

RUPTURE OF THE UTERUS IN A PRIMIGRAVIDA : A CASE REPORT

B Chigbu, S Onwere, C Kamanu, C Aluka, E Adibe, C Onichakwe

Department of Obstetrics and Gynaecology, Abia State University Teaching Hospital, Aba, Nigeria.

ABSTRACT

Uterine rupture during a first pregnancy is rare. We present the case of spontaneous intrapartum uterine rupture in a 40 year old primigravida with no prior uterine surgery, and a structurally normal uterus. The patient had obstructed labor. Operative findings were a male fresh stillbirth weighing 3800g, massive hemoperitoneum, and an anterior transverse rupture at the lower uterine segment. Repair of the rupture was done without bilateral tubal ligation. Although a rare event, the primigravid uterus is not immune to rupture as exemplified by this report.

Key Words: Primigravida, Uterine rupture

(Accepted 2 February 2009)

INTRODUCTION

Uterine rupture is a catastrophic obstetric complication. Although an uncommon event in developed countries, it continues to be associated with a high rate of maternal morbidity and mortality in developing countries.¹ Rupture of the unscarred uterus is a rare obstetric complication, with an estimated incidence of 1 in 8000-15,000 deliveries.² The risk of spontaneous rupture of an unscarred uterus in a primigravida is very difficult to estimate. The two most informative reports on primigravid uterine rupture come from Dublin, Ireland. Between them, these two reports document no case of uterine rupture among 52,872 primigravid deliveries, attesting to the rarity of this obstetric event.^{3,4} Classic teaching suggests that the primigravid uterus is virtually 'immune to rupture'.⁵ Here we report our experience to highlight the possibility of rupture of the primigravid uterus.

CASE REPORT

A 40 year old primigravid woman presented at our obstetric emergency department at 39 weeks of gestation with the complaint of drainage of liquor of four hours duration and abdominal pain of eight hours duration. She had been in labor at a private hospital but with no progress. The labor was spontaneous in onset and had not been augmented. There was no history of abdominal trauma and no previous gynaecological operations. She had been married for two years and had not been previously investigated for infertility. On examination, the patient was pale and distressed, with a pulse rate of 98 beats per minute (bpm) and blood pressure of 110/70 mmHg. The abdomen was tender, there were no palpable contractions and the symphysis-fundal height was 39 cm. The fetal presentation was

cephalic and above the brim of the pelvis and the fetal heart tone was 110bpm and distant. The vulva and vagina were normal, the cervix was thick and 7 cm dilated. The liquor was meconium stained and the presenting part was high and not well applied to the cervix. A clinical diagnosis of abruption with fetal distress was made and she was admitted to the maternity unit. Her hemoglobin concentration was 8.1 g/dl, two units of screened blood were cross matched and she was taken to theatre for a caesarean section. At laparotomy, there was hemoperitoneum and a complete transverse tear of the uterus 10 cm long was found on the lower segment anteriorly. A dead male fetus that weighed 3800g was extracted. The placenta was fundally placed and the myometrium surrounding the rupture appeared normal. Peritoneal lavage was done and the tear repaired. The woman's post-operative course was uneventful, and she was discharged on her 12th post-operative day. She was counseled on the need for her to book early in subsequent pregnancies and to be delivered by elective caesarean section.

DISCUSSION

The cause of uterine rupture in this patient was possibly obstructed labor. Despite the widely held belief that the primigravid uterus reacts to obstruction with uterine inertia, there are a small number of reports of primigravid uterine rupture in which the only identifiable risk factor was labor-related uterine contractions.^{6,7} Documented risk factors of uterine rupture in primigravid women also include previous undisclosed surgical termination of pregnancy (a phenomenon not uncommon in our environment),⁸ abdominal myomectomy, laparoscopic myomectomy, and myolysis.⁹ Our patient had no previous uterine instrumentation or laparoscopy. Other reported risk factors include morbidly adherent placenta, bicornuate uteri, connective tissue disorder (Ehlers-Danlos syndrome)⁹, adenomyosis, oxytocin

Correspondence: Dr B Chigbu
Email: chigbub@yahoo.com

administration, and use of prostaglandin analogues (misoprostol).¹⁰ Primigravid uterine rupture following external cephalic version (ECV), has also been reported.¹¹

Classically, complete uterine rupture presents with sudden-onset abdominal pain, cessation of contractions, signs of hypovolemia, and fetal compromise.^{9,10} However, it is rare that all these features are evident. Therefore, it is important to maintain a high index of suspicion for uterine rupture in women presenting with some, or all, of these features, regardless of parity. A low index of suspicion for primigravid rupture will lead to delayed interval to surgical intervention, especially if the diagnosis is not initially considered. It has been suggested that rupture of an unscarred uterus is a more catastrophic event than rupture through a previous scar, as the area of rupture is more vascular.² A number of conditions can present with abdominal pain, hypovolemia, and fetal compromise in the primigravid woman. Most commonly, this constellation of findings occurs with placental abruption, which may be concealed in the absence of vaginal bleeding.⁹ Other less common conditions to be considered include subcapsular liver hematoma with or without rupture,¹² rupture of the broad ligament,¹³ splenic rupture,¹⁴ uterine torsion and uterine vein rupture.¹⁵ All these conditions will require surgical intervention, and swift recourse to laparotomy is generally indicated for a patient presenting with these symptoms.

Uterine repair without bilateral tubal ligation was done for this patient because of her parity, the simple nature of the tear and the fact that she was haemodynamically stable. Moreover, in view of the high premium placed on child-bearing and the high infant mortality in most developing countries, a case could be made for conservation of her child-bearing capacity. She was however counseled on the necessity for antenatal care and elective caesarean section in her next pregnancy. Prevention of this disaster requires utilization of standard antenatal and delivery care services, careful labour monitoring by trained birth attendants to facilitate an early diagnosis of abnormal progress in labour and referral, judicious control of oxytocin infusion rates and avoidance of difficult manipulative vaginal deliveries.

REFERENCES

- Odusoga OL, Adefuye PO, Oloyede OAO, Fakoja TA, Olatunji AO.** Uterine Rupture: a Major Contributor to Obstetric Morbidity in Sagamu. *Trop J Obstet Gynaecol*, 2003; 20(2):137-140.
- Miller DA, Goodwin TM, Gherman RB.** Intrapartum rupture of the unscarred uterus [review]. *Obstet Gynecol* 1997; 89:671-673.
- Gardeil F, Daly S, Turner MJ.** Uterine rupture in pregnancy reviewed. *Eur J Obstet Gynecol Reprod Biol* 1994; 56:107-110.
- Cahill DJ, Boylan PC, O'Herlihy C.** Does oxytocin augmentation increase perinatal risk in primigravid labor? *Am J Obstet Gynecol* 1992; 166:847-850.
- O'Driscoll K, Meagher D, Robson M.** Active Management of labor. 4th ed. London: Mosby; 2003.
- Fischer RL.** Spontaneous rupture of an unscarred uterus in a primigravid woman. *Am J Obstet Gynecol* 1996;175:504-505.
- Orji EO, Dayo AA, Malomo OO.** Rupture of the Pregnant Uterus in an Unbooked Primigravida. *Trop J Obstet Gynaecol*, 2002, 19:49-50.
- Musa J, Misauno.** Uterine rupture in a primigravida presenting as an acute abdomen post delivery: a case report. *Nig J Med*, 2007; 16(3):274-6.
- Walsh CA, O'Sullivan RJ, Foley ME.** Unexplained prelabor uterine rupture in a term primigravida. *Obstet Gynecol* 2006; 108:725-727.
- Ezegwui HU.** Uterine rupture in a primigravida when misoprostol was used for induction of labor and subsequent successful pregnancy outcome. *J Obstet Gynecol* 2006;26:160-161.
- Ibekwe PC.** Ruptured Uterus in a Primigravida. *Trop J Obstet Gynaecol*, 2002;19: 47-48.
- Wicke C, Pereira PL, Neeser E.** Subcapsular liver hematoma in HELLP syndrome: evaluation of diagnostic and therapeutic options-a unicenter study. *Am J Obstet Gynecol* 2004; 190:106-112.
- Roy Chowdhury R, Ahern T, McKenzie-Gray B.** Prelabour rupture of the broad ligament in a primigravida[review]. *BJOG* 2004; 111:181.\
- Sakhel K, Aswad N, Usta I.** Postpartum splenic rupture. *Obstet Gynecol* 2003; 102:1207-1210.
- Kuppuvelumani P, Rachagan SP, Khin MS.** Spontaneous intra-partum rupture of uterine vein- an uncommon cause of intra-abdominal haemorrhage. *Med J Malaysia* 1994;49:185-186.