Case Report

Once-in-a-Lifetime Diagnosis, Uterine Torsion

Aqsa Ikram ul Haq[1], Shama Bashir[2], Nadia Sadiq[3], Nabeela Waheed[4], Shifa Ghazanfar[5], Umm e Aqsa[6]

[1,2,3] Senior Registrar, [4]Professor, [5,6]Postgraduate trainee Gynae/Obs Holy Family Hospital
(Dept of Gynae/Obs Holy Family Hospital, Holy Family Hospital)

Correspondence:
Dr Aqsa Ikram ul Haq
Senior Registrar Gynae/Obs Holy Family Hospital
dr.aqsa81@gmail.com

Abstract

Uterine torsion is a very unusual gynaecological and obstetric emergency defined as "Pathological rotation of the uterus of more than 45 degree along its long axis commonly at the cervico isthmic junction". It has been referred as, once-in-a-lifetime diagnosis by obstetricians and gynaecologists. However, the prognosis is improved as long as the management is done rapidly. Unfortunately, it is difficult to suspect and harder to confirm in emergency conditions. More data is needed to know about the genetic predilection and the characteristics of imaging workup for a rapid preoperative diagnosis to prevent the adverse outcome.

Keywords: Uterine torsion, pregnancy, Pelvic pain, Abdominal mass, Abdominal pain.

Introduction

Uterine torsion is a very rare condition. It can occur both during pregnancy at any gestational age and also in the non-pregnant state. The extent of uterine torsion usually ranges from 45 to 180 degree, with less than 45 degree is considered normal and more than 180 degree is unlikely to occur. However, few cases of torsion of a maximum of 720 degrees have also been reported in the literature.[1]

Its incidence is not very well known. Approximately 250+ cases of uterine torsion are reported worldwide. Risk factors include previous LSCS, abnormal fetal presentation, external cephalic version, uterine leiomyoma, ovarian tumors, uterine developmental anomalies, pelvic adhesions, structural weakness, and angulation in the isthmic region.[1,2]

It has a wide range of non-specific clinical features related to degree and duration of torsion and gestational age. It may present with abdominal pain, shock, placental abruption, vaginal bleeding, persistent pathological CTG, urinary and intestinal symptoms, birth obstruction. A high index of suspicion is required for diagnosis.[3] Preoperative diagnosis is challenging.

Here, we are reporting a case of uterine torsion in pregnancy at term from our unit and a review of reported cases.

Case Presentation

A 33 years old female married for 3 years $G_3P_1A^1$, previous LSCS at gestational amenorrhea of 36+ weeks with singleton pregnancy was admitted in Gynae unit II, Holy Family Hospital, Rawalpindi with

a complaint of lower abdominal pain from last 2 hours. She was having an uneventful pregnancy till date with regular antenatal visits at a private hospital. Referred from the private hospital due to positive scar tenderness. Abdominal pain was continuous in nature, severe in intensity, involving the whole of the abdomen, non radiating, associated with nausea but no vomiting. Fetal movements were not perceived by the patient since her arrival at our hospital. No history of vaginal bleeding or leaking.

Two years back, she had emergency LSCS at term in private hospital Rawalpindi, due to grade 2 meconium having a male child, alive and healthy, of avg. weight, breastfed and vaccinated, no intra operative or post-operative complications were noted at that time and 1 year back, she had undergone a spontaneous complete first trimester miscarriage.

In gynae emergency patient received in shock. Her receiving vitals were: BP: 80/50 mm Hg, Pulse: 126/m (low volume). On general physical examination pallor++, on abdominal examination, the abdomen was tense and tender on palpation, fundal height corresponding to 36 weeks gestation. Fetal heart sounds were negative. Vaginal examination shows closed and very high up cervix.

On ultrasound, there was a Single dead fetus with the longitudinal lie, cephalic presentation, fetal biometry corresponding to 36 weeks, placenta anterior with suspicion of retro placental clots, and no free fluid seen in the peritoneal cavity.

With a provisional diagnosis of placental abruption and Uterine rupture, we started managing the patient. Initial resuscitation done with 2 wide bore I/V lines, IV fluids attached, 1 RCC attached, Patient, catheterized. Attendants counselled about the provisional diagnosis, fetal demise, and critical condition of the patient. Consent for emergency laparotomy taken and patient shifted to OT after all preparations.

Intra-operatively, the uterine wall appeared blackish in color with multiple dilated tortuous vessels seen crossing the lower uterine segment. The normal anatomical landmarks were not seen, ureterovesical peritoneum could not be identified. The previous scar was not visible. Upon further exploration, a twist was noted at the junction of the uterine body and cervix. There was 180 degrees torsion of the uterus in a clockwise direction (dextrorotation).

