

OBSTETRIC “TWIST” - UTERINE TORSION AT THIRD TRIMESTER: A CASE SERIES

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Received : 19/09/2023

Received in revised form : 01/11/2023

Accepted : 16/11/2023

Keywords:

Obstetric emergency, Torsion, Pregnancy.

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DOI: 10.47009/jamp.2023.5.6.305

Source of Support: Nil.

Conflict of Interest: None declared

Int J Acad Med Pharm

2023; 5 (6); 1487-1489



Abstract

Obstetric emergencies are life threatening conditions that occur in pregnancy, during labor or postpartum which requires immediate action to prevent a catastrophe. Uterine torsion is one such rare but elusive obstetric emergency during pregnancy. High amount of suspicion, timely diagnosis and interventions are necessary to prevent maternal and fetal mortality and morbidity. Here we report three cases of third trimester uterine torsion managed successfully in our obstetrical unit.

INTRODUCTION

Torsion of the gravid uterus is defined as rotation more than 45° around the long axis of the uterus.^[1] It is seen in all age groups, in all parity and at all stages of pregnancy.^[2] It is a rare, unexpected obstetric emergency and for most obstetricians it probably represents a ‘once-in-a-lifetime’ diagnosis.^[3] It is almost invariably diagnosed only at caesarean section. Torsion is commonly seen in the third trimester with dangerous maternal and perinatal complications. By narrowing the lumen of the veins, torsion of uterus leads to diminished placental perfusion.^[4] So, foetal distress becomes inevitable. The perinatal mortality following a torsion is reported to be 12%. The exact etiology is not known but it is found to be commonly associated with malpresentations, uterine fibroids and uterine / fetal anomalies.^[4] Uterine torsion has varied presentation from asymptomatic incidental discovery to severe abdominal pain and shock. Clinical diagnosis is often challenging and most of the time erroneous diagnosis of abruptio placenta or rupture uterus is made. USG or MRI might give a clue to the diagnosis. Treatment is surgical intervention by laparotomy. Missed or late diagnosis due to its rarity can lead on to devastating consequences.

CASE SERIES

Case 1

Mrs. X, 24 years, gravida 2 para 1, Previous LSCS (done for oligohydramnios) at 33 weeks gestation walked into our casualty late night with complaints of abdominal pain and leaking since 1 hour.

Fetal presentation was breech so she was taken up for emergency repeat C-section.

At surgery, Uterine torsion of >90° was evident. (Figure 1a)

The ovary, fallopian tube, round ligament, and vascular plexus were noted just lateral to the midline. Upon failure of detorsion, baby boy of weight 1.8kg was delivered through a deliberate incision through the posterior surface of the uterus.

The posterior hysterotomy incision was closed (figure 1b) and the uterus was rotated back to its normal anatomical position.

Postoperative period uneventful.



Figure 1a



Figure 1b

Case 2

Mrs. Y, 26 years, gravida 2, para 1, previous full term normal delivery at 32 weeks came to the casualty with complaints of giddiness and sudden onset of suprapubic pain since 1 hour. Current pregnancy had been uncomplicated till the date of admission. On examination patient looked pale and was in a state of shock, (vitals: BP- 80/40 mmHg, PR- 120/min, SpO₂-90% in room air) with a tender uterus and an absent fetal heart rate. Patient was not in labor. Patient was resuscitated and taken up for emergency LSCS with a presumptive diagnosis of abruptio placenta.

Intra operatively, the lower segment of the uterus contained a rich vascular plexus, and the utero-vesicle fold of peritoneum could not be identified. Uterine torsion of 180° was evident by the displacement of right ovary and fallopian tube to the left side (figure 2). Detorsion of the gravid uterus done to return it to its anatomical position and C-section was proceeded in the usual way and a dead baby boy weighing 1.9 kg was delivered. Abruptio placentae diagnosed with blood-stained liquor and retroplacental clots of 500 grams. Adequate units of blood and blood products were transfused during the intra operative & and post-operative period and the recovery was uneventful.



Figure: 2

Case 3

Mrs. Z, 25 years, primi gravida, 39 weeks of gestation came to the OPD with gestational hypertension. Labor was induced as per our induction protocol. During active labor, patient was taken up for emergency LSCS in view of fetal

distress. Intra operatively prominently engorged vessels were noted in the lower uterine segment.

