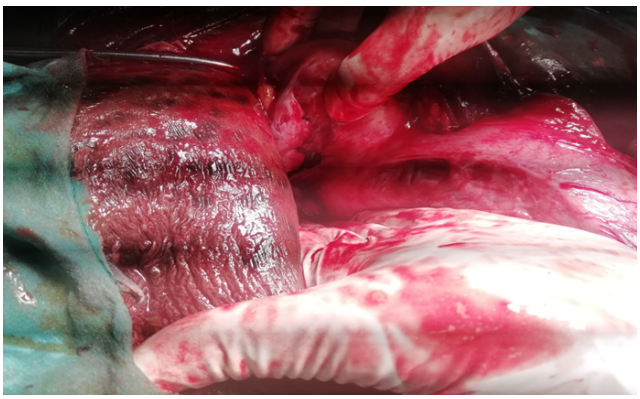

Fig. 1: Image of Ruptured Uterus (left horn)

3. Discussion

Rupture of non- scarred uterus in nongravid horn is extremely rare. The majority of uterine rupture during pregnancy involves scarred uterus.[2] Rupture of un- scarred uterus is a rare event involving 1:17,000 to 20,000 deliveries.[3] There are 35 reported case of rupture of Primigravida uterus in literature in past 60 years.[4] In such case rupture may be either traumatic or spontaneous.

An abnormal fetal heart rate pattern, particularly bradycardia, is the most common clinical manifestation of uterine rupture. Other potential findings include loss of station, abdominal pain with or without hemodynamic instability, uterine tenderness, cessation of contractions, change in uterine shape, vaginal bleeding, and hematuria.

Clinical signs of uterine rupture during pregnancy are nonspecific and can be confusing. Indeed, it is not always easy to distinguish it with other abdominal emergencies (appendicitis, gallstone, pancreatitis)[5]

A high index of suspicion is required to diagnose intrapartum rupture in patients with unscarred uterus. The diagnosis is usually made at laprotomy by visualization of complete disruption of all uterine layers with active bleeding. Uterine abnormalities and high parity are recognized as major risk factor for spontaneous uterine rupture in unscarred uterus.[5] Other etiological factors classically recognized as contributing to rupture of unscarred uterus are: Obstetric maneuvers, malpresentation, transverse lie, cephalopelvic disproportion given trial of labor, trauma due to uterine curettage, abnormal placentation (placenta percreta).[6] The case presented here emphasizes the possibility of uterine rupture, even in women with unscarred uterus with persistent unexplained abdominal pain and need of routine antenatal care, early diagnosis of condition with high index of suspicion and imaging modalities.

We believe that the possible cause for this rare case presentation could be inherent weakness in the musculature in nongravid horn of the uterus, the same side kidney also being absent.

Early surgical intervention is usually the key to successful treatment of uterine rupture.[5] Although therapeutic management is total or subtotal hysterectomy, the haemostatic sutures can also be performed and helps preserve the reproductive function of patient who have never given birth with a recurrence risk of uterine rupture assessed between 4 to 19% at a subsequent pregnancy, can occur as early as second trimester and is difficult to predict.[7]

Though there is no consensus on the optimum timing of delivery, a reasonable approach is to plan repeat cesarean at 36+0 to 37+0 weeks.[8]

4. Conclusion

The most common cause of uterine rupture is presence of uterine scar. Measures aimed at reducing the high maternal and perinatal morbidity and mortality associated with uterine rupture includes health education of masses, proper antenatal care, early referral of at risk patients and supervised hospital delivery. Importance should be given to the pain symptom and that can guide to the diagnosis.

5. Source of funding

None.

6. Conflict of interest

None.

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