Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v30i19.3636

UNSCARRED UTERINE RUPTURE (UUR) IN EARLY PREGNANCY.

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Abstract

Background: Uterine rupture is a devastating obstetric complication commonly occurring in uterus with scarring during labor or late pregnancy. Early trimester and rupture of unscarred uterus is an infrequent event.

Case Report:A 36-year-old woman, gravida 6 para 5+0, came with the complain of sudden generalized abdominal pain at 10+ weeks of gestation. All previous pregnancies were spontaneous vaginal deliveries and patient refused any sort of recent surgical procedure involving uterus, but had a history of consumption of misoprostol for 3 days. Transabdominal ultrasound showed increased haziness suggestive of fluid and FAST turned out to be positive for free intraperitoneal fluid. Hence, an emergency laparotomy was performed to confirm diagnosis. It revealed hemoperitoneum caused by the rupture of the uterine fundus and products of conception in peritoneal cavity with blood clots. Uterine defect was repaired and bilateral tubal ligation was performed.

Conclusion: Uterine rupture should be considered even in early gestational age pregnancies and in an unscarred uterus in a patient with hemoperitoneum as early diagnosis is associated with better prognosis.

Keywords: Hemoperitoneum, uterine rupture, misoprostol.

INTRODUCTION

Uterine rupture during pregnancy is a life threatening obstetric complication. It is defined as a nonsurgical disruption in the wall of uterus along with visceral peritoneum. Worldwide incidence of uterine rupture during pregnancy is 1 per 1,416 pregnancies (0.07%) [1]. Single most important factor leading to this consequence is a scarred uterus due to previous uterine surgery [2]. Rupture of an unscarred uterus occurs rarely and in developed countries it's rate is 1 per 8,434 pregnancies (0.012%) whereas the incidence is eight times higher in developing countries that is 1 in 920

(0.11%) [1]. This case study reports rupture of unscarred uterus during medical abortion in a grand multipara woman at 10+ weeks of pregnancy without any other known risk factors.

CASE REPORT

A 36-year-old female, married, gravida 6 para 5+0, at 10+ weeks of gestation presented to our tertiary center with generalized abdominal pain. According to the patient, pain was continuous, severe, non-radiating, and sudden in on-set. It was associated with loose stools and two episodes of vomiting.The patient was not sure of her last menstrual period neither she had any dating scan done. The abdominal pain commenced after the patient took Misoprostol 200 mcg to abort her current pregnancy. She consumed Misoprostol tablets 3 days before her admission.3 Days back she took 1st dose of 4 tablets (800 mcg) on day one, then 2 tablets (400 mcg) BID for 2 days. She denied any sort of instrumentation or surgical procedure for termination of pregnancy.

Until the commencement of pain, the patient's pregnancy had been uneventful. Her past medical and surgical history was not significant. Her obstetric history included a current regular pregnancy witha history of 5 spontaneous vaginal deliveries, last child born was 4 years back. No history of miscarriage was there. Her family history was negative for diabetes, hypertension and cancer.

On arrival to emergency department, patient was pale, confused and drowsy but arousable. Her body temperature was 36°C, blood pressure was 77/70 mmHg, pulse rate was 98 bpm, and oxygen saturation was 99%. Clinical examination showed generalized abdominal distension. Guarding along with tenderness on superficial and deep palpation was present. Gut sounds were found to be sluggish. Respiratory system was normal with normal vesicular breathing and bilateral equal air entry. Blood test showed leukocytosis (21.4 × 10^9/L), mild thrombocytosis (440 × 10^9/L), hemoglobin of 10.4 g/dL and normal coagulation markers.Onpervaginal examination bleeding was positive.

A transabdominal ultrasound scan showed bowel contents up to rectum with increased haziness suggesting ascites/fluid. No pneumoperitoneum reported [figure 1]. Ultrasound FAST was positive for free intraperitoneal fluid.

Differentials that were made for this case included ruptured ectopic pregnancy, uterine ruptureand rupture of corpus luteal cyst.

An urgent exploratory laparotomy was performed after consent for laparotomy and bilateral tubal ligation due to worsening condition of patient and for confirmation of diagnosis. Laparotomy revealed transversely ruptured uterine fundus near right cornua [figure 2] [figure 3] and massive hemoperitoneum. Products of conception were found in peritoneal cavity with around 3 liters of blood clots. These were removed and the uterine defect was repaired and hemostasis was secured.Fallopian tubes were macroscopically normal in all their parts. Bilateral tubal ligation was done during laparotomy. No endometriosis or other abnormality was observed, and all other abdominal viscera were normal. Surgical team was called to evaluate and explore gut for any damage. Surgical team identified no abnormality in small and large bowels. Integrity of uterus was restored by a single layer of interrupted stitches, then peritoneal cavity closed, followed by closure of rectus sheath and skin. Four packed cells volume (PCVs) were transfused intra-operatively.

