

Spontaneous Full Length Fundal Uterine Rupture in Unscarred Uterus at Preterm Gestational Age in Primigravida

Manju Lata Verma*, Uma Singh, Rekha Sachan, PL Sankhwar

Department of Obstetrics and Gynecology, King George Medical University, Lucknow, Uttar Pradesh, INDIA.

ABSTRACT

Uterine rupture is associated with major maternal and fetal morbidity and mortality. Presentation may be varying. Here we present very rare spontaneous uterine rupture in unscarred uterus at preterm gestation without going in labour.

Keywords: Uterine rupture, Fundal rupture, Scarred uterus, Spontaneous rupture, unscarred rupture uterus.

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Correspondence

Dr. Manju Lata Verma

Associate professor, Department of Obstetrics and Gynaecology, KGMU, Lucknow-226003, Uttar Pradesh, INDIA.

Phone: +91 9721250092.

E-mail: gaganmlv@gmail.com,

INTRODUCTION

Uterine rupture is the spontaneous disruption of the myometrium extending to and involving the uterine serosa. Most uterine rupture occur in women who have had a previous trans myometrial incision typically for caesarean delivery. Rupture uterus in an unscarred uterus is rare, estimated to occur in 1/8000 to 1/15000 deliveries.¹⁻³

The cause of unscarred rupture uterus can be either congenital weakness of myometrium (example Ehlers-Danlos type IV)^{4,6} or acquired myometrial weakness due to protracted labour or use of strong uterotonic drugs (eg. Misoprostol), overdistension of uterine cavity or any trauma including accidents and prior obstetrical manoeuvres (eg. internal or external version etc).⁷⁻⁸

The risk factors for fundal uterine rupture include multiparity, advanced maternal age, malpresentation, gynaecological interventions (eg. Hysteroscopy, uterine

curettage, polypectomy, septoplasty), uterine anomalies and abnormal placentation and possibly short interpregnancy interval.

We hereby are presenting a case of spontaneous preterm uterine rupture in a patient who has neither a previous uterine surgery in any form, nor in labour or any other high risks.

CASE REPORT

A 30-year-old primigravida at 33 weeks of period of gestation was being managed conservatively for subacute intestinal obstruction in surgery department for last 5 days which was diagnosed on basis of pain abdomen, abdominal distension, sluggish bowel sounds, absence of passage of flatus and improved general condition after placement of Ryle's feeding tube. Ultrasound done there, confirmed fetal wellbeing and distended bowel loops. Patient was taken transferred from department of surgery to labor room with complaint of pain abdomen since last 2 days. Pain was insidious in onset, continuous in nature, mild in intensity, localized in upper abdomen. Her antenatal period was uneventful till now and she had no significant medical history and no prior obstetrical intervention barring a hysterosalpingography 8 months ago and within same cycle of HSG patient conceived.

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On examination, her vitals were stable. Abdomen was uniformly distended. No pain or tenderness on examination was present. No guarding, no rigidity. Fundal height was 32 weeks, uterus was relaxed, foetal heart rate was regular. There were no signs of preterm labour. Ultrasound revealed foetus of mean gestational age 32 weeks with breech presentation with central placenta previa. Patient was kept under strict observation and was monitored carefully. Two Hours Later, patient had sudden tachycardia (HR 130 bpm) and fall in BP (90/72 mm hg). On examination - abdomen was distended, uterine contour was not well maintained. Foetal heart rate was less than 60 bpm. Rupture uterus was suspected. Ultrasound showed hemoperitoneum upto Morrison pouch.

Patient was immediately taken up for exploratory laparotomy. A midline vertical incision was given. Per operatively 1 litre hemoperitoneum was drained. Foetus was lying in peritoneal cavity and was delivered by breech extraction. On delivery heart was less than 20 bpm. In spite of all resuscitative measures, baby could not be salvaged. A fundal uterine rupture was found, transversely involving the left cornual end and 1.5 cm short of right cornual end.

Placenta was low-lying completely covering OS. Placenta and membranes were removed completely.

Uterine repair was done by double layer baseball stitches. Colon was loaded with multiple fecoliths with proximal bowel dilatation. 2 units PRBC's were transfused per operatively. Post operatively patient's vitals remained stable. She was treated with I/V antibiotics which showed a good response. Patient was discharged 11 days later with advice to regular follow up.

DISCUSSION

Uterine rupture is a life-threatening condition. Overall incidence of uterine rupture is below 1 in 1000.⁹ Rupture in an unscarred uterus is even lower, estimated between 1 in 8000 to 1 in 15000. Fundal rupture is most common site of unscarred uterine rupture. It is almost always associated with previous uterine intervention like dilatation and curettage, previous myomectomy, uterine anomaly and morbidly adherent placenta. However fundal uterine rupture without any cause have never been documented.

The most common sign of uterine rupture on cardiotocography is a non-reassuring foetal heart rate pattern with variable decelerations that evolve into late decelerations and finally foetal bradycardia. Hallmark signs also include maternal tachycardia and hypotension and sudden cessation of acute abdominal pain.

However, in some patient's rupture may manifest with subtle atypical symptoms and non-specific abdominal pain.

Our patient presented with subacute intestinal obstruction. The incidence of SAIO in pregnancy is 1 in 1500 to 1 in 66431.¹⁰ It manifests with symptoms like crampy abdominal pain, abdominal distension, vomiting and constipation. It is diagnosed mostly in second and third trimester. However there have not been many case studies to prove its association with uterine rupture as a sequelae.

Another peculiar finding in our patient is history of a hysterosalpingography 8 months ago. Coincidentally, our patient conceived in the same cycle as this diagnostic test. We can therefore theorize that during this HSG some insignificant or incomplete perforation may have occurred at the fundus of the uterus and with progression in her pregnancy, overstretching of this weakened area may have led to fundal rupture. It's a point of contention as no records of uterine rupture post HSG have been documented.

Definitive surgical management includes hysterectomy. However, depending on extent of uterine damage, haemodynamic stability, patient fertility desires and the surgeon's skills, uterine repair may be possible. Most women with a previous uterine rupture have a favourable outcome in subsequent pregnancies. An interpregnancy interval of at least 18 months is suggested and a planned caesarean delivery is advised.

The recurrence rate for uterine rupture is reported to be between 4.8% to 19% with higher rates of recurrence in women with history of ruptured fundus and upper uterine segment.¹¹ It is therefore recommended that patients with history of ruptured lower uterine segment scar be delivered by 37-38 period of gestation. And it is advised that women with history of fundal rupture be delivered by 35 weeks.¹²⁻¹³

This case highlights the fact that rupture uterus can have a very different presentation like continuous nagging upper abdominal pain as in our patient even without any scar or dilatation and curettage history and that too at preterm gestation. Learning lesson is to be very vigilant for any type of abnormal abdominal pain during pregnancy with raised high index of suspicion for rupture uterus.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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