Case Report

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A Rare Cause of Placental Abruption: Uterine Torsion

Obstetrics and Gynaecology Section

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ABSTRACT

Uterine torsion is defined as a rotation on its long axis and it is a dangerous, unexpected obstetric emergency. We report a case of uterine torsion at 32 weeks of gestation in a singleton pregnancy. A 37-year-old woman with multiple prior cesarean deliveries referred to emergency unit of our hospital at 32 weeks of gestation with severe abdominal pain and mild vaginal bleeding. Ultrasonography showed a single fetus in vertex position, with a normal amniotic fluid. Fetal biometer was appropriate for 32 weeks of gestation. Placental location was anterior with a subchorionic hypoechogenic small area which was suspected to be a sign of placental abruption. An emergency cesarean section was performed under general anesthesia. The 180° uterine torsion was diagnosed and it was not possible to perform detorsion of the gravid uterus by exteriorization by pfannenstiel incision. Posterior hysterotomy was performed and a male baby of 1830 grams weight was delivered. The newborn was transported to Neonatal Intensive Care Unit (NICU) of another hospital and discharged within two weeks. Patient recovered well and was discharged on second postoperation day.

Uterine torsion is a very rare and life threatening situation. In unexpected cases posterior low transuerse hysterotomy is generally performed and it is suggested as a safe choice when detorsion was not accomplished. It is not easy to keep in mind the possibility of uterine torsion in cases of abdominal pain during pregnancy. Because it generally causes abruption, management of abruption is vitally important to prevent fetal mortality.

Keywords: Abdominal pain, Placental abruption, Uterine torsion

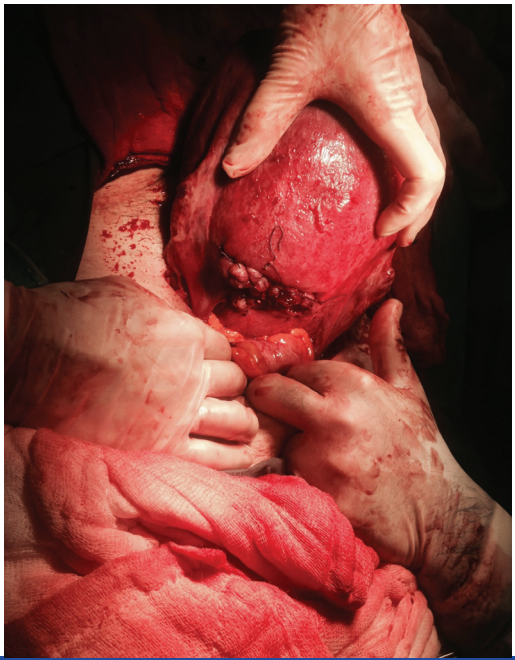
CASE REPORT

A 37-year-old woman with multiple prior cesarean deliveries (gravida 3, para 2) referred to emergency unit of our hospital at 32 weeks of gestation with severe abdominal pain and mild vaginal bleeding. The abdominal pain had started two hours prior to admission. Her blood pressure was 90–60 mmHg, heart rate was 100 beats per minute. Abdominal pain was very diffuse, with no signs of renal colic. Uterine growth was appropriate for gestational age and the abdomen was tender on palpation. On vaginal examination cervix was 1cm dilated and 30% effaced. Mild vaginal bleeding was detected.

Ultrasonography showed a single fetus in vertex position, with a normal amniotic fluid. Fetal biometry was appropriate for 32 weeks of gestation. The course of pregnancy was regular including fetal growth. Placental location was anterior with a subchorionic hypoechogenic small area which was suspected to be a sign of abruptio placenta. Fetal heart rate at ultrasound examination was 120 beats per minute. Repeated decelerations were detected in non-stress test. An emergency caesarean section was performed under general anesthesia.

Abdomen was opened by pfannenstiel incision. The 180° uterine torsion was diagnosed because of the anterior position of the left ovary and tube and extremely engorged vessels in the lower uterine surface. As it was not possible to perform detorsion of the gravid uterus by exteriorization by pfannenstiel incision posterior hysterotomy was performed and a male baby of 1830 grams weight was delivered. The fetus was alive but pale and hypotonic. The uterus was ischemic and floppy. Fresh clots leaked from the uterus. We detected a large subchorionic hematoma on placenta indicating approximately 30% abruption. After exteriorization of the uterus the posterior uterine incision was closed by a standard two-layer suture. We performed the detorsion of the uterus [Table/Fig-1] and observed a myoma 4x5 centimeter in diameter on the anterior wall of the uterus. After the administration of the uterotonic agent, uterus became contracted and then put back into the abdomen. The placenta was sent for pathologic examination that confirmed the clinical diagnosis of abruption.

