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Complete Axial Torsion of Gravid Uterus By 720^0

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***Abstract*: *Introduction*:** *To report a case of torsion of gravid uterus by 720^0 at 28 weeks:*
***Case Report*:** *A 20 years primigravida presented with complaints of pain in abdomen, vomiting and loss of fetal movement after a fall 3 days back. USG revealed intrauterine fetus and intestinal obstruction but didn't explain the cause of high up and left deviation of cervix which failed to dilate on induction with prostaglandin so MRI was done which revealed a concentric mural thickening of Cervix representing stenosis/ mass. On laparotomy it was diagnosed that there was a uterine torsion of 720^0 with dead fetus. Uterus was uniconuate with rudimentary right horn and adnexa. As uterus was devitalized and could not be salvaged so subtotal hysterectomy done.*
Conclusion:*Uterine torsion is a rare complication of pregnancy and obstetricians should have this complication in differential diagnosis.*
Keywords: *pregnancy, intestinal obstruction, subtotal hysterectomy, uterine anomaly, uterine torsion.*

I. Introduction

Uterine torsion is defined as a rotation of the uterus of more than 45 degrees on its long axis. It is an unusual complication of pregnancy and for most obstetricians it is probably diagnosed intraoperatively. Uterine torsion usually ranges from 45 degrees to 180 degrees but some cases of torsion of up to 720 degrees have also been reported [1]. Torsion of the gravid uterus is rare. The earliest report of this condition was made by an Italian veterinarian by the name of Columbi in 1662. Almost 200 years later, in 1863, Virchow reported the first case in a human, observed at postmortem examination. In 1876 this abnormality was described in a living woman for the first time by Labbe.. Until 1992, only 212 cases had been reported in literature [2]. Dextrorotation occurs in two thirds of the cases and levorotation is found in the other one third [3].The non- specific clinical course and rarity of this condition makes the preoperative diagnosis difficult and raises critical management considerations.

II. Case Report

Clinical history: The patient was a healthy primigravida 20 years old, had a hitherto uneventful pregnancy, there being no evidence of hypertension, albuminuria, or other abnormal features. On 27th Jan. 2013 evening when approximately 28 weeks pregnant, she was admitted in our institution after being referred from periphery on account of severe anemia, with complaints of vomiting and acute abdominal pain since 3 days and loss of fetal movements since 2 days. The onset was gradual, with some vomiting, weakness, and faintness, but no actual collapse. There was no history of any recent strain, or any hemorrhage per vagina but a positive history of fall 3 days back. Patient had normal vitals with only mild tachycardia and severe pallor present [Hb. 3.2].On examination abdomen was distended to 36 weeks size, uterine tenderness and soft distension present, the fetal parts could not be palpated easily and no fetal heart could be auscultated. Patient was comfortable on right lateral position and pain aggravated in supine/ erect posture. On vaginal examination, vagina was normal tubular, vault on the right side was empty while on the extreme left side a small, nulliparous, firm and very high up cervix was present. The external os admitted a tip of finger which failed to enter into the canal as it was tightly closed. Provisional diagnosis of secondary abdominal pregnancy and rupture uterus was made but an urgent USG revealed gravid uterus of 28-30 weeks with intrauterine death of fetus in cephalic presentation and intestinal obstruction. After the surgical opinion and ruling out other acute abdominal conditions patient was managed expectantlyfor 4 days with intravenous antibiotics, 5 units O negative of blood transfusion [Rh negative patient] and nasogastric tubing for obstruction. Meanwhile patient was induced with dinoprostone gel once which failed to ripe the cervix so a second USG done which confirmed the findings of previous ultrasound but it could not explain the cause for high up and deviated cervix so the Radiology dept. advised forMRI of patient. MRIrevealed:

- Gravid uterus with cephalic single fetus.
- Placenta posterior rt. lateral with no evidence of accidental hemorrhage.
- Uterus thin and fairly homogenous.
- Left deviation of vagina and cervix.
- Concentric mural thickening of upper cervix close to internal os measuring 2 cm representing stenosis/mass. Marked distension of rectum

- Minimal reactionary ascites.

Operation: After the intestinal obstruction symptoms subsided [patient had passed motion and the vomitings ceased], Hb. raised to 9.8gm% and as the possibility of vaginal delivery was less likelydue to presence of cervical stenosis in MRI, patient was posted for exploratory laparotomy and caesarean section on 1st Feb 2013. Counseling for hysterectomy if needed was done. Abdomen and peritoneum opened.The gravid organ itself was tense and markedly congested with multiple ecchymosis [bluish black in appearance]. Dead male fetus of 600grams extracted after an incision on lower part of uterus. Uterus was exteriorized with difficulty as there were multiple flimsy adhesions present between uterus and small intestines, same removed with finger. The uterus was uniconuate on left side, enlarged and flabby. Left ovary and tube were markedly congested and edematous freely hanging without any broad ligament attachment . On right side the horn and adnexa were rudimentary and embedded in rt. lower abdominal wall. The lower uterine segment was elongated and twisted. Thus the condition was evidently an axial torsion of the pregnant uterus in its longitudinal plane, the direction of rotation being clockwise and the extent approximately 720 degrees. The actual site of the torsion was apparently in the cord like elongated uterine cervix. Detorsion was done. Uterus was freely swinging, thin and flabby and devitalized so subtotal hysterectomy done. There was no evidence of concealed accidental hemorrhage or other abnormality than the one described. Small and large intestines were explored, no signs of obstruction found. Abdominal cavity irrigated and closed back. The patient herself made an entirely satisfactory recovery without any complications and discharged on 10th day.

