

## Acute Axial Torsion of Gravid Uterus by 360 degrees – A rare case report and an unpredictable complication of pregnancy

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**Abstract: Introduction:** To report a case of acute uterine torsion of gravid uterus by 360 degree at 26 weeks gestation. **Method:** A 32 yr old multigravida presented with acute pain abdomen at 26 weeks of gestation. On ultrasound revealed a dead foetus with concealed placental abruption. On laparotomy, it was diagnosed to be a case of 360 degree acute axial torsion of uterus. Due to excessive necrosis hysterectomy was done.

**Result:** Laparotomy revealed a 360 degree axial torsion of gravid uterus, with a dead foetus and placental abruption, and gangrenous necrosis of uterus. Hysterectomy was done in view of gangrenous uterus and multiparity of the patient. **Conclusion:** It is a very unpredictable and rare differential diagnosis of pain abdomen in pregnancy, rarely diagnosed antenatally, and is associated with an adverse foetal outcome. If diagnosed early, it may improve the maternal outcome and spare a hysterectomy.

**Key Words:** uterine torsion, pregnancy, placental abruption, hysterectomy.

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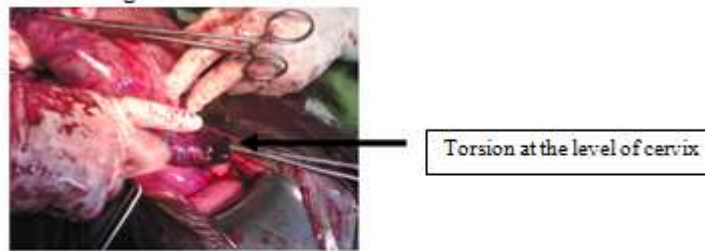
### I. Introduction

Rotation of gravid uterus of less than 45 degree is a normal finding in late trimester of pregnancy. Torsion of uterus is defined as rotation beyond 45 degree. It was first reported by *Labbe* in 1876<sup>1,2</sup>, but such cases are mostly under-reported due to its nonspecific presentation, difficult antepartum diagnosis and in most of the cases results in successful outcome. In 2006, *Wilson et al* reported 38 cases<sup>3</sup>. Torsion has been identified in all reproductive age group, parity and in all trimesters. Outcome of the cases ranges from spontaneous abortion, stillbirth to live birth. Thus the primary concern is focused on foetal outcome rather maternal outcome. Most usual symptoms are abdominal pain, vaginal bleeding and urinary and intestinal symptoms. Coexisting conditions resulting in uterine torsion are uterine fibroid, adhesion, adnexal mass, foetal malpresentation, and traumatic injury<sup>4</sup>. It is not a life threatening entity but an early antepartum diagnosis would reduce the foetal mortality in a suspected case of uterine torsion.

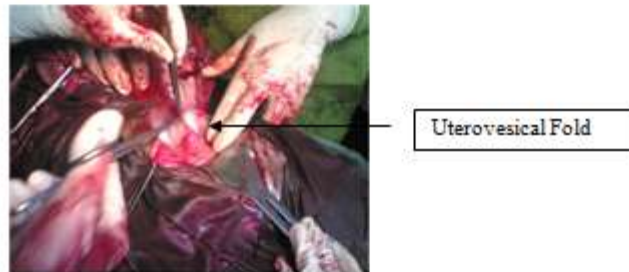
### II. Case Report

A 32 year old gravida 4 para 3 presented at 26weeks of gestation to the labour ward with severe intermittent cramