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Cesarean Section from posterior wall of uterus?????

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Abstract
Torsion of the pregnant uterus, at term, is a very rare event in obstetric practice. It is associated with high perinatal mortality but in our case report the torsion remained asymptomatic till 3rd trimester. We report a case of singleton term pregnancy of 38 weeks in breech position, with mild polyhydramnios and expected baby weight of 3.7 kg. Caesarean section through the posterior uterine wall necessitated by 180 ~ dextro-rotation of uterus with facing anterior. Intraoperative findings show that left sided tubes and varies were pulled up towards right side; bladder and utero-vesical fold could not be identified. Baby was in transverse lie with back posterior and was delivered by breech extraction. Baby did not cry immediately but cried after resuscitation. Baby APGAR score was good and baby weight was 3.6 kg.
Keywords: *Torsion, Mortality, Breech position, Polyhydramnios, Resuscitation, APGAR score.*

Introduction

When any part of the foetus other than vertex presents the case is one of mal-presentation. The aetiology which interferes with the normal ovoid shape of the fetus or changes in the shape of the uterus may result in a mal-presentation, such as breech. Factors that have been associated with breech presentation include nulliparity, uterine abnormalities, low insertion of placenta, polyhydramnios, multiple pregnancies, prematurity, decreased fetal activity, fetal abnormalities and fetal death[1].

In pregnancy up to 30^0 dextro-rotation of the uterus in its long axis is fairly common and is usually attributable to the presence of the spinal column, sigmoid colon and rectum. Levorotation can also occur but to a lesser extent, with a 25% incidence reported by Bakes and Axelsson[2]. Axial rotation (torsion) becomes pathological if it exceeds 45^0[3] or is severe enough to produce symptoms[4].

We describe the clinical sequence of events in a case of 180^0 dextro-rotation of a gravid uterus, which culminated in an emergency caesarean section through the posterior uterine wall.

Case Report

A 34 years $G_4P_3L_3$ female was first visit at 32 weeks of gestation and registered in our private nursing home at Mumbai for delivery. She previously had spontaneous vaginal deliveries. Her last menstrual period (LMP) date was 11/10/2017 and estimated date of delivery (EDD) was 18/07/2018. She presented us with known case of pregnancy induced hypertension (PIH) with blood pressure controlled on Tablet Labet 100 mg TDS and Tablet Ecosprin 75 mg after lunch. Her first and second trimester routine antenatal profile was normal. Her 1st trimester USG (obstetrics) were normal and revealed no anomaly. However in 3 rd trimester, she had diabetes mellitus (DM) with mildly raised sugars, controlled on diet. Also her ANC'S visits revealed normal examination findings. However, on 3/07/2018, USG (obstetric) revealed single line gestation of 38 weeks with baby in breech presentation, with mild polyhydramnios with expected baby weight of 3.7 kg.

She was advised urgent admission for emergency LSCS, in view of multiparty with breech presentation with PIH with overt DM. However, patient refused for admission and formalities of discharge against medical advice done. Next day on 4th July 2018 morning, she presented with leaking per vaginum (PV) with labour pains.

On examination, uterine contours had changed with fullness in flanks transversely with empty Pawlik's grip. FHS- 60 bpm with pick up to 100 bpm on O2 and IV fluids, BP- 170/100 mmHg, RBS- 100, Pulse -120/min, RR- 60/mm, p/v 4 cm dilated with cord prolapse. Leak present with clear liquor.

Decision of emergency LSCS taken and cord was reposited with moist saline mop, high risk consent in view of guarded maternal and poor neonatal outcome was taken. After anesthesia LSCS was started. On opening abdomen, intraoperative findings were- 1) Uterus had dextro-rotated through 180^0 with posterior wall facing anteriorly, 2) Left sided tubes, ovaries and round ligament were pulled up towards right side, 3) Bladder and utero-vesical fold could not be identified. De-torsion was not possible.

However, in view of fetal distress, incision was taken on visualized uterine segment as posterior uterine wall was very thick; incision was extended laterally to raise flaps laterally. Baby was in transverse lie with back posteriorly and was delivered by breech extraction. Baby delivery was difficult and baby did not cry immediately but cried after resuscitation. Baby APGAR score was good and baby weight was 3.6 kg. After removing placenta, entire anatomy was oriented and cut uterine segment were sutured in two layers. Hemostasis was checked and LSCS completed.