III. Discussion

Etiology: The presence of a uterine tumor was once believed to be the main etiological factor in development of torsion of the uterus, and in 1904 Barozzi[4] made the statement "no tumor, no torsion". Robinson and Duvall[5] in 1931 modified that statement to "no uterine abnormality, no torsion", and they presented the hypothesis that uterine rotation in the absence of gross disease was due to a developmental asymmetry of the myometrium. In other words certain maternal irregular body movements or posture and positions may help trigger the rotation of uterus with pre-existing structural pathology and intrinsic pathology is found in 66% of cases of uterine torsion. In our case the causative factor wasunicornuate uterus, and the history of fall 3 days back was the triggering factor.

In most cases the degree of torsion has been of the order of 180°. However, Van Pall in 1940 reported a rotation of 540° which was associated with uterine necrosis. The causative factors mentioned by Nesbitt and Corner in their review of the condition are listed in Table I.

Table I—Causes of torsion of the gravid uterus

Uterine myomata	31.8%
Uterine anomalies, especially bicornuate uterus	14.9%
Pelvic adhesions	8.4%
Ovarian cysts	7.0%
Abnormal presentation and/or fetal anomalies	4.6%
Abnormalities of the spine or pelvis	2.8%
No discoverable cause	30.5%

According to Siegler and Silverstein[6] there is, to date, no instance of this condition having been diagnosed preoperatively. Nicholson et al[7] suggested use of pelvic magnetic resonance imaging (MRI) to diagnose uterine torsion, which may show an X- shaped configuration of the upper vagina. In our case there was clockwise rotation of uterus leading to left deviation of vagina and cervix and 2 cm. thickening of cervix in MRI increasing our suspicion towards uterine torsion.

Maternal mortality: The overall maternal mortality rate associated with torsion of the gravid uterus is about 13% and is directly related to the duration of the gestation[8]. Less than 5 months it is zero, whereas at term it

reaches 18.5%[9].The maternal mortality rate is also directly related to the degree of twisting, and whereas it is only 7.4% in torsions of 90° to 180^0, it increases to 50% when the rotation is 180° to 360 degrees[10] .

Perinatal mortality: The perinatal mortality is variably reported from 12% to 18%, as quoted by Wilson et al[11] and Jensen et al[12]. The limited number of cases reported and the lack of accuracy of some clinical records make this figure difficult to estimate with precision. It has been noted that the perinatal mortality increases with the degree of rotation, and whereas it ranges between 20 and 24% in cases in which the uterus is rotated from 90 to 180°, it may reach as high as 75% in cases of rotation in excess of 180".

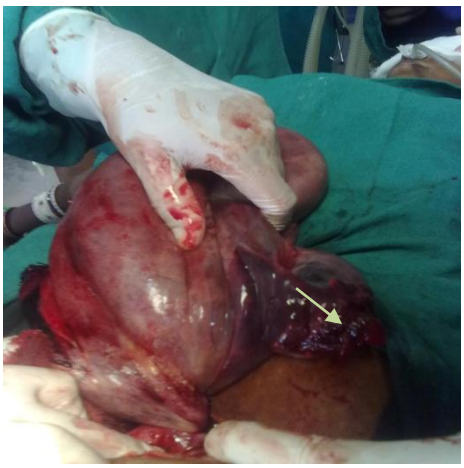

Fig 1: uterine torsion of 720^0. Left ovary and tube enlarged congested free swinging [marked by arrow].

Fig 2: Torsion above the level of cervix.

Fig 3: Posterior part of the enlarged flabby uterus with Left ovary and tube[marked by arrow]

IV. Conclusion

Uterine torsion is a rare complication of pregnancy and obstetricians should have this complication in mind when performing a caesarean section on a woman with abnormal presentation of the fetus, adhesions, uterine myomas, uterine abnormalities or ovarian tumor. In cases with acute abdominal pain during pregnancy, uterine torsion should also be included in differential diagnosis, especially in presence of uterine pathology.

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Reference

[1]. Corr JE. Axial torsion of the gravid uterus in two successive pregnancies.Am J Obstet Gynecol. 1943; 46: 749-751.
[2]. Jenson JG. Uterine torsion in pregnancy.ActaObstetGynecol Scand.1992; 71: 260-265.
[3]. Barber HRK, Graber EA. Uterine Torsion during pregnancy. In: Surgical disease in pregnancy. Philadelphia: WB Saunders Co Ltd, 1974: 387-388.
[4]. BAROZZI J: Manuel de Gynecology Pratique. Paris, 1907
[5]. ROBINSON AL, DUVALL HM: Torsion of the pregnant uterus. J ObstetGynaecol Br Commonw 38: 55, 1931
[6]. SIEGLER SL, SILVERSTEIN KM: Torsion of a pregnant uterus with rupture. Am J ObstetGynecol 55: 1053, 1948
[7]. Nicholson WK, Coulson CC, McCoy CM, Semelka RC. Pelvic magnetic resonance imaging in the evaluation of uterine torsion.Obstet& Gynecol. 1995; 85: 888-890
[8]. Nesbitt REL, Corner GW.Torsion of the human pregnant uterus.ObstetGynecolSurv. 1956; 11: 311-332.
[9]. RABBINER B: Torsion of the pregnant uterus in patients with kyphotic pelvis. Am J ObstetGynecol 30: 136, 1935
[10]. WRUBEL NN, GREENBERG MV, BEILLY JS: Interstitial pregnancy with torsion of pregnant uterus and spontaneous amputation of adnexa and round ligament. NY State J Med 51: 2533, 1951
[11]. Wilson D et al. Third trimester Uterine torsion. *J ObstetGynaecol Can. 2006; 28(6):531-35.*
[12]. Pelosi MA 3rd, Pelosi MA. Managing extreme uterine torsion at term: A case report. *J Reprod Med. 1998; 43: 153-157*