



Silent Uterine Rupture of an Unscarred Uterus during Labour- A Case Report

Malavalli Kempasiddaiah Girija, Sumedha Swamy and Maheshwari Marisiddaiah

Department of Obstetrics and Gynaecology, Bharatha Ratna Dr B.R. Ambedkar Medical College & Hospital, Bengaluru, Karnataka, India.

ARTICLE INFO

Article history:

Received: 9 June 2015;

Received in revised form:

10 August 2015;

Accepted: 20 August 2015;

Keywords

Rupture,
Oxytocin,
Unscarred uterus,
Prostaglandin.

ABSTRACT

Uterine rupture is a potentially catastrophic event during childbirth for mother & baby. The incidence of ruptured uterus is 0.3 to 1.7% in scarred uterus, and 0.03 to 0.08% in unscarred uterus. The mortality rate ranges between 1-13% and perinatal mortality between 74-94%. The most common cause for rupture in unscarred uterus is cephalo pelvic disproportion. We present a case of uterine rupture in a patient who had previous normal vaginal birth.

© 2015 Elixir All rights reserved.

Introduction

Uterine rupture is one of the worst obstetric complication, with an increased risk of maternal & perinatal morbidity & even mortality [1][2]. The integrity of the myometrial wall is breached. In an incomplete rupture the peritoneum is still intact. But with complete rupture the contents of the uterus may be in abdominal cavity or broad ligament. Risk factors for uterine rupture in an unscarred uterus are grand multiparity, induction with misoprostol or oxytocin, malpresentation, cephalo pelvic disproportion and previous surgical abortion.

Case report

A 31 yrs, G2 P1 L1 with 38wks with oligohydramnios with premature rupture of membrane with hypothyroidism, reported to labour room on 17/5/2015 at 8.20 pm. Her Obstetrics score was a booked case with last child birth 3yrs. It was a term vaginal delivery of 2.6kg.

On admission vitals normal with reactive NST(non stress test) and labour induction done with intra cervical gel(prostin E2) at 9pm as her uterus relaxed and cervix uneffaced with 1 cm dilation with clear liquor draining. She was monitored for uterine contraction with cervical dilation with foetal heart sounds.

At 8.10 am on 18/5/2015 when her cervical dilation was 4cm, so pitocin drip started at 2.5 U @ 10-12 drops/min. At 9.35 am, foetal heart rate drops upto 80bts with cervical dilation at 6-7cm with cervical caput at -1 station. In view of foetal bradycardia she was planned for emergency section.

Intra-operative findings showed, it was complete rupture of uterus from right side about 5-6 cm in lower uterine segment but foetus still inside the uterus (fig-1). Minimal blood collection in the abdomen noted. Baby was delivered with APGAR score 8 at 1 minute.

Bladder was intact. Uterus was closed in layers with difficult as hardly any uterine tissue was present as bladder was very close to the rupture site(fig-2). Blood stained urine noted after extraction of baby.

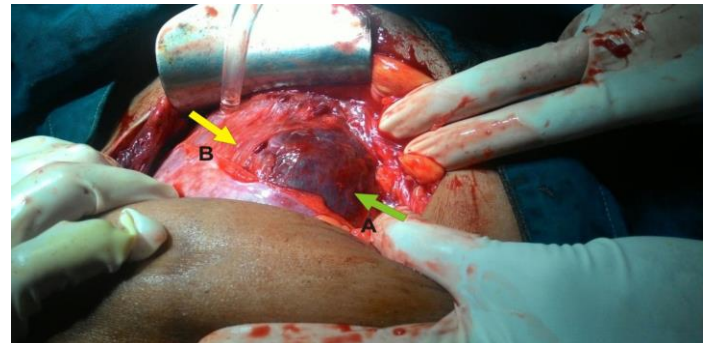


Fig 1. (A) Shows right side lower uterine segment rupture (head inside)
Shows thinned out lower uterine segment partly intact on left side

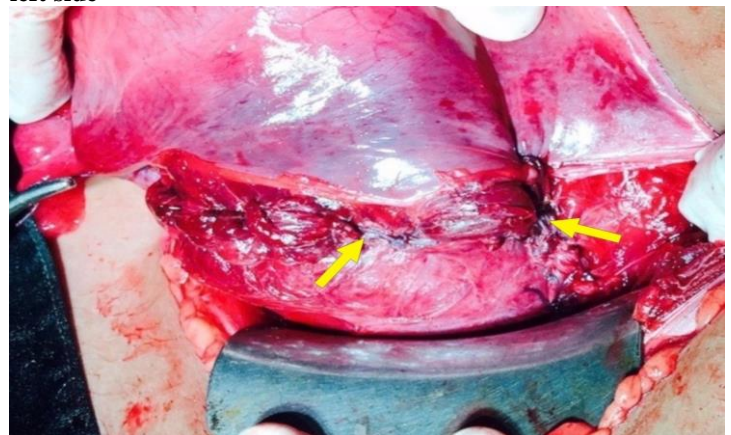


Fig 2. Shows repaired lower uterine segment
Post operatively she needed one blood transfusion and she was discharged on 9th post operative day.