Her post-operative blood counts were hemoglobin of 9 g/dl, hematocrit of 26.1%, white blood cells (13.1 × 10^9/L) and platelets of (189 × 10^9/L).Her beta- HCG was 36149.5 mIU/ml that corresponds to around 10-12 weeks of gestation. Post operatively she was transfused with 4 packed cells volume (PCVs) . The patient's postoperative course was regular and she was discharged in stable condition.

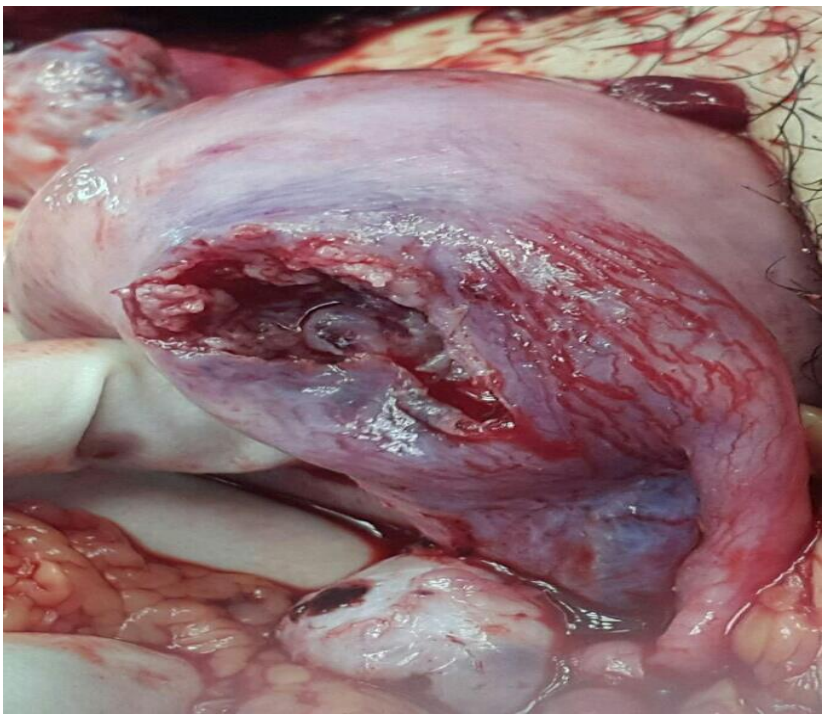

Figure 1: Laparotomy showed Transverse Defect in Uterine Fundus.

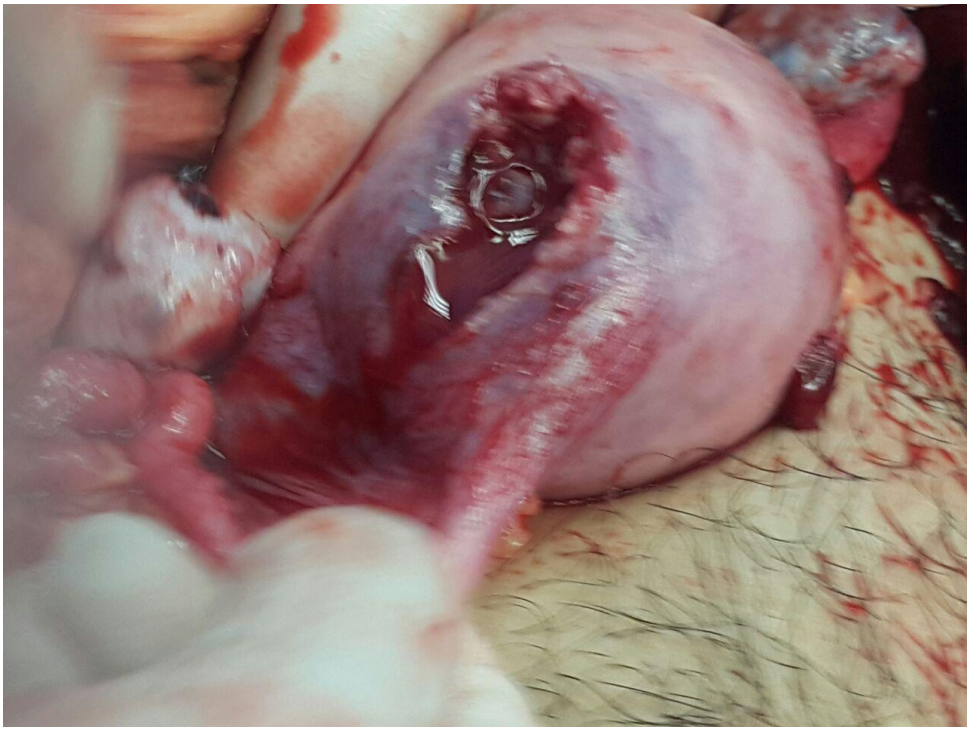

Figure 2: Laparotomy showed Uterine Rupture with Amniotic Fluid Extravasating from the Defect

DISCUSSION

Uterine Rupture is a potentially fatal sequalae of late pregnancy and labor in a uterus with scarring [3]. Rupture of unscarred uterus most commonly involves the lower segment of uterus which is the weakest part [4].Only 0.012% of normal uteri are at risk of rupture and chances of rupture increases with the number of previous scars. It is 0.5% after one caesarean section and 2% after two or more than two scars [1]. In Pakistan, incidence of uterine rupture is reported in 1 out of 64 deliveries [5]. 85.3 % of the diagnosed Pakistani women had unscarred uteri previously [6].

