Uterine Torsion, A Rare Cause of Acute Abdominal Pain in the Third Trimester of Pregnancy; A Case Report

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Introduction

Uterine torsion is rotation of the gravid uterus to greater than 45 degrees around the long axis. It is a rare complication of pregnancy, with few reported cases. We present a case of uterine torsion in the third trimester of pregnancy, presenting with epigastric pain, in a woman with Ehlers-Danlos syndrome.

Case Report

A 23-year-old, para 1 with a previous vaginal delivery and history of Ehlers-Danlos syndrome, presented at 36+4 weeks gestation with epigastric pain and irregular uterine tightenings. She was haemodynamically stable and afebrile, the uterus was soft and non-tender with a multipus on examination. Cardiography was reassuring and obstetric Ultrasound (USG) showed a flexed breech position, with normal growth, liquor volume and dopplers. An abdominal USS revealed a para-umbilical hernia. With worsening pain at the hernia site and suspected strangulation a caesarean section (CS) was performed in the presence of the general surgeons.

A Pfannenstiel incision was made and the lower uterine segment identified. A loss of bladder reflection and tortuous ovarian vessels were noted, the right broad ligament, fallopian tube and ovary appeared draped over the lower uterine segment and uterine torsion of 180° was diagnosed. De-torsion of the uterus was attempted but unsuccessful, therefore a posterior lower uterine segment incision was made and a breech delivery performed. The uterus was de-torted, exteriorised and the posterior uterotomy repaired. Examination of the uterus and the adnexa revealed no abnormality. The general surgeons performed an open repair of an unstrangulated epigastric hernia. Recovery was uneventful and elective CS was advised for future deliveries.

Discussion

Rotation of the gravid uterus to 45° is a normal finding. Dextorotation occurs in approximately 80% of cases and levorotation in the remainder. It occurs as the uterus ascends from the pelvis with tilting to the right due to positioning of the rectosigmoid. Uterine torsion is rotation of the uterus more than 45° around the long axis and usually ranges from 45-180°, however a case of 720° has been documented. It is a rare obstetric complication, occurring in all ages, parities and gestations.

The exact cause is unknown. It has been proposed that pre-existing structural uterine pathology coupled with irregular maternal body movements, posture and positions may be precipitating factors. Other causes include pelvic adhesions, ovarian cysts, fetal malpresentation, abdominal trauma and external cephalic version. However, idiopathic uterine torsion in pregnancy has been reported. Smooth muscle abnormalities and ligamentous laxity may also participate in abnormal uterine rotation, and Ehlers-Danlos syndrome was a co-morbidity in this case.

Clinical symptoms and signs range from the asymptomatic patient to the acute abdomen. Other presentations include vaginal bleeding, urinary symptoms and intestinal obstruction. In labour it can present as cervical dystocia despite regular, strong uterine contractions. Vaginal examination may reveal a twisted vaginal canal and urethral displacement.

Acute abdominal pain in pregnancy requires prompt diagnosis and exclusion of obstetric emergencies. USS findings of a change in placental location and abnormal positioning of ovarian vessels across the uterus can aid the diagnosis, and MRI may have a role with demonstration of an X-shaped configuration of the upper vagina.

The majority of cases are diagnosed intra-operatively and present major challenges to the surgical team. Rotation of the uterus should be attempted. If unsuccessful a transverse lower segment incision on the posterior uterine wall can be made. The challenges then become; repair of the uterotomy, reducing the risk of recurrence and implications for future pregnancies. Recurrence of uterine torsion immediately postpartum can be reduced through plication of the round ligament and long term recurrence by plication of the uterosacral ligaments.

The paucity of evidence supporting vaginal birth after CS with a posterior uterotomy has led to recommendations for elective CS in subsequent pregnancies. The presence of a posterior uterotomy may also confound assessment of non-specific symptoms such as back pain, commonly seen in pregnancy, with integrity of the scar being a concern.

Conclusion

We present a case of uterine torsion, in the third trimester, in a woman with Ehlers-Danlos syndrome. The diagnosis was made on the intra-operative findings of abnormal positioning of the broad ligament, fallopian tube and ovary with tortuous ovarian vessels and loss of the bladder reflection. Though rare, uterine torsion should be considered a differential diagnosis in women presenting with acute abdominal pain. Often an intra-operative diagnosis, de-torsion of the uterus should be attempted prior to delivery. If unsuccessful, posterior uterotomy, repair and restoration of the normal uterine lie is appropriate management.