

A rare case of asymptomatic axial rotation of the gravid term uterus by 180 degrees

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ABSTRACT

Some degree rotation of the gravid uterus in pregnancy is not an abnormal finding. However, extreme uterine torsion of 180 degrees around its cervical junction is a relatively rare event in obstetrics. Most women undergoing torsion present with symptoms. Here, we report a rare case of asymptomatic uterine torsion detected at laparotomy for an emergency cesarean section due to transverse lie in labor. As derotation of the gravid term uterus was not possible, a transverse incision in the lower posterior uterine segment was given. The clinical challenge of uterine torsion lies in its non-specific clinical course and rarity of this condition makes the preoperative diagnosis difficult.

Keywords: *Cesarean section, Pregnancy, Uterine torsion.*

Torsion uterus is sporadically reported in association with human medicine and has been referred to as ‘once in a lifetime diagnoses’. As all the cases are not reported, the prevalence of torsion is not known but is at best rare. Uterine torsion is defined as the rotation of more than 45 degrees of the uterus around its long axis that occurs at the junction between the cervix and the corpus. The extent of the rotation is usually 180 degrees, although cases with torsion from 60 to 720 degrees have been reported [1].

In most instances, the cause of uterine torsion is obscure and no specific pathology is identified. Structural abnormalities of the uterus or adnexa are; however, demonstrated in at least 20% cases [2]. A soft thin-walled lower uterine segment, laxity of supporting ligaments and abdominal wall, in combination with excessive movements of the fetus, transverse position or the presence of an asymmetrical uterine fibroid, could induce such a condition. Some degree of clockwise axial rotation is possible if the mother lays habitually on her right side [3]. Symptomatic torsion occurs when the degree of twisting is sufficient to interfere with arterial and venous circulation. The range of the associated symptoms is both wide and nonspecific, mimicking those of many much more common conditions. Uterine torsion may present as abdominal pain, obstructed labor or, in a few cases, shock with or without urinary and bowel symptoms [4]. Prompt recognition and management of this condition are necessary for the better maternal and fetal outcome.

CASE REPORT

A 26-year-old gravida 2 para with 1 live issue at term gestation presented to the labor room of a medical college of Kanpur

with complaints of pain in the abdomen for a couple of hours. Her prior obstetric history included one uncomplicated vaginal delivery and current pregnancy had been uncomplicated until the date of presentation. The fetal lie was oblique in previous routine antenatal check-up, ten days back.

On examination, the patient was afebrile. Her vital parameters were stable. The uterus was term size with transverse lie of the fetus with the presence of moderate uterine contraction. Fetal heart sound (FHS) was around 146. On vaginal examination, the cervix was 3 cm dilated and 40% effaced, fetal membranes were intact. Though Non-Stress Test was assuring, she was taken up for emergency cesarean section in view of transverse lie with good size baby.

Emergency cesarean section was performed under spinal anesthesia. The abdomen was opened by Pfannenstiel incision. After opening, the abdominal cavity uterus was reached but the uterovesical fold of peritoneum was not identified. The bladder was lower down. An incision was put straight on the lower segment well away from the bladder. A live male baby of 3 kg was extracted by breech extraction. Hind water was clear. The uterus was exteriorized and the following findings were noted. Firstly, bilateral ovaries were the anterior-most structures followed by broad and round ligament (Fig. 1). Secondly, round ligament arising from the right side of pelvis was seen crossing the posterior side of the uterus (Fig. 2a). On manipulation, uterine torsion of 180 degrees was noted and an incision was found on the posterior surface of the uterus (Fig. 2b). Uterus and adnexa revealed no abnormalities.

Derotation of the uterus was done. After correcting torsion, the incision site was sutured in 2 layers using vicryl no. 1 and

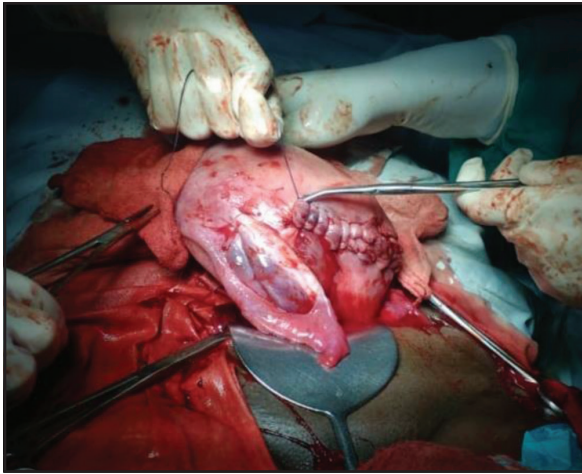


Figure 1: Intraoperative photograph showing ovaries as the anterior most adnexal structure.

put back into the abdomen. The abdomen was closed in layers. The patient made an uneventful recovery. Bowel sound returned on second postoperative day and she was discharged home on 5th postoperative day. The patient was advised to undergo cesarean delivery for any subsequent deliveries because of the lack of information about the safety of labor following a posterior segment uterine incision.