Factors associated with unscarred uterine rupture (UUR) are high parity [7,3], abnormal placenta implantation, uterine anomalies, malpresentations, injudicious use of uterotonics [3], breech

extraction, uterine instrumentation, myomectomy and macrosomia [1]. Other factors are low socioeconomic status, unbooked patients, prolonged and mismanaged labor and delay in receiving care during obstructed labor [7].

Clinical presentation of uterine rupture varies at different gestational agesand on the site of rupture. Signs and symptoms include abdominal pain, hemorrhage (revealed or concealed), fetal bradycardia, recession of fetal presenting part, gut prolapse in vagina, presence of placenta at vulva [5], hypotension and hypovolemic shock [8].

Maternal consequences arising from this event include hemorrhage, anemia, bladder injury, need for hysterectomy, hypovolemic shock and death whereas fetal hypoxia, acidosis, admission to NICU and fetal death can occur in fetus [1].

The factors that we found culprit in this case are age of this patient, grand multiparity and the use of misoprostol. In a study conducted to determine the risk factors of uterine rupture in developing countries, it has been reported that frequency of uterine rupture is twice among the age group of 30-39 years and 8 times higher among grand multiparous women [7]. The point of distinction in this scenario is that rupture occurred at a low dose of misoprostol in the first trimester in an unscarred uterus.

Diagnosis was challenging due to early pregnancy and non-specific signs and symptoms of hemoperitoneum. Moreover, the rupture of fundal area leads to concealed hemorrhage and intraperitoneal blood collection, often delaying diagnosis [4]. Definitive diagnosis of such cases is based on surgery. Imaging studies like Ultrasound is helpful when defect is large and on anterior surface. Rupture at lower uterine segment leads to per vaginal bleeding and therefore helps in prompt diagnosis [8].

Uterine rupture serves to be lethal if not managed timely and appropriately. Treatment is directed towards controlling hemorrhage and suturing of primary defect. Choice to perform either surgical repair or hysterectomy depends upon surgeon's expertise, extent and site of defect, co-morbidities in patient etc.

In above reported case, the patient had no uterine anomaly. Other causes like endometriosis, corpus luteal cyst and placental abnormalities were excluded during surgery.

CONCLUSION

Rupture of uterus should be among one of the differentials in similar clinical presentation even at early trimester and unscarred uterus. Awareness and acceptance regarding family planning are of dire importance as it will help preventing grand multiparity and fatal outcomes associated with it. Provision of free antenatal care and discouragement of traditional birth attendants would help in reducing incidence of uterine rupture and other obstetric complications.

ACKNOWLEDGEMENTS

Authors declare that they have no conflict of interests.

REFERENCES

1. Nahum G., Pham K. Uterine Rupture in Pregnancy. Medscape, 2012,http://reference.medscape.com/article/275854-overview.
2. Sturzenegger, Karin; Schäffer, Leonhard; Zimmermann, Roland; Haslinger, Christian (2016). Risk factors of uterine rupture with a special interest to uterine fundal pressure. Journal of Perinatal Medicine, 45(3):309-313.
3. Tola EN. First trimester spontaneous uterine rupture in a young woman with uterine anomaly. Case Rep Obstet Gynecol. 2014;2014:967386. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3914315/
4. M. Misra, R. Roychowdhury, and N. C. Sarkar, "The spontaneous prelabour rupture of an unscarred uterus at 34 weeks of pregnancy," Journal of Clinical and Diagnostic Research, vol. 7, pp. 548–549, 2013.

5. Qudsia Q, Akhtar Z, Kamran K, Khan AH. Woman health; uterus rupture, its complications and management in teaching hospital bannu, pakistan. Maedica. 2012;7(1):49.
6. United Nation Children Fund (1997) Women's Health in Pakistan.
7. Omole-Ohonsi A, Attah R (2011) Risk Factors for Ruptured Uterus in a Developing Country. Gynecol Obstetric 1:102. doi: 10.4172/2161-0932.1000102
8. Mannini L, Sorbi F, Ghizzoni V, Masini G, Fambrini M, Noci I. Spontaneous Unscarred Uterine Rupture at 15 Weeks of Pregnancy: A Case Report. The Ochsner Journal. 2016;16(4):545-547.