Patient had an uneventful recovery and discharged home with healthy baby. Advices on discharge to have permanent method of sterilization and for subsequent pregnancy suggested early elective LSCS.

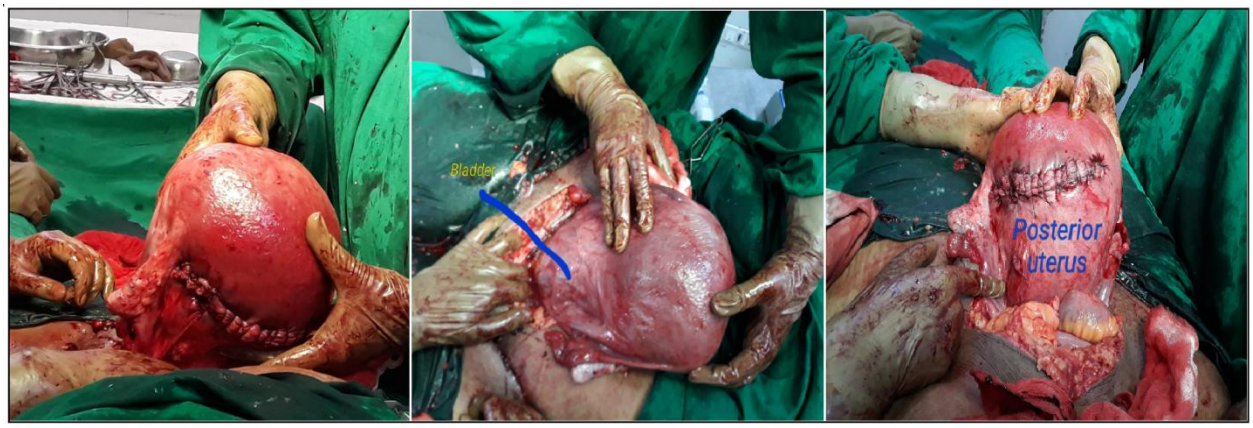
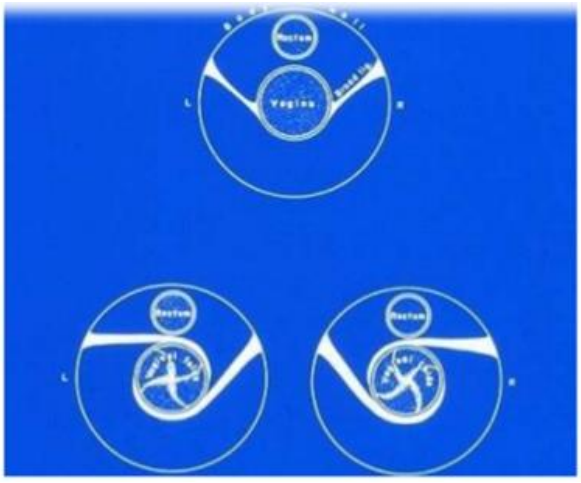


Figure 1: 180-degree uterine torsion

Discussion

Uterine torsion is the twist of the uterus between the cervix and uterine body. A minor degree of rotation of the pregnant uterus is fairly common during the third trimester of pregnancy but is deemed rather negligible. In contrast, an axial rotation of more than 45 degrees is quite unusual and its occurrence is defined as uterine torsion. The unusual occurrence of this latter condition during the puerperal period is often associated with predisposing factors altering the shape or position of the uterus or adnexa[5].

The exact mechanism and aetiology of torsion is not known. Uterine torsion may develop at any maternal age and gestation weeks during pregnancy without an underlying cause[6]. Uterine fibroids, adnexal masses, uterine anomalies, fetal presentation anomalies, polyhydramnios, maternal connective tissue elaxity have been reported to cause uterine torsion[7,8]. In our case; polyhydramnios associated with PIH with overt DM and presence of breech presentation might be risk factors for uterine torsion. The extent of the torsion can range from 60 to 720 degrees, with dextrorotation in two-third and levorotation in one-third of cases[3]. The relative portion of the broad ligament is diagramed for A) 180 degree right (clockwise) uterine torsion (lower left), B) 180 degrees left (counter- clockwise) uterine torsion (lower right).



The incidence of uterine torsion is quite low. It causes serious maternal and fetal morbidity and mortality approximately with a rate of 12-18%[9].

