



**UTERUS TORSION@ 270 DEGREES RARE CASE REPORT**

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**ABSTRACT**

Torsion of the pregnant uterus, at term, is a very rare event in obstetric practice. It is associated with high perinatal mortality but in our case report the torsion remained asymptomatic till patient landed in labour pains. We are reporting a case of uterine torsion, where a booked second gravida with previous lower segment cesarean section underwent an emergency cesarean section due to severe lower abdominal pain, with uterine contractions poor Bishop Score and transverse lie. Diagnosis made on laprotomy tried to untwist the uterus but could not attempt more than 90 degrees which gave avascular posterior surface. Following delivery uterus untwisted on itself through 180 degrees. To the surprise right adnexa was absent. Patient had history of laparoscopy. The non-specific clinical course and rarity of this condition makes the preoperative diagnosis difficult and raises critical management considerations. This article reviews the pathophysiology, clinical presentation, diagnosis and management of uterine torsion in pregnancy. There is no study of outcome and management of pregnancies with both anterior and posterior uterine scars. Efforts need to be made to develop consensus for management of these cases, in future.

**KEYWORDS:** *Uterine torsion. Cesarean section. Pregnancy. Right salphingoophorectomy.*

**INTRODUCTION**

Dextrorotation of a gravid uterus is a normal finding but rotation beyond 45 degrees or torsion of uterus is a rare finding in obstetrics. The earliest reported case of uterine torsion during pregnancy is in the sixth gestational week and the latest in 43 weeks. It is an unusual complication of pregnancy and for most obstetricians it probably represents a 'once in a lifetime' diagnosis. Uterine torsion usually ranges from 45 degrees to 180 degrees but some cases of torsion of up to 720 degrees have also been reported. It is said to be a fatal condition for the fetus. Increased pressure in placental cotyledons caused by uterine venous obstruction can lead to abruption and fetal distress. When it progresses to uterine artery obstruction, placental perfusion reduces, which can result in fetal demise but on the contrary we had asymptomatic case<sup>1</sup>. So, early recognition and correction of torsion is mainstay of its management. Maternal prognosis is good after surgical treatment;. We report a case of uterine torsion@ 270 degree at term but relatively asymptomatic.

**CASE REPORT**

A booked second gravida with previous lower segment cesarean section came at 34 weeks of gestation with lower abdominal discomfort and giddiness. On examination, the patient was vitally stable. Per abdominal examination showed fetus with transverse lie,

no uterine contractions, scar tenderness was absent. No discharge seen on per speculum examination. Vaginal examination demonstrated closed cervix. Her Hb was 6.4 gm/dl rest all investigations were within normal limit. Ultrasound reported intrauterine pregnancy of 34 weeks with scar thickness of 4.7 mm. with transverse lie. The patient was managed conservatively, 2 units of PCV and antispasmodics was given. After 2 weeks at 36 completed weeks emergency lower segment cesarean section was carried out due to excruciating lower abdominal pain and persistent uterine contractions. Vertical incision given tortuous venous plexus of broad ligament seen anteriorly so the diagnosis established of torsion uterus, tried to untwist the uterus but succeeded partially and got posterior avascular surface ( identified by not visualizing bladder fold) nick given on avascular posterior surface. A male baby of 2.5 kg was delivered with Apgar score of 6 and 8 at one and five minutes, followed by complete delivery of placenta and membranes. Uterus sutured with delayed absorbing suture hemostasis achieved and uterus got retwisted by itself through 180 degrees, now the incision was on the posterior lower uterine segment; and hence, the diagnosis of uterine torsion was confirmed. The previous cesarean scar was thick and intact. Than the adnexa examined and the right tube with ovary and right sided round ligament was absent patient had history of laparoscopy probably it could have been removed though we could not be able to

extract that detail from patient, this abnormality was probably could made the term uterus unsupported from right side and resulted in torsion. Though it is mentioned in literature that torsion leads to spontaneous amputation of adnexa hence the torsion was secondary to absent right adnexa or there was spontaneous amputation of adnexa secondary to long standing torsion cannot be commented. The patient had an uneventful recovery and was discharged home on seventh postoperative day along with healthy newborn.

## DISCUSSION

Labbe reported the first case of uterine torsion in 1876, since then it has been reported rarely. Nesbitt and Corner reviewed this subject in 1956 and found only 107 cases in world, s literature. Uterine torsion is defined as

rotation of the uterus of more than 45 degrees on its long axis that occurs at the junction between the cervix and the corpus of the uterus. The extent of the torsion can range from 60 to 720 degrees, With dextrorotation in two-third and levorotation in one-third of cases.

We had two cases in our institution in a period of 10 years the first was associated with fibroid uterus where fibroid could be the associated factor for torsion in that case torsion was diagnosed retrospectively and caesarean myomectomy was done. Wilson *et al.* summarized 38 cases of uterine torsion from 1996 to 2006 and concluded that in most of the cases it was normal pregnancy with typical pelvic anatomy. Jensen, in 1992, reviewed 212 cases from various countries and concluded that pelvic pathology could be a cause of uterine torsion (Table 1).

