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Case Report

A rare case report of rupture uterus with full fetus in bladder

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ABSTRACT

Uterine rupture is the primary concern when a patient chooses a trial of labour after a caesarean section. Bladder rupture accompanied by uterine rupture should be taken into consideration if gross haematuria occurs. We report the case of a patient with uterine rupture during a trial of labour after cesarean delivery. Her course of labour went into obstructed labour and failed forceps delivery for which she was referred to our tertiary care hospital. Intra-operatively she was found to be a case of rupture uterus with rupture of bladder and full fetus lying in the bladder which was delivered by giving incision on the anterior bladder wall. Patient had subtotal hysterectomy with repair of bladder done with suprapubic cystostomy. Her postoperative recovery was uneventful. Bladder injury and uterine rupture can occur at any time during labour. Gross haematuria immediately after delivery is the most common presentation. The incidence of rupture uterus and associated bladder injury is on increase due to higher rates of caesarean section. But there are no case reports on full fetus inside the bladder, so it is justified to report this case.

Keywords: Rupture uterus, Obstructed labour, Failed forceps, Subtotal hysterectomy

INTRODUCTION

Uterine rupture in pregnancy is rare and often a catastrophic complication with high risk of fetal and maternal morbidity and mortality. Rupture of uterus can occur in a scarred or an unscarred uterus. The prevalence of rupture uterus tended to be lower for countries defined by the United Nations as developed than the less or least developed countries. For women with previous caesarean section, the prevalence of uterine rupture reported 1%, the risk varies according to the type and location of previous uterine incision.¹ An interval less than 6 months was associated with increased risk of uterine rupture.² Rupture uterus can involve adjacent organs most common being the urinary bladder which is an acute obstetric emergency.

CASE REPORT

A 30 years G₂P₁ at term gestation with previous caesarean section was referred to our tertiary care hospital as a case of prolonged second stage of labour with failed forceps. On examination she was conscious, oriented, afebrile, dehydrated, having moderate pallor, PR-120/min, BP-90/70 mm of Hg, with no respiratory & cardiovascular abnormalities. On abdominal examination there was generalised abdominal tenderness, loss of uterine contour, fetal parts felt superficially and fetal heart sounds not localised. Foleys catheter was in situ with haemorrhagic urine. On P/V examination cervix fully effaced, os fully dilated, membrane absent with blood stained liquor coming out and head station at 0. Suspecting uterine rupture along with bladder injury urgent laparotomy under general anaesthesia was planned

with one unit of blood in hand. Abdomen opened by longitudinal incision. The intraperitoneal anatomy was totally distorted. Incision was given on anterior wall of bladder thinking it to be anterior uterine wall and a female dead fetus weighing 2.5kg delivered [Figure 1]. It was found that bladder was bivalved as the head was entrapped completely inside the bladder cavity due to uterine rupture at previous scar site along with posterior bladder wall rupture. As uterine repair was not possible subtotal hysterectomy done by clamping, cutting and ligating the supports of uterus. Bladder was bivalved both anteriorly and posteriorly [Figure 2]. Posterior angle extended up to bladder neck. Infant feeding tubes were given in both ureteric orifice. Bladder closed in two layers by urologist. Both suprapubic and per urethral catheter given. She received one intraoperative and one post-operative blood transfusion. Except Hb (9.1 gm %), rest routine blood and urine reports were within normal limits. Her post op period was uneventful. Her suprapubic catheter removed on 14th post-operative day and she was discharged. She came for her first follow up on 30th post-operative day; her urethral catheter was removed. She had no micturition difficulties & urinary retention following that.



Figure 1: Distended bladder with entrapped fetal head.



Figure 2: Bivalved urinary bladder anterior to uterus.

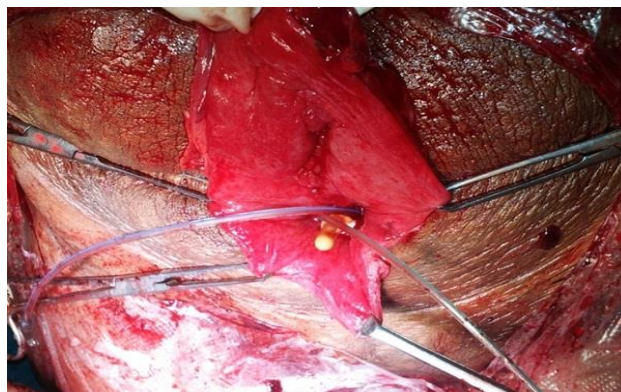


Figure 3: Repaired posterior bladder wall with two infant feeding tubes in both ureteric orifice after subtotal hysterectomy.