Labbe published the first case of uterine torsion in 1876. There have been very few cases since this first publication, all nearly exclusively regarding torsion of the uterus occurring during pregnancy. Nesbitt and Corner[4] reviewed this subject in 1956 and found only 107 cases in the world's literature. Jensen[6], during the long period between 1876 and 1992, found 212 cases. Between 1996 and 2006, Wilson et al[9] found another 38 cases. A Medline search revealed only 46 cases reported since 1985 and none with a rotation $\geq 270^0$. Therefore, there are less than 300 cases published in the last 150 years[10].

The clinical presentation of uterine torsion is variable and non-specific. Moreover, it is not possible to clarify why uterine torsion occurs, but numerous abnormalities have appeared with uterine torsion; most often, abnormal fetal presentation, myoma uteri and uterine malformations. The most usual symptoms of uterine torsion are birth obstruction, abdominal pain, vaginal bleeding, shock, and urinary and intestinal symptoms[6]. Symptoms depend on the degree of torsion, the speed at which the torsion develops, duration of torsion, and stage of pregnancy, labor or puerperium. In around 11 percent of cases torsion is asymptomatic[6].

Differential diagnosis is almost always obstetric, mostly as spontaneous uterine rupture or obstructed labor. The diagnosis should be made promptly for two reasons: (1) to save the fetus, and (2) to prevent ischemic uterine changes which could lead to uterine necrosis indicating hysterectomy[10]. Ultrasonography (USG) can be used in the diagnosis of uterine torsion. Changes in known placental localization, loss of flow in the uterine artery dopplers, and abnormal localization of the ovary can be detected at ultrasonography [11]. In situations where the immediate operation is not required, Nicholson et al[12] suggested use of pelvic magnetic resonance imaging (MRI) to diagnose uterine torsion, which may show an X-shaped configuration of the upper vagina/ on bladder. However an ultrasound or MRI would only be of use if there is a high index of suspicion.

Definitive diagnosis: at laparotomy

Considering the management of uterine torsion, all cases should have laparotomy. Management during early pregnancy is manually twisted with correction of precipitating factors like myomectomy or ovarian cystectomy. If uterine necrosis occurs, it is treated with hysterectomy. At term pregnancy: manual correction followed by delivery of fetus by caesarean section is treatment of choice. In cases where correction not possible deliberate posterior hysterotomy is done for delivery of fetus. Both vertical and transverse posterior incision described. Risk of rupture in transverse incision is theoretically less. Bilateral plication of round ligament can be done to prevent immediate recurrence Laparoscopy and hysteroscopy following a posterior uterine incision has shown appropriate healing but the lack of substantive evidence supporting the safety of vaginal birth after a posterior hysterotomy has prompted some authors to pursue contraception (tubal ligation) at the time of operation or recommend an elective caesarean section at early term gestation.

The impact on intra-abdominal adhesion formation and uterine rupture/dehiscence with a posterior hysterotomy is unknown[13]. Studies also suggested bilateral plication of uterosacral ligaments to prevent long term recurrence. Patients having posterior incision –should have repeat caesarean section in future pregnancy[14].

In our case decision of emergency LSCS was taken through the posterior uterine wall necessitated by 180 ~ dextro-rotation of uterus with facing anterior. It is important to determine the degree of torsion to avoid bladder injury and ureter injury at the back of the uterus during operations where detorsion cannot be performed. In such cases, the baby can be delivered in three ways: 1) Vertical uterine fundal incision, 2) Uterine posterior wall incision, 3) High transverse incision from the anterior wall of the uterus[15]. In our case, the uterus could not be detorsioned due to advanced degrees of torsion. We delivered the fetus with a uterine posterior wall incision by observing and protecting the bladder plication. In order to reduce the recurrence rate of uterine torsion; round ligament plication was recommended in the early postpartum period[16] and uterosacral ligament plication was recommended in the late postpartum period[14]. Although we did not perform any plication in our case, we observed no early postpartum complications.

Conclusion

To the best of our knowledge, this is the first case with regards to uterine torsion, developing twisting and omit of uterine atony after the operation. Uterine torsion is a rare obstetric emergency, potentially dangerous, require high index of suspicion. Transverse incision on posterior uterine segment is a safe choice of treatment. However, it is important to determine the degree of torsion and place of the uterine incision (whether the anterior wall or the posterior wall of the uterus) for avoiding complications.

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