**Table 1: Causes of the torsion of the gravid uterus**

<b>Uterine Myoma</b>	<b>31.8%</b>
Uterine anomalies, especially biconuate uterus	14.9%
Pelvic adhesion	8.4%
Ovarian cyst	7%
Abnormal presentation and or fetal anomalies	4.6%
Abnormalities of spine and pelvis	2.8%
Idiopathic	30.5%,

A study of magnetic resonance imaging evaluation of patients following low transverse caesarean section suggested that in rare instances poor isthmic healing may result in suboptimal restoration of normal cervical length in these cases. This results in an elongated cervix with structural weakness and angulations in the isthmic region leading to torsion. Uterine torsion resulting from abdominal trauma has also been reported .The occurrence is independent of maternal age, parity and gestation.

The clinical presentation of torsion is non-specific. The most common symptom is abdominal pain however this may vary from mild abdominal discomfort to an acute abdomen with shock, thus making diagnosis difficult. In around 11 percent of cases torsion is asymptomatic. Most cases, present with abdominal pain and tenderness, are diagnosed only at laparotomy<sup>1</sup>. Other presenting symptoms (Table 2).

**Table 2: Presenting symptoms of torsion of gravid uterus**

<b>Pain</b>	<b>95.0%</b>
Shock	8.0 – 27.0%
Intestinal Obstruction	11.0 - 26.5%
Urinary Symptoms	8.8 – 12.0%
Bleeding	6.0 – 12.5%
Obstructed Labour	14.0 – 29.0%
Asymptomatic	6.0%



Physical examination and ultrasonography may be insufficient for diagnosis. Only vaginal examination reveals the cervical canal to be twisted and closed<sup>2</sup>.Ultrasound has some diagnostic role in cases of regular pregnancy followup, when changes in placental localization on ultrasound could be a sign of uterine torsion<sup>3</sup>. Magnetic resonance imaging is currently the method of choice for establishing diagnosis by demonstration of an X-shaped configuration of the torsion site. Normally, H-shaped configuration is seen when MRI film/slice is taken at the level of upper vagina.

Maternal prognosis is good after surgical treatment; however, perinatal mortality is high as 18%.

The authors reviewed 19 cases of uterine torsion cited in Pub Med, from the year 2000 to January 2016. Delivery of the baby was accomplished by anterior uterine wall incision in 8 cases (after correction of torsion) and posterior uterine wall incision in 11 cases. In our cases both time incision was on posterior wall in one case we could not attempt complete untwisting while in other case associated with fibroid the diagnosis was made retrospectively.

The overall maternal mortality rate associated with the torsion of the gravid uterus is about 13% and is directly related to the duration of gestation. Under 5 month it is zero, whereas at term it reaches 18.5% The maternal mortality rate is also directly related to the degree of torsion it is only 7.4% in torsions of 900 to 1800 it increases to 50% when the rotation is 1800 to 3600 10. The perinatal mortality is 30%. It has been noted that perinatal mortality increases with the degree of torsion it ranges between 20 to 24 % with torsion of 900 to 1800 it may increase to 75% with torsion greater than 1800. We had been lucky that in spite of 2700 torsion we could deliver and discharge a live baby.

#### MANAGEMENT

Patients with acute symptoms or with suspected uterine torsion should have a laparotomy. In early pregnancy, the uterus should be manually untwisted along with correction of any precipitating factors like myomectomy or ovarian cystectomy. In cases with uterine necrosis or thrombosis of blood vessels, resulting from prolonged torsion, hysterectomy should be considered. Torsion at term, manual correction followed by delivery of the fetus by a caesarean section is the treatment of choice. In cases where correction is not possible, a deliberate posterior hysterotomy can be done for delivery of fetus. Both vertical and transverse posterior uterine incisions have been described. The risk of rupture of transverse incision is less than a vertical incision although the exact risk is not known. Therefore whenever feasible a transverse incision should be preferred. The anatomical landmarks should be defined prior to uterine incision, to prevent any inadvertent injury to blood vessels or other organs. After delivery, manual correction can be easily performed. Predisposing factors such as adhesions, fibroids or ovarian cyst should be removed to prevent post-partum recurrence. Bilateral plication of the round ligaments can be done to prevent immediate post-partum recurrence of uterine torsion and help to keep the uterus in ante version, reduce posterior uterine adhesions and future dyspareunia. Mustafa et al described bilateral plication of uterosacral ligament, which may provide resistance to torsion and prevent long term, recurrence of uterine torsion. Patients with incision on the posterior wall of the uterus should have a repeat caesarean section in future pregnancy, since the risk of rupture is not known? This condition is associated with significant mortality and

morbidity. The perinatal mortality has been reported to be 12%. Overall the maternal mortality is around 13% and is directly proportional to the duration of gestation and degree of torsion. However, since 1960, only one maternal death due to uterine torsion has been reported.

#### CONCLUSION

Uterine torsion is a rare complication 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 be included in differential diagnosis, especially in presence of uterine pathology. Anatomical landmarks should always be defined prior to uterine incision during a caesarean section, to prevent damage to uterine vessels and to check for any degree of torsion of the pregnant uterus.

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