DISCUSSION

The clinical presentation of uterine torsion is variable and clinical examination and ultrasonographic scanning may be insufficient for diagnosis. Some cases that are similar to our case are asymptomatic and diagnosed only at cesarean section. Sudden rotation can present with placental separation, hemorrhage, shock or acute peritonitis. They may present with birth obstruction, vaginal bleeding, and shock, urinary and intestinal symptoms [5]. A high degree of suspicion is needed to diagnose this condition antenatally.

Fariba et al published a case of asymptomatic uterine torsion of 180 degrees detected at laparotomy for an emergency cesarean section due to rupture of the amniotic membrane [6]. Chundawat RS et al reported a rare case of levorotation of the gravid horn of bicornuate uterus leading to severe abruption and intrauterine death of the fetus [7]. Sachan et al reported a case of complete axial torsion of 15 weeks gravid uterus who presented as a case of acute abdomen, in a state of shock [8]. Basava et al presented a case of 180 degrees uterine torsion in pregnancy diagnosed at cesarean section done for fetal bradycardia [9].

Modification of placental site compared to previous ultrasonography and abnormal position of vessels uterine vessels across uterus on Doppler can help in the diagnosis of torsion [10]. Brichard et al suggested the use of Magnetic Resonance Imaging (MRI) to diagnose uterine torsion, which may show an X-shaped configuration of the upper vagina [11].

Management requires emergency laparotomy. In mid-trimester, if the patient is symptomatic and uterine torsion is diagnosed, the uterus can be derotated and pelvic pathology causing torsion removed. At term, the uterus is derotated and lower segment cesarean section (LSCS) is done. If derotation is not possible, a posterior low transverse incision is made and the fetus is extracted as it was done in our case [12]. In such cases, an elective section is advised in the next pregnancy as the risk of rupture is not known. Following cesarean delivery, it is necessary to surgically remove all the anatomical causes of torsion, and rotate the uterus back to its normal position. To prevent recurrent torsion, Mustafa et al have advocated plication of round ligament or uterosacral ligament [13]. There are no reported cases of maternal deaths in the literature and fetal mortality around 12% is reported [14].

CONCLUSION

The usual clinical presentation of torsion of the gravid uterus is vague, by knowing the risk factors we can suspect the condition.

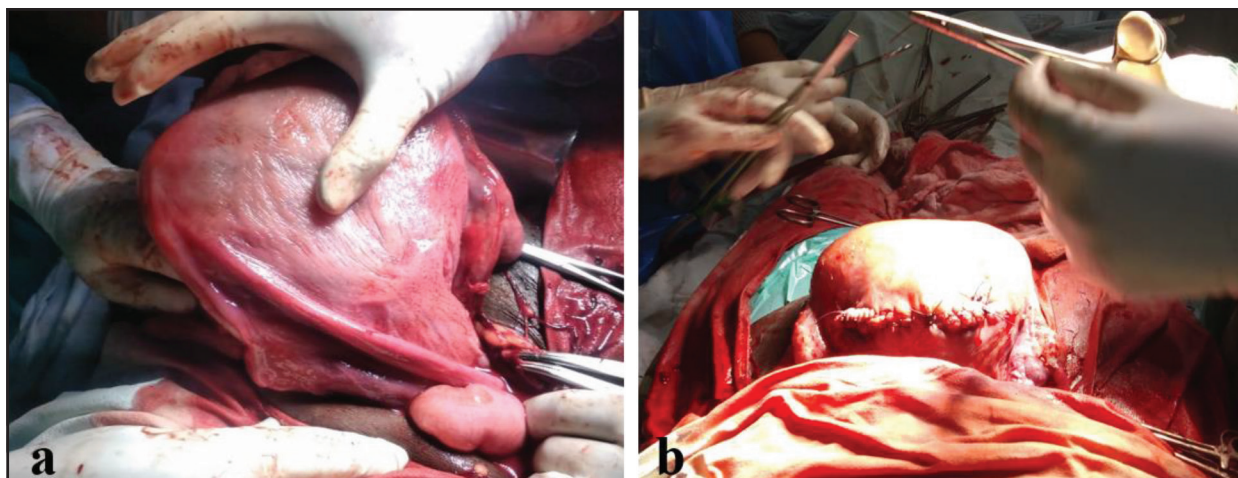


Figure 2: Intraoperative photograph of (a) rotated uterus showing round ligament crossing posteriorly; (b) derotated uterus with incision of cesarean delivery on the posterior surface of the uterus

In the case of posterior hysterotomy incision, elective cesarean delivery has to be done in a future pregnancy.

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