

# Torsion of gravid uterus- Once in a life-time emergent situation faced by obstetricians

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## Abstract

*Torsion of gravid uterus is a rare life-threatening situation. We report a 30 weeks gestation mother who presented to our emergency unit with abdominal pain and features of hypovolemic shock, the unexpected diagnosis of torsion uterus was made per-operatively after a posterior hysterotomy to deliver the dead fetus. Emergency hysterectomy done to save the life of mother as there was atonic uterus with haemorrhagic shock, not responding to resuscitative measures.*

**KEY WORDS:** *Torsion uterus, gravid uterus, hypovolemic shock, antenatal, long cervix*

## Introduction

Torsion of gravid uterus is a rare entity in which the uterus rotates clockwise or anticlockwise of more than 45 degrees along the longitudinal axis of cervix and body of uterus. It can occur at any age-group, affect pregnant as well as non-pregnant uterus and any stage of pregnancy<sup>1</sup>. If a gravid uterus undergoes torsion it carries high maternal and perinatal mortality. Uterine anomalies such as uterus didelphys, Ultrasound showed a non-viable fetus of 30 weeks, transverse lie and a minimal retroplacental haemorrhage. Per-vaginal examination revealed showed clear urine. Clinically we suspected either an abruptio placenta, previous uterine scar dehiscence or poor general condition, patient was taken for emergency laparotomy under general anesthesia. Peroperatively, no haemo-peritoneum was seen. Lower segment was not well formed and cervix

bicornuate uterus, uterine tumours like leiomyoma, fetal malpresentations, laxity of ligaments and pelvic adhesions are closely associated with torsion uterus. Most of the cases are diagnosed intra-operatively.

## Case report

A 28 year-old woman, G2P1L1 -30 weeks, referred from a primary health centre sudden onset with severe abdominal pain with features of hypovolemic shock. Her obstetrical history revealed one previous girl child delivered by lower segment Caesarean section 2 years earlier.

On examination, Patient was hemodynamically unstable, restless with hypotension, cold and clammy extremities. BP was 80/60 mmHg and pulse rate 120/min and severe pallor was present. Respiratory and cardiovascular system examination was normal. On abdominal examination, a longitudinal healthy previous caesarean scar noted, neither bulge nor tenderness was present. Uterine fundal height corresponded to 30 weeks of gravid uterus size. Uterus was not tense and tender.

uneffaced and closed cervix with no bleeding. Catheterisation of bladder

ruptured uterus. Immediate resuscitative measures were undertaken. In view of measured length of 8cm as shown in figure 1. Lower transverse incision made and about 3.5 litres of blood stained liquor drained. Dead baby was delivered by assisted breech extraction. There was abruptio

placenta with retroplacental clot. Placenta and membrane removed and uterus was exteriorized. Grossly, Couvelaire and a flabby uterus noted. Hysterotomy Incision sutured and watched for contraction, but uterus went into atonicity. Utero-tonics given both by parental and intramural route. We replaced the uterus back again into the pelvic cavity and watched for contraction. In spite of all measures, uterus went into the state of atonic postpartum haemorrhage and bleeding actively. Informed consent obtained and proceeded for hysterectomy as there was persistent atonic haemorrhage.



As we proceeded for hysterectomy, noted that uterus had undergone 360° anticlockwise rotation at the junction cervix and body of the flabby uterus. We also noted the torsion of the uterus. FIG1: 8-cm long cervix precipitated torsion of gravid uterus

The baby succumbed probably due to asphyxiation secondary to retroplacental haemorrhage (abruptio placenta). Then detorsion of the uterus made and abdominal hysterectomy successfully completed. Both tubes and ovaries were normal. Patient ventilated postoperatively for 48 hrs and 7 units of whole blood transfused. Her vitals stabilized

vaginal canal looked for in similar cases. Up to 45 degree rotation of torsion uterus is considered as normal<sup>3</sup> and more than 45 degrees is pathological. Fetus acts as the heavyweight-mobile unit which gets rotated with uterine body-cervix junction as fixed point. Asymptomatic torsion of gravid uterus was reported by Faribha et al and they detorsed after an accidental posterior hysterotomy and was diagnosed Peroperatively. The patient was not in shock, post-delivery uterine contracted adequately and hence they plicated the broad ligaments on both sides to prevent further torsion in subsequent pregnancy<sup>4</sup>. In 80% cases the obstetrician made the incision in the lateral or

noticed the hysterotomy incision was actually made on the posterior aspect of uterus, to deliver the dead foetus as shown in figure 2. Abnormally long (8cm) and thinned out cervix noted, large retroplacental clot with separated placenta and dead fetus.