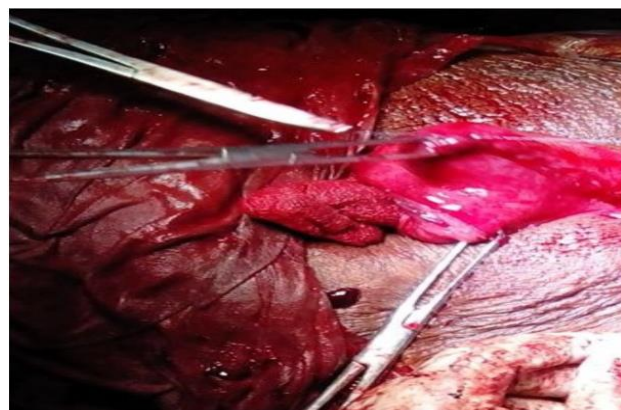


Figure 4: Repaired anterior wall of bladder.

DISCUSSION

The clinical presentations of concomitant uterine and bladder rupture at the time of VBAC are variable and depend on the time, location and type of uterine rupture that extends onto the adjacent organs. Severe signs and symptoms can result when a complete rupture occurs intrapartum, including a non-reassuring fetal heart tracing, loss of the presenting part on pelvic examination, change in uterine shape, cessation of uterine contractions, abdominal pain, vaginal bleeding, and even maternal shock.⁴⁻⁷

Rupture of a previous caesarean section scar is frequently diagnosed on the basis of altered fetal heart rate pattern, vaginal bleeding, maternal tachycardia or unusual pain during labour. In most cases which occur in a hospital setting, timely laparotomy results in safe delivery of the baby and repair of the uterus. A recent review of uterine rupture limited to women with previous caesarean section in developed countries reported increased risk of uterine rupture and perinatal death for women undertaking trial of labour compared with elective repeat caesarean section.³ A major factor in uterine rupture is obstructed labour. In less and least developed countries, uterine rupture is more prevalent than in developed countries. In

developed countries most uterine ruptures follow caesarean section. Future research on the prevalence of uterine rupture should differentiate between uterine rupture with and without previous caesarean section. In less and least developed countries, uterine rupture is an important cause of maternal mortality, accounting for as many as 9.3% of maternal deaths in one Indian study.⁸

For estimating the likelihood of developing rupture of a scar during subsequent labor, some investigators have suggested using sonography as a tool for evaluating the risk of VBAC.^{9,10} The thickness of the lower uterine segment measured by transabdominal or transvaginal sonography is correlated with the risk of rupture.¹⁰ However, the critical cut-off value for a safe lower segment thickness is controversial. Bergeron et al¹⁰ concluded that a full lower uterine segment < 2.3 mm in thickness measured between 35 and 38 weeks of gestation is associated with a higher risk of complete uterine rupture during VBAC. To date, there have been no isolated bladder ruptures reported in gravidas undergoing VBAC. Therefore, in addition to the criteria issued by the American College of Obstetricians and Gynecologists in 2004, measurement of the full lower uterine segment thickness may be useful to evaluate the risk of simultaneous uterine and urinary bladder rupture.

The management of uterine and bladder rupture usually requires laparotomy because of fetal distress or an arrest of labor.¹¹⁻¹⁴ In VBAC patients, rupture results from traumatic separation of the dense adhesions between the uterus and bladder during labor. Thus, expectant management might result in poor healing, which in turn could lead to the formation of vesicouterine fistulas. Once suspected, cystoscopy should be performed to identify the bleeding source and possible bladder and uterine rupture. In addition to uterine rupture, the possibility of bladder injury should be included in the patient's antepartum counseling for VBAC. Careful selection of candidates for a trial of labor is the most important issue to prevent an unwanted outcome.

CONCLUSION

The high maternal morbidity, mortality and fetal mortality that follow uterine rupture calls for an integrated effort to prevent its cause. Good antenatal care, early diagnosis of high risk obstetric cases, timely referral, and availability of transportation, increased patients awareness on birth spacing can help us curtail this problem of increased maternal mortality and morbidity due to rupture uterus and rupture bladder.

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