

Posterior Uterine Wall Rupture In A Non-Labouring Woman With Previous Intact Caesarean Section Scar

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Citation

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Abstract

Background

Posterior uterine wall rupture in the presence of a previous intact caesarean section scar is a rare and unpredictable event. It is associated with high maternal and fetal mortality and morbidity.

Case presentation

A 35-year-old lady, gravida 2, para 1 attended the delivery suit at her 35+6 weeks gestation with severe generalised abdominal pain and irregular contractions. She had a history of laparoscopic excision of rectovaginal endometriosis and bladder endometriotic nodule and emergency caesarean section for an undiagnosed breech. Emergency caesarean section was performed due to fetal bradycardia of 90bpm on CTG, suspecting uterine rupture. During surgery, fetus was found floating on the left upper quadrant of the abdomen and was delivered in poor condition but survived after successful resuscitation. On exteriorising the uterus, a transverse rupture of the entire posterior uterine wall in the lower segment which communicated with the uterine cavity was noted which was successfully repaired.

Conclusion

In this case, thorough examination, adequate knowledge and prompt intervention was successful in reducing the maternal and fetal mortality and morbidity. It also highlights the need to have a high index of suspicion for uterine rupture in women with previous history of caesarean section even if they are not in labour. Literature reports couple of cases with increased risk of atypical uterine rupture in women with previous laparoscopic resection of rectovaginal endometriosis. None the less, more research needs to be done in this aspect as this will affect the management as well as counselling of these patients.

BACKGROUND

Uterine wall rupture during labour in a lady with a history of previous caesarean section is well documented in literature. Rupture usually occurs at the site of the previous caesarean scar. However, posterior uterine wall rupture in the presence of a previous intact caesarean section scar is a rare and unpredictable event. It is associated with high maternal and fetal mortality and morbidity.

Here, we present a case of posterior uterine rupture in a non-labouring woman with a previous caesarean section scar and a history of laparoscopic surgery for severe endometriosis.

CASE REPORT

A 35-year-old lady, gravida 2, para 1 attended the delivery

suit at her 35+6 weeks gestation with severe generalised abdominal pain and irregular contractions. She was previously diagnosed with severe endometriosis, followed by laparoscopic excision of recto vaginal endometriosis and 3 cm endometriotic module from the bladder back in 2013. Her first pregnancy was uneventful, and baby was delivered by emergency lower segment caesarean section due to undiagnosed breech. Postnatal period was complicated by wound infection which took 2 weeks to resolve. She is otherwise fit and healthy with no past medical history.

Her current pregnancy had been uneventful except for her ultrasound scan at 35-week gestation which showed a normal growth velocity but reduced liquor volume on the 2.5th centile. She presented at 35+6 weeks gestation with

constant severe generalised abdominal pain. The pain was constant associated with irregular contractions for 1 hour, but she denies of any scar pain.

She was happy with fetal movement and reported no PV loss. On observation, she was stable, abdominal examination reviewed generalised tenderness and palpable irregular uterine contraction, lasting no more than 60 seconds. Vaginal examination revealed a closed cervix, and possible bradycardia of 5 minutes duration on CTG. The fetal heart rate was similar to maternal heart rate but scan was done to confirm which showed a fetal heart rate of 90bpm. In view of the constant severe abdominal pain and ongoing fetal bradycardia a decision was made for emergency caesarean section suspecting uterine scar rupture.

At caesarean section, intraperitoneal bleeding with large clots of about in excess of 1.4 L was noted. The previous caesarean section scar was found to be intact throughout its length. A transverse incision was made into the lower uterine segment and found to contain only the placenta. On exploration of the abdominal cavity, the fetus was found floating in the left upper quadrant of the abdomen, delivered in a poor condition and handed over to the neonatal team. The placenta was delivered by CCT easily. The uterus was exteriorised and a transverse rupture of the entire posterior uterine wall in the lower uterine segment which communicated with the uterine cavity was noted.

Figure 1



The posterior uterine rupture was closed with vicryl in continuous sutures in 2 layers. The anterior uterine incision was also closed in 2 layers using vicryl. The estimated blood loss was 1.8L. The post-operative haemoglobin was 95.

Mother recovered well and was discharged from hospital after 2 days.

The baby was initially resuscitated successfully (inflation breathes, Oxygen only). Apgars scores were of 4,6 and 9 at 1, 5 and 10 minutes respectively with a venous blood PH of 6.8 and lactate 14 with (arterial PH was not obtained). The baby weighed 3266g and spent 3 weeks in Neonatal Unit and was discharged home.

DISCUSSION

The incidence of uterine rupture in labour following a previous caesarean section in 1 in 200 but can be increased 2-3 fold with induction and augmentation of labour with prostaglandins and oxytocin. Uterine rupture usually occurs in women with a scarred uterus mainly due to previous history of caesarean section. Other risk factors include myomectomy, deep cornual resection, extensive resection of endometriosis developing within the uterine wall, iatrogenic uterine perforation or less commonly placenta increta, congenital anomalies, trauma and sacculating of entrapped retroverted uterus (1)(4). The rupture of the uterus usually occurs at the site of the previous scar.

There have been few case reports of posterior uterine wall rupture in women with previous caesarean section but they have all been in labour with or without induction or augmentation of labour. To The best of the author's knowledge, this is the first case of posterior uterine rupture with neonatal survival in a non-laboring woman who has also not been induced with prostaglandins or oxytocics. However, in our case, she had a previous history of laparoscopic excision of rectovaginal endometriosis a 3cm endometriotic from her bladder for severe endometriosis which were both confirmed by histology as well.

Van De Putte et al reported a case of posterior uterine wall rupture in woman with a previous history of laparoscopic resection of rectovaginal endometriosis (2). It is recommended that the rectovaginal lesion behaved differently from other endometriotic sites (2). The lesion which is usually found in the posterior fornix is invariably attached to cervix and vaginal wall and is frequently difficult to distinguish accurately from the posterior cervix at the cervico-vaginal junction (2). As there is a lack of capsule in deeply invasive endometriosis, there is a risk that the excision is either excessive or incomplete (2). In this case, during surgery, the posterior uterine wall appeared fibrotic and we feel that the previous history of severe endometriosis and the subsequent surgery may have weakened the posterior

wall hence making it susceptible to rupture.

Another possible explanation was put forward in the literature for a posterior uterine rupture is that a rigid scarred anterior uterine wall may cause abnormal distribution of force, predisposing atypical uterine rupture via healthy tissue, such as the posterior uterine wall (5). This explanation may be more relevant to a lady in active labour having strong contractions but in our case, she was not in labour, although she was having irregular contractions which were mild to palpate.

CONCLUSION

In this case, thorough examination, adequate knowledge and prompt intervention was successful in reducing the maternal and fetal mortality and morbidity. It also highlights the need to have a high index of suspicion for uterine rupture in women with previous history of caesarean section even if they are not in labour. Literature reports couple of cases with increased risk of atypical uterine rupture in women with previous laparoscopic resection of rectovaginal endometriosis. None the less, more research needs to be

done in this aspect as this will affect the management as well as counselling of these patients.

DECLARATIONS

Patient written consent taken for publication. No ethics approval needed. No funding. No conflict of interest.

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