Case report

Uterine Torsion: A Rare Obstetric Emergency

Abstract:

Uterine torsion is the rotation of the uterus by more than 45 degrees around its long axis. It is considered to be a rare and fatal obstetric emergency which can occur at any gestational age with varied presentations. Most of the time this condition is recognized at cesarean section and management is to detort the uterus, deliver the baby and act upon the cause if any. The first patient was a great grand multipara with bad obstetric history presented at term with transverse lie. Bicornuate uterus with torsion was diagnosed intraoperatively, detorsion was attempted successfully and cesarean section was performed. The second patient was a primigravida with multiple fibroids and complete placenta previa in whom emergency cesarean section was performed. Torsion of the uterus was diagnosed in this case after the baby was delivered by incision on the posterior wall. The uterus was then detorted and the associated intra-operative complications were managed. Thus, in both the cases, immediate corrective measures led to good feto-maternal outcomes.

Introduction:

Uterine torsion is one of the unusual complications in obstetrics which is almost impossible to diagnose antenatally. This obstetric emergency is considered to be the rotation of gravid uterus by more than 45 degrees along its long axis. It is difficult to estimate the prevalence of this condition as most of the data is in the form of anecdotal case reports. Being a life-threatening condition, it necessitates a high level of suspicion for diagnosis and prompt intervention to optimise results. The reported maternal mortality is around 9% for uterine torsion at term and overall perinatal mortality rate noted is 12%.[1] Such rare entity is said to be "once in a lifetime diagnosis" for an obstetrician but we describe two such cases which we encountered in a span of less than 18 months.

Case descriptions:

Case 1: A forty-two-year-old G13P11L6A1 presented in our outpatient clinic in her 38th week gestation with history of previous five term intrauterine fetal demise (all home deliveries). She neither had previous antenatal visits nor any obstetric sonography done during this pregnancy. Her past medical and family histories were insignificant. There was no abnormality detected on her general and systemic examination. Per abdomen examination revealed term gestation with transverse lie and clinical suspicion of oligohydramnios. She was admitted for safe confinement and sonography confirmed a single live gestation of 37+1 weeks in transverse lie with severe oligohydramnios of AFI less than 3 cms. After counselling, the patient was taken up for emergency cesarean section. Under spinal anesthesia, Pfannenstiel incision was given followed by opening of abdomen in layers. Distended small bowel loops were seen and complete dextrorotation of the uterus by 180 degrees around its longitudinal axis was noted. Skin incision was converted into an inverted T shaped configuration and the uterine torsion was manually corrected. Baby was delivered by taking the incision on lower uterine segment. Negligible liquor was noted and baby cried immediately after birth with APGAR score of 7 and 10 at 1 and 5 minutes respectively. At the time of suturing the uterine incision, a non-gravid uterine horn was identified on the left side. The uterus and abdomen were closed in the usual manner and the blood loss was

calculated to be less than 500 ml. Her post-operative period was uneventful and she was discharged with baby on day 5 of cesarean section.