When the uterus was untorted, a marked improvement in pulse and blood pressure of the patient was noted and then we came to know that she was in vasovagal shock and it was noted that she has unusually elongated cervix and uterus was torted (tortured) on it. The utero-vesical peritoneum visualized, the previous scar was intact. The incision is given in the lower uterine segment after separating the peritoneum. Baby girl of 3kg (fresh stillbirth) delivered as cephalic. 20% placental abruption was found. Post-operatively her recovery was uneventful and the patient was discharged on 3rd post-op day. She was counselled regarding the nature of the disease in this pregnancy and advised to use contraception for 2-3 years.

Discussion

Uterine torsion is an unexpected condition with high perinatal mortality 13% and occasional maternal mortality. The most common site of torsion according to literature is at the junction between the cervix and the uterine body. Torsion of the non-gravid uterus was first described by Virchow in 1863

whereas torsion of a gravid uterus was first reported in 1876. The exact mechanism for uterine torsion is still unclear, in cases where no pelvic pathology was found previous caesarean section was found to be a risk factor. As in our case, two important risk factors were identified history of previous caesarean section and increased cervical length. It is reported that poor healing at the isthmic region leads to suboptimal restoration of normal cervical length and this results in an elongated structurally weak cervix with angulation in the isthmic region which can lead to torsion.[5,8]

Piot et al. and Jansen et al. did review of reported cases showing common causes of torsion in the gravid uterus were: fibroids (32%), uterine anomalies including the bicornuate uterus (15%), pelvic adhesions (7%), ovarian cysts, or other adnexal mass (7%), and abnormal fetal presentation (5%) and fetal abnormality (3%) and pelvic adhesions. According to Nesbitt's series, no abnormalities were found in 16% of cases.[6,7]

Ultrasound might detect abnormal positioning of ovarian vessels across the uterus or might show a change in placental localization. With magnetic resonance imaging (MRI), X-shaped configuration of the upper vagina could be seen instead of normal H-shaped structure. On the CT-scan whirlpool, the sign is seen.[7]

Ideally, the uterus should be repositioned before proceeding to caesarean section but in many instances, this may not be possible due to advanced uterine size and limited surgical space. In such cases, deliberate transverse or vertical incision on the posterior uterine wall is required to deliver the baby. Total abdominal hysterectomy and bilateral salpingo-oophorectomy are usually done in those who have completed family, elderly, and whose uterus and adnexa had undergone gangrene and necrosis due to prolonged torsion.[9,10]

Conclusion

The lesson learned by this case is that a patient who suffers the sudden onset of abdominal pain and shock in late pregnancy along with fetal demise in-utero may have uterine torsion with or without concealed placental abruption.

References

1. Darido J, Grevoul Fesquet J, Diari J, El Haddad C, Bouzid N, et al. Hemorrhagic shock due to irreducible uterine torsion in a third trimester twin pregnancy: A case report. Clin J Obstet Gynecol. 2020; 3: 085-089.
2. Liang R, Gandhi J, Rahmani B, Khan SA. Uterine torsion: A review with critical considerations for the obstetrician and gynecologist. Translational Research in Anatomy. 2020 ;21:100084.
3. A Dua, K Fishwick, B Deverashetty. Uterine Torsion in Pregnancy: A Review. The Internet Journal of Gynecology and Obstetrics. 2005;6(1):1-3
4. Toshniwal, R. Uterine Torsion in 20 Weeks of Pregnancy: A Rare Case Report. J Obstet Gynecol India.2019; 69:28–30

   https://doi.org/10.1007/s13224-018-1145-1
5. Sachan R, Patel ML, Sachan P, Arora A. Complete axial torsion of pregnant uterus with leiomyoma. BMJ Case Rep. 2014. doi: 10.1136/bcr-2014-205558..
6. Sophia Halassy, David Clarke, Twisting around an axis: A case report of uterine torsion, Case Reports in Women's Health.2020; 25: e00170
7. Mokhtar, Huda & Faridz, Sumayyah & Ismail, Rohana & Yaacob, Nasuha & Ramli, Roziana. Uterine torsion in pregnancy, expect the unexpected: case report. International Journal of Reproduction, Contraception, Obstetrics and Gynecology.2020; 9. 3473. 10.18203/2320-1770.ijrcog20203343.

8. Mathews JE, Amte PP, George A, Biwas B. torsion of the gravid uterus–a case report. Indian Obstetrics and Gynaecology. 2011;1(4).

9. Nagose VB, Rosemary RS, Anandrajan RC, Hubert N, Raj R. Torsion of Non-gravid Uterus: A Life-Threatening Condition in a Postmenopausal Lady. The Journal of Obstetrics and Gynecology of India. 2020;70(5):393-6.

10. Augustin G. (2018) Torsion of the Gravid Uterus. In: Acute Abdomen During Pregnancy. Springer, Cham. https://doi.org/10.1007/978-3-319-72995-4_17