Uterine torsion of 180 degrees was evident by the displacement of right ovary and fallopian tube to the left side (figure 3). Detorsion of the gravid uterus to return it to its anatomical position was successful. C-section proceeded in the usual way and an alive, term, baby boy weighing 3.5 kg with a good APGAR was delivered. No intraoperative or postoperative complications.



Figure 3:

DISCUSSION

Dextro-rotation of the gravid uterus is a normal finding at term due to the sigmoid on the left. When the rotation exceeds 45° it is called as torsion. Because the uterine ligaments play a balancing role, it is normally very difficult for uterine torsion to occur in humans⁵. Hence extreme uterine torsion of 180° around its cervical junction is a relatively rare event in obstetrical practice.^[6] No known association exists between torsion and maternal age and parity. The exact aetiology is also not well defined.

The condition is often found to be associated with malpresentation -23%, myoma- 21%, uterine anomaly- 11%, adhesions- 7%, others- 27% (pelvic mass, twins, abruptio, placenta previa, adnexal cyst, interstitial pregnancy) and following external cephalic version.^[7] No specific causes identified in 15%. Activating factors are – posture, position, fetal movements and uterine contractions.

Symptoms include abdominal pain(suprapubic)-75%, shock-19%, bowel symptoms (vomiting, diarrhoea) - 16%, bladder symptoms (urgency, frequency, oliguria) -8%, bleeding per vaginum-10%, obstructed labor- 12% and asymptomatic-10%.^[8]

Signs consists of tender uterus, twisted vagina, constriction ring in cervix, high up cervix not reached on per vaginal examination, uterine artery pulsations in anterior/ posterior fornix and fetal distress. Differential diagnosis is abruptio placenta, ruptured uterus, malpresentation, obstructed labor, appendicitis and torsion of a tumor.

Imaging by ultrasound shows the placental position inconsistent with the original position and Doppler

shows abnormal position of ovarian vessels. Nicholson et al., pointed that X-shaped configuration of vagina on MRI was a marker of uterine torsion due to the fact that vagina is seen as an H-shaped structure on MRI.^[9] But MRI cannot be used in an emergency.

Maternal mortality is 4% and increases as gestational age and degree of torsion increases. Maternal morbidity includes abruptio placenta,^[9] and hysterectomy. Perinatal outcome is again directly proportional to gestational age, duration and degree of torsion. Perinatal mortality is around 12%. Management is essentially surgical. Laparotomy, detorsion and caesarean section. In unexpected cases posterior low transverse incision is generally performed and Albayrak et al., suggested that it was a safe choice when detorsion was not accomplished.^[10] If detorsion not possible, classical C-section avoiding injury to the uterine vessels to be done. The methods that mentioned in the literature to prevent a recurrence of uterine torsion are plication of round ligaments,^[11] or uterosacrals,^[12] but they are not common. No studies till date have indicated whether it is necessary to plicate the lax ligaments during c- section. Therefore, further clinical observations are needed.

In our study, the mean age of the mother was 24 to 26 years, the mean gestational age 32 to 38 weeks, and degree of rotation 90 to 180°. One presented in a state of shock and the other two were asymptomatic and the torsion was an incidental finding during C-section. Torsion should be kept in mind as a differential diagnosis when dealing with obstetric emergencies and anatomical landmarks should always be defined while doing a C- section, prior to uterine incision to prevent a posterior hysterotomy which might lead on to bowel adhesions in the future. No predisposing factors like myomas, anomalies or adhesions were noted in our cases. The only risk factor noted was a breech presentation in our first case and abruptio placenta was associated with torsion in our second case. Ipek Ulu et al. reported a similar case of placental abruption due to uterine torsion. There was one intrauterine death of the fetus due to associated abruption. Maternal

outcomes were good and all were discharged in excellent condition.

CONCLUSION

Uterine torsion in pregnancy is rare. It has varied presentation from asymptomatic incidental discovery to severe abdominal pain and shock. Timely intervention will help minimize both maternal and perinatal mortality and morbidity.

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