Case 2: A twenty-nine-year-old Primigravida with type 4 placenta previa and multiple uterine fibroids presented in emergency with complaints of spotting per vaginum at 36 weeks gestation. This patient had regular antenatal visits and was diagnosed to have multiple myomas largest being 3 cms in her first trimester scan. She was admitted in her 17th week gestation with complaints of pain in abdomen and was treated symptomatically. Sonography confirmed multiple myomas largest being 6 cm x 6 cm size in second trimester. Patient followed up regularly with uneventful antenatal period and similar findings till she came to emergency. Patient was admitted and managed conservatively but had to be taken for emergency cesarean section as she went in labor three days later. Intraoperatively, enlarged blood vessels were noted in lower uterine segment which were thought to be due to placenta previa. Uterine incision was taken and baby was delivered after cutting through the placenta. Baby cried immediately after birth with APGAR score of 7 and 8 at 1 and 5 minutes respectively. Placenta was delivered completely but active bleeding was noted. Uterus was exteriorized and multiple myomas were noted largest being around 6 x 7 cms near the incision line. Close inspection revealed 180 degrees of uterine levo-rotation with uterine incision on the posterior wall. Further exploration revealed complete transection of the cervix. Spinal anesthesia was converted to general anesthesia and relatives were counselled about the intraoperative findings and sos need for hysterectomy. Decision was taken to give a trial to reconstruct the anatomy initially as the relatives were keen to preserve the reproductive functions. 18G Foley's catheter was introduced intravaginally into the uterine cavity and the foleys bulb was inflated with normal saline. Cervix was sutured circumferentially around the foleys tube in interrupted manner. Myomectomy was performed and uterine incision was sutured in two layers. Bilateral adnexa were normal. Hemostasis was achieved and abdomen closed in usual manner. Estimated blood loss was approximately 1.8 litres for which 4 units of whole blood were infused per – operatively (2 intra-operative and 2 post-operative in first 24 hours). Patient was shifted to ICU and closely monitored for next 24 hours and later shifted to ward in stable condition. Patient and her baby had an uneventful postnatal period and were discharged on day 7 without any further complications. The patient followed up regularly in outpatient clinic after a week, a month, 6 months and a year. Postpartum sonography revealed no abnormality. Patient resumed her menses 5th month postdelivery.

Discussion:

Uterine torsion occurs at the transition of the cervix and the corpus. Most of the cases published generally include uterine torsion at 180 degrees though cases with torsion of more than 45 degrees to 720 degrees have been reported. Two-thirds of the cases seem to occur as dextrorotation but levorotation has also been seen. Majority of the torsions occur in third trimester; the earliest gestational age is recorded at 6 weeks and latest at 43 weeks. Such torsions are known to cause vascular compromise and are dangerous for both the mother and the fetus.[2]

The main etiological factors for uterine torsion are considered to be the obvious asymmetry due to either congenital or acquired deformities and the traction due to the pelvic tumors or adhesions. Pregnancy also adds on to the congenital and physiological rotations and obliquities of the uterus. The known predisposing factors associated with uterine torsion are abnormal fetal presentation, uterine anomalies and myomas. The most common abnormal fetal presentation reported is transverse lie while the most common uterine anomalies noted

are didelphys and bicornuate uterus. The sequelae to pathological uterine torsion include stenosis and compromise of the uterine vasculature which leads to poor perfusion of placenta subsequently. This further leads to abruption, fetal distress and finally fetal demise if emergency steps are not taken.[3]

The symptoms are generally related to the duration and degree of torsion and can be categorized as acute, subacute or chronic. The patient can be completely asymptomatic or may present with abdominal pain, irregular or hypertonic uterine contractions, bleeding per vaginum or in shock. Intestinal symptoms may include nausea, vomiting or loose motions. Urinary symptoms may include frequency, urgency, oliguria or even hematuria.[3]

Antenatally, imaging techniques can diagnose uterine torsion. Sonography can pick up transposition of the placental bed compared to previous scan with ovarian vessels anterior to uterus on doppler recognition. MRI demonstrates "X" configuration in upper vagina.[1] On per vaginal examination, uterine pulsations might be felt in anterior or posterior fornix with twisted vagina and constriction ring in the cervix. But such diagnosis is seldom established pre operatively and these patients are generally taken up for emergency cesarean in view of fetal distress, antepartum hemorrhage, obstructed labor, uterine rupture or torsion of pelvic tumors.[2]

Maternal and fetal prognosis is related to the stage of pregnancy at which uterine torsion occurs and also on the degree of torsion. Giving a trial of vaginal delivery for such patients can be disastrous. Laparotomy plays an imperative role in the management of uterine torsion. Intra-operative diagnosis is generally made by identification of anatomical landmarks. Management is detorsion followed by cesarean section and removal of any tumors. In cases where the surgeon is not able to reposition the uterus anatomically, deliberate incision should be taken on the posterior wall to decrease the high likelihood of fetal mortality. In asymptomatic patients where the diagnosis is not established antenatally, the decision for cesarean section is delayed. This delay might lead to ischemia of reproductive organs and finally compromise the fertility of these patients.[4]

Though both of our cases were diagnosed intraoperatively, in the first case detorsion was successfully attempted before the incision on the uterus. In the second case, we observed the lower uterine segment seemed very vascular but we attributed it to the complete placenta previa and hence we took the uterine incision on the supposedly anterior surface which later we realized was the posterior surface. Eventually we reconstructed the anatomy but we still accept the fact that the morbidity of the patient was increased. Prompt recognition and intraoperative vigilance helped us in having successful maternal and fetal outcome in both the cases of such a rare obstetric emergency.