Maternal conditions were stable after the surgery. Haemoglobin concentration decreased from 13.5 grams/liter at admission to 11.1 grams/liter. White blood cell count was increased from 11.300/milliliter to 13.300/milliliter. C-reactive protein had always been negative. Analysing the previous reports we confirmed that a posterior placental position had been observed at 21 weeks' scan, the opposite of the anterior position we have seen by ultrasound at the time of this admission.



[Table/Fig-1]: Posterior of the detorsioned uterus showing from medial to lateral, proper ligament of ovary, fallopian tube and round ligament of uterus on the left side of the uterus

The newborn at birth weighted 1830 grams, Apgar score was 5, and 6 at first and fifth minutes respectively. The newborn was transported to Neonatal Intensive Care Unit (NICU) of another hospital and discharged within two weeks. Patient recovered well and was discharged on second postoperation day.

DISCUSSION

Uterine torsion is defined as a rotation on its long axis more than 45 degrees and is more often to the right [1]. It is a rare, unexpected obstetric emergency and for most obstetricians it probably represents a 'once-in-a-lifetime' diagnosis. It is almost always diagnosed at cesarean section [2].

By narrowing the lumen of the veins, torsion of an any organ like uterus leads diminishing in perfusion. So, fetal distress becomes inevitable. There are no reported cohorts of uterine torsions, only case reports exist in the literature. Though it has been reported since 1861 [3], only about 200 cases have been reported in the past 100 years [4].

The underlying causes facilitating the rotation are leiomyomas, uterine anomalies, malpresentation of the fetus and occasionaly the fetal anomalies [2]. In fact most of the cases are unexplained. In our case the only risk factor was the leiomyoma of the uterus.

It is not easy to diagnose this rare occasion antenatally. Although the symptoms are not specific, abdominal pain and vaginal bleeding should alert the physician. Asymptomatic cases make it harder to suspect [2]. The change of placental site compared to the previous scan on ultrasound and the abnormal position of ovarian vessels across the uterus on Doppler evaluation can be useful to suspect the situation. Because we had to perform a rescue laparotomy without the suspicion of a torsion we did not do doppler evaluation. Nicholson et al., pointed that X-shaped configuration of vagina on MRI (Magnetic Resonance Imaging) was a marker of uterine torsion due to the fact that vagina is seen as an H-shaped structure on MRI [5]. But MRI can not be used in such an emergency condition.

Agar et al., suggested that vertical hysterotomy should be advised in suspected cases to prevent the vascular or ureteral injury [6]. In unexpected cases posterior low transuerse incision is generally performed and Albayrak et al., suggested that it was a safe choice when detorsion was not accomplished [7].

The methods that mentioned in the literature to prevent a recurrence of uterine torsion are plication of round ligaments [8] or uterosacrals [9], but they are not common.

CONCLUSION

Uterine torsion is an extremely rare situation and may lead to fetal death easily. Unfortunately it is difficult to suspect and harder to confirm in such emergency conditions. Furthermore detorsion is impossible in most of the cases. It usually causes abruption of the placenta, so the management of abruption should be the crucial point rather than its reason.

REFERENCES

[1] Piot D, Gluck M, Oxorn H. Torsion of gravid uterus. *The Canadian Medical Association Journal*. 1973;109(10):1010–11.
[2] Zullino S, Faiola S, Paganelli AM, Ferrazzi E. A Case of Abruptio Placentae due to the Torsion of Gravid Uterus. *Case Rep Obstet Gynecol*. 2014;2014:801616.
[3] Hawes CH. Acute axial torsion of the uterus. *Ann Surg*. 1935;102(1):37–40.
[4] HavaldarN, Ashok K. Torsion of non-gravid uterus with ovarian cyst - an extremely rare case. *Pan Afr Med J*. 2014;18:95.
[5] Nicholson WK, Coulson CC, McCoy MC, Semelka RC. Pelvic magnetic resonance imaging in the evaluation of uterine torsion. *Obstetrics and Gynecology*. 1995;85(5, part 2):888–90.
[6] Agar N, Canis M, Accoceberry M, Bourdel N, Lafaye AL, Gallot D. Prelabour uterine torsion complicated by partial abruption and fetal death. *Gynecol Obstet Fertil.* 2014;42(6):451-53.
[7] Albayrak M, Benian A, Ozdemir I, Demiraran Y, Guralp O. Deliberate posterior low transverse incision at cesarean section of a gravid uterus in 180 degrees of torsion: a case report. *J Reprod Med*. 2011;56(3-4):181-83.
[8] Sparić R, Pervulov M, Stefanović A, Tadić J, Gojnić M, Milićević S, et al. Uterine torsion in term pregnancy. *Srp Arh Celok Lek.* 2007;135(9-10):572-75.
[9] Mustafa MS, Shakeel F, Sporrong B. Extreme torsion of the pregnant uterus. *Australian and New Zealand Journal of Obstetrics and Gynaecology.* 1999;39(3):360–63.

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