Discussion

Uterus can rupture during pregnancy or delivery. It is commonly seen in a case of previous caesarean section but rupture in unscarred uterus is extremely rare. The incidence may vary from 1 in 8000 to 15000 deliveries[2].

Several risk factors may contribute for rupture of uterus in unscarred like, multiparity, uterotonic drugs, placenta percreta, cephalo pelvic disproportion, malposition, malpresentation, twins, instrumental delivery and presence of congenital uterine anomalies where the rudimentary horns can also lead to rupture[3]. Finally any external trauma can increase risk. Blunt trauma due to direct force leads to rupture about 0.6%. In these cases, fetal death is 100% and maternal death is 10% [4]

The use of uterotonic agents has been associated with an increased risk of rupture. Yap et al found 71.4% of women who experience rupture had labour induced or augmented with PGE2 or oxytocin. Induction of labor with oxytocin appeared a 4.6 fold increased risk of rupture with no oxytocin use among women with previous caesarean section who attempted a trial of labour[5].

Signs and symptoms of uterine rupture include vaginal bleeding, severe uterine or lower abdominal pain, shoulder pain from sub diaphragmatic irritation by blood, disappearance of fetal heart sounds, severe maternal hypotension and maternal shock[5].

Oxorn divides uterine rupture into silent, violent and uterine rupture with delayed diagnosis. Various methods of obstetrical management for rupture include uterine repair, uterine artery ligation and hysterectomy[6]. In our case we have done uterine repair. In very selected cases, suturing of the rupture may be performed when the uterine muscles can be reestablished for the safety of future pregnancy[7].

The diagnosis is primarily a clinical but confirmed with laparotomy. In some cases ultrasound may be useful. The differential diagnosis are abruption, placenta previa, vasa previa, tear in cervical or vaginal and uterine artery rupture. The risk of rerupture seems to range from 4-19% [8][9]. So patient need to be counseled regarding sterilization, that is what we have done in our case report.

Conclusion

Uterine rupture in an unscarred uterus is rare, so careful measures can be taken to diagnose and treat immediately to avoid maternal and fetal morbidity or mortality.

Conflict of interest

The authors declare that there are no conflict of interest

Source of funding

None

Acknowledgment

Authors acknowledge the scholars whose articles are cited and included in references of this case report. The authors are also grateful to authors/editors/publishers of all those articles and journals from where the literature for this article has been reviewed and discussed.

References

- [1] Wang PH, Yuan CC, Chao HT, Yang MJ, Ng HT. Posterior Uterine wall rupture during labor. *Hum Reprod* 2000;15:1198-9.
- [2] Pan HS, Huang LW, Hwang JL, Lee CY, Tsai YL, Cheng WC. Uterine rupture in an unscarred uterus after application of fundal pressure. *J Reprod Med* 2002;47:1044-6.
- [3] Ripley D. Uterine emergencies. *Obstet Gynecol Clin*.1999;26(3):419-434.
- [4] Pearlman MT, Lorenz R. Blunt trauma during pregnancy. *N Engl J Med*. 1990;323:1609-1613.
- [5] Yap OW, Kim ES, Laros RK Jr. Maternal and neonatal outcomes after uterine rupture in labor. *Am J Obstet Gynecol*.2001;184:1576-1581.
- [6] Hughes SC, Levinson G., Rosen MA. Shnider and Levinson's Anesthesia for Obstetrics. 4th ed. Philadelphia, Pa: Lippincott Williams & wilkins;2002:365-367.
- [7] Oxorn H. Human Labor and Birth. 5th ed. Norwalk, Conn: Appleton-century-Crofts; 1986:541-546.
- [8] Aguero O, Kizer S. Obstetric prognosis of the repair of uterine rupture. *Surg Gynecol Obstet*. 1968;127:528-530.
- [9] Steth S. Results of treatment of rupture of the uterus by suturing. *J Obstet Gynaecol Br Commomw*. 1968;75:55-58.