Conclusion:

The two cases described above especially the second case were a near miss situation which highlights the grave consequencesthat can be associated with uterine torsion. Preempting the diagnosis, prompt recognition of this condition and intraoperative skills and vigilance can considerably reduce the morbidity and mortality that can be caused by this dreadful obstetric complication.

References:

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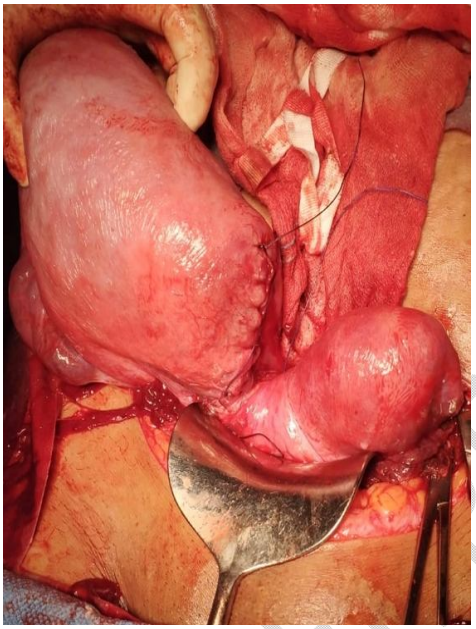

Fig 1: Bicornuate uterus after closure of uterine incision (Case 1)

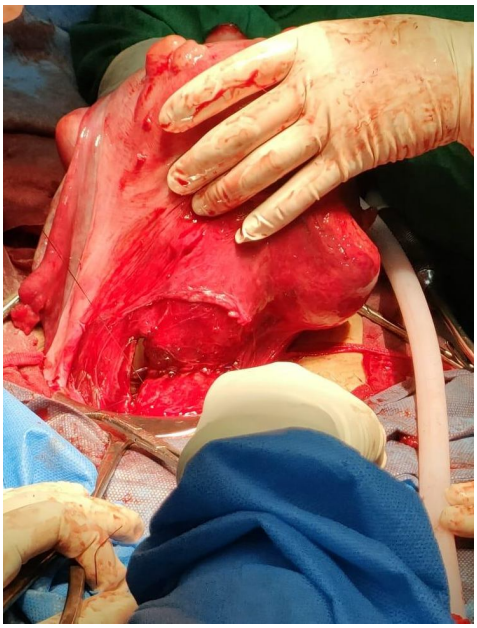

Fig 2a: Anterior surface of uterus Anterior surface of cervix sutured with foley's catheter seen intra-uterine (Case 2)

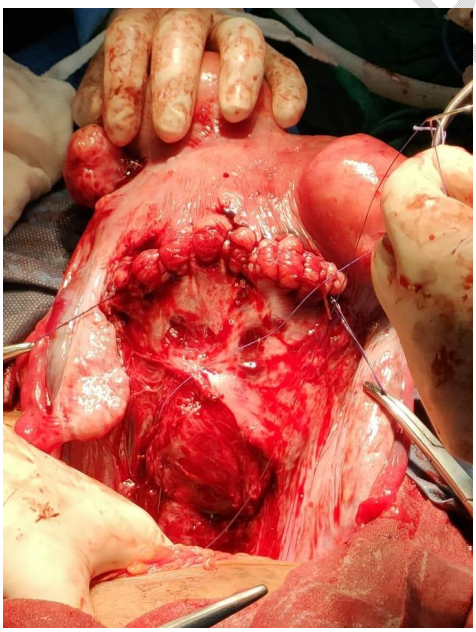

Fig 2b: Posterior surface of uterus after closure of uterine incision. Posterior surface of cervix sutured (Case 2)