

UTERINE RUPTURE: A CASE REPORT

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ABSTRACT

Uterine rupture is a rare obstetrical emergency during an intrapartum period which may occur either in the vaginal or cesarean delivery. Uterine rupture is more commonly associated with a previous cesarean delivery. The overall incidence of uterine rupture is less than 1%. Guidelines exist regarding the mode of delivery in the case of a previous cesarean section and, when followed, have greatly reduced the chances of uterine rupture. A case report of complete uterine rupture in a parturient admitted in labor ward is presented.

Keywords: *Uterine rupture; Maternal and Neonatal morbidity/mortality; Obstetric anesthesia*

INTRODUCTION

Uterine rupture is an unusual condition, but leads to a serious child birth complication that can occur during vaginal delivery. During labour, the baby moves through the mother's birth canal by the pressure builds inside the uterus which leads the uterus to tear. Often, it tears along the site of a previous caesarean delivery scar. When an uterine rupture occurs, the uterine contents and the baby may spill into the mother's abdomen which can cause severe bleeding to the mother and fetal distress.

The incidence of uterine rupture varies globally from 0.012 to 0.3 %, with higher in developing countries. Among the several predisposing factors; a history of previous cesarean delivery remains the most important etiological factor. Neonatal mortality is higher in women who present with uterine rupture when compared with the general obstetrical population, at rates of 51/1000 and 1.4/1000 respectively. A cesarean deliveries rate has increased over the past two decades in most

countries, varying from 15 % to 40 % of deliveries, with Northern European countries having the lowest rates.

CASE REPORT

A 28 years old female with a history of previous cesarean delivery, admitted in labour ward at 38 weeks & 1 day of gestational week with complaints of abdominal pain and draining per vagina from previous day night and she had 2 episodes of vomiting which was brownish in color. On general examination she was conscious and oriented whereas in abdominal examination it shows abdomen is longitudinally distended and fetal parts felt superficially while palpating there is a diffuse tenderness and on auscultation there is an absence of fetal heart rate. Ultrasonography reveals that fetus is situated in the abdominal cavity towards left, uterus retracted along with placenta to right side with hemoperitoneum and fetal bradycardia. She was diagnosed with ruptured uterus and abdomen was opened by a

pfannenstiel incision and moderate hemoperitoneum maintained. The uterus was completely ruptured; the slit was closed in layers, bilateral sterilization done and peritoneal toileting done. The mother received 1 unit of FFP, 1500 ml of RL and > 4 units of blood. Vital signs, haematocrit, platelet count, fibrinogen levels, prothrombin time, partial thromboplastin time, lactate levels as well as arterial gas and pH analyses were within the normal range during and after surgical exploration. Two hours after the surgery she was extubated in the recovery area and transferred to the postnatal ward for surveillance. Postoperatively mother was conscious and the uterus was well contracted and no soakage. She delivered a male baby with the weight of 3.08kg. The new born had an Apgar score of 2/10 & 5/10 at 1 and 5 minutes. Intubated and shifted to NICU. Bladder catheterized and Umbilical artery catheter & Umbilical vein catheter in situ after two days weaning process started with CPAP mode and extubated. Urinary Catheter and UAC & UVC removed. After the condition of mother and baby was stable, they were discharged from the hospital.

DISCUSSION

The management of uterine rupture should be prompt in order to prevent lethal complications. A stoppage in seeking medical attention can be costly because of the many threats poses to the life of the patient.

During postpartum period the involution of uterus will be 1 cm/day and should be difficult to palpate by the midwife after 2 weeks. Though uterine rupture usually manifested with its own acute

signs and symptoms along with hemodynamic instability, this case infers that it can present through mild symptoms of life-threatening complications like infections. Infection of the female reproductive tract occurring from the end of labor until six weeks postpartum is defined as puerperal sepsis. In the presence of uterine rupture, the infection extends into the peritoneal cavity through the scar imperfection, leading to peritonitis, which was characterized by vaginal bleeding, and involvement of the peritoneal cavity, symptoms of abdominal infection like abdominal pain, distension, or fever. If we fail to diagnose the symptoms earlier this leads to bacteremia and septic shock. Ultrasonography is the best choice for diagnosing uterine rupture. It reveals that fetus is situated in the abdominal cavity towards left, uterus retracted along with placenta to right side with hemoperitoneum and bradycardia of fetus.

When a Uterine rupture is diagnosed by ultrasound laparotomy is recommended. In this case, abdomen was opened by a pfannenstiel incision and moderate hemoperitoneum encountered. The uterus was completely ruptured and dent was closed in layers, bilateral sterilization done and peritoneal toileting done.

Nearly 14% to 33% of women were undergoing hysterectomy surgery due to uterine rupture. When the mother's uterus is viable and it won't endanger her life, then the uterus saving procedure was desirable. For these types of patients, administration of antibiotics, along with surgical repair, and debridement of necrotized tissues was required as a treatment protocol. Hence, it is

necessary to set the treatment plan based on the conditions of each patient. By scrupulous intrapartum monitoring, advancement in medical care and a team approach, we can reduce the incidence of Maternal and Neonatal mortality and morbidity.

MANAGEMENT

Uterine rupture is considered as an obstetric emergency. Therefore, it is vital to first carry out life saving approach, and call the necessary team members – including senior obstetricians, midwives and anesthetists, and, where appropriate, call for the Obstetric Hemorrhage Protocol.

Resuscitation

- Protect the airway (it reduced with levels of consciousness)
- 15L of 100% O₂ through a non-rebreathe mask
- Assess the circulatory compromise
 - ✓ Use (14G) cannulas for collecting blood samples
 - ✓ Start circulatory resuscitation.
 - ✓ Additional blood products required, like fresh frozen plasma, platelets and/or fibrinogen.
- Monitor patient's Glasgow coma scale
- Assess patient to identify any other bleeding sources

Surgical Management

Deliver the fetus via Caesarean section, and the uterus is either repaired or removed

(hysterectomy). The decision-incision interval in operative intervention should be less than thirty minutes suggested by UK guidelines. In this case the parturient woman was taken immediately after USG to OT (Within 20 minutes) and Caesarean was done with bilateral tubal ligation.

CONCLUSION

Rupture of the pregnant uterus is an unusual condition but it is a severe obstetrical event, which is associated with high perinatal and maternal morbidity and mortality. It often presents asymptomatic, which makes it difficult to detect and diagnosis is based on clinical and physical examination only. The main risk factor is a previous caesarean section (the “scar rupture”), but a pregnant woman presenting with severe abdominal pain, should always be considered even if she is a primi gravid patient.

ETHICAL APPROVAL

The parturient woman has given permission and obtained informed consent concerning the publication of this case report for the scientific purpose.

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