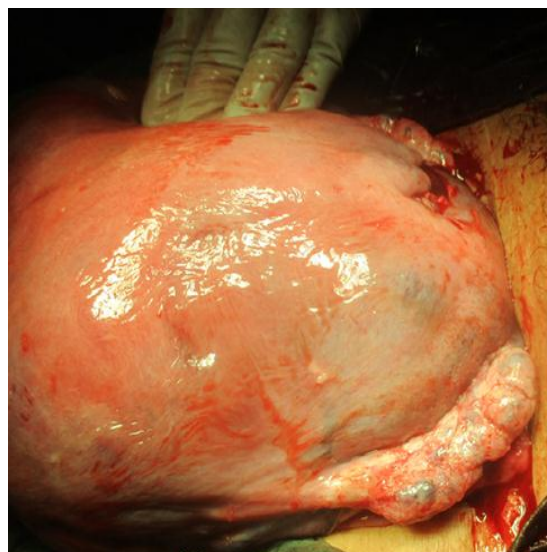


Fig 2: Torsed uterus with posterior hysterotomy incision

and weaned off ventilatory support on second postoperative day. Sutures removed on 5th day and patient discharged home on 6th postoperative day.

### Discussion

Torsion was first reported in 1909, till now 200 cases are reported<sup>2</sup>. On pervaginal examination, one can palpate uterine artery pulsation anteriorly in Torsed uterus. Atresia or twist of upper

posterior wall of the uterus<sup>5</sup>. Our patient as well in stage of hypovolemic shock, accidental posterior hysterotomy incision made and then detected after the delivery of the dead fetus. Abnormally placed uterine pulsation anteriorly is a valid point, and we missed looking for it in our case and understood as a valuable clinical finding.

Wilson et al reported that most number of cases had normal anatomy<sup>6</sup> and termed as idiopathic. On contrary, our patient had a long cervix of length 12cm which precipitated the torsion, otherwise no uterine pathology or anomaly detected. The length of cervix in our case was 8cm, long enough to predispose torsion. A large study done by Piot et al,

noted that 31.8% had uterine myomata, 14.9% uterine anomalies especially bicornuate uterus, 8.4% had pelvic adhesions, 7% had ovarian cysts, 4.6% had abnormal presentation and fetal anomalies, 2.8% abnormalities of spine and pelvis, no discoverable causes in the rest of the cases<sup>7</sup>.

Ultrasound examination has limited role in diagnosis, but can detect uterine fibroids and uterine anomalies which can be associated with torsion of uterus. Kremer<sup>8</sup> et al described placental localization in ultrasound can aid in the diagnosis of torsion by frequent change in the placental position, termed as “placenta migrans”. Also, we stress that routine USG in antenatal check-ups can detect the abnormally long cervix which can be a predisposing factor for the development of torsion. Hence, one should look for it specifically.

CT can display whorled appearance of cervix similar picture seen in uterine fibroids<sup>9</sup>. MRI of vagina usually appears as an H-shaped structure, but with

torsion of the uterus and upper vagina, the vagina appears as an X-shaped structure. Hence obstetrician should advise MRI for a case of suspected antenatal torsion. MRI pelvis can make a prompt diagnosis of this uncommon life-threatening condition<sup>9</sup>. However, most of these patients present in the stage of shock and MRI role is suboptimal.

### Conclusion

It's essential on the part of obstetrician to keep uterine torsion in differential diagnosis when abdominal pain develops during pregnancy. Early diagnosis and intervention would reduce the maternal and perinatal mortality associated with this grave condition.

### Acknowledgement

We thank our nurses in the departments.

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