4th Stage Transvaginal Omental Herniation during repeat VBAC complicated by shoulder dystocia: a unique presentation of uterine rupture

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INTRODUCTION

Uterine rupture, defined as full thickness break in the wall of the uterus [1] is the commonest and most serious complication of vaginal birth after cesarean delivery (VBAC) [2]. It occurs in rates of 0.5-9% [2, 3] and is influenced by type of scar, number of scars, induction of labour, increasing maternal age, foetal macrosomia and interdelivery interval less than 18-24 months [2-4]. It is common in women attempting their first VBAC after primary caesarean section (CS) but the risk significantly diminishes with subsequent VBACs [4, 5].

There are few reports of ruptured uterus after a repeat VBAC [2] available in English literature. In this article, a unique case of uterine rupture during a repeat VBAC complicated by shoulder dystocia was discovered during the 4th stage of labour when omentum was noted protruding through the vagina.

CASE REPORT

A 20 year old gravida 3 para 2 Kenyan lady of Africa descent presented in second stage of labour. She had had a caesarean delivery 4 years earlier due to prolonged labour and an uneventful vaginal birth two years later. On examination she was mildly pale, had a blood pressure of 117/70mmhg and a pulse of 90 beats per minute. Haemogram indicated a haemoglobin of 10.2g/dl and platelets of 270000 per microliter. She was having strong uterine contractions and the presenting part had fully descended. No foetal heart rate was discernible on auscultation. The midwives conducted labour but there was shoulder dystocia. The author was called and did a posterior arm delivery after failed McRobert’s manoeuvre. A 3200gm lifeless infant was delivered. A diagnosis of uterine rupture was made when the omentum was noted prolapsing into the vagina after delivery of the placenta. The patient was prepared for laparotomy under spinal anaesthesia. She had normal oxygen saturations and blood pressure intra-operatively. Half a litre of haemoperitoneum was encountered. A 10cm full thickness tear along the lower segment transverse scar (figure 1) was repaired in layers. The operation was uneventful. She was started on a unit of whole blood post operatively which progressed to completion without any transfusion reaction. Eight hours post operatively, and 2 hours after completion of transfusion, she suddenly developed shortness of breath, tachycardia and sweating and died within 30 minutes while undergoing resuscitation. The exact cause of the mortality could not be ascertained and the relatives opted not to have a post mortem done.

DISCUSSION

While a common complication during the first VBAC, uterine rupture decreases significantly during the subsequent VBACs [5]. When present, ruptured uterus is often associated with induction/augmentation of labour [2-4, 6-7], fundal pressure [6] and some form of labour dystocia especially after 7cm of cervical dilatation [1, 5]. Intrapartum, the point of uterine rupture is usually indicated by onset of foetal bradycardia and tender maternal abdomen [4, 6].

Shoulder dystocia has been reported in association with uterine rupture, both as a precipitant [7] and as a result [6]. There are also recorded cases of transvaginal omental and bowel herniation after third stage as the first signs of uterine rupture [7-8]. The case by Sighal and colleagues [7] was associated with prostaglandin E2 labour induction and fundal pressure while Guasch and colleagues
[8] reported a case of previous repeated uterine curettage as the possible risk for the uterine rupture.

The uniqueness of this case lies in its lack of induction/augmentation of labour and in its being a second VBAC. That the woman presented with no perceivable foetal heart rate means the rupture could have occurred earlier whence foetal life was lost. The bradycardia and subsequent loss of foetal heart rate occurs due to placental detachment and uterine contraction [4] following rupture. If this had already happened to this patient, it is logical to imagine that the foetus would have been expelled through the 10cm tear into the peritoneal cavity. There is also the possibility that the shoulder dystocia could have led to the uterine rupture. If this was the case, then the cause of foetal demise remains unknown. The placenta was not yet detached and active management of third stage of labour was done. Overzealous vaginal delivery in the setting of shoulder dystocia can also cause uterine rupture[6]. It is the author’s opinion, though, that there was no overzealous vaginal delivery as he delivered the posterior arm, after failure of McRoberts manoeuvre and suprapubic pressure, without much uterine manipulation.

With excellent haemodynamic status intra-op, the sudden post-operative death of the mother is a shock in an operation gone just well. The last recorded blood pressure was 100/82mmhg, less than an hour before death. The shortness of breath and tachycardia, coupled with the rapidity of deterioration of cardiorespiratory status in the hands of resuscitating staff points to a possibility of pulmonary embolism. Pulmonary embolism is a leading cause of mortality following gynaecologic surgery and cesarean section [9].

In this part of Kenya, it is not uncommon to find women presenting to hospital in advanced labour, not to mention those delivering at home. Had this patient presented earlier for delivery at hospital, probably a non-reassuring foetal heart rate would have been picked and the baby saved through an emergency caesarean delivery. The lost opportunity for a post mortem examination robbed the author of a chance to establish the exact cause of death.

CONCLUSION

It is not common to experience uterine rupture among women attempting repeat VBAC. Uterine rupture is often associated with poor foetal outcome. When it occurs, it may not always follow the known pattern intra-partum. It is important that women with a previous caesarean delivery present to hospital for delivery so that good labour monitoring and appropriate intervention is done. This was a unique case of a successful second VBAC complicated with uterine rupture that did not present classically.

CONSENT

Written informed consent was obtained from the patient patient’s husband for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

COMPETING INTERESTS

The author declares no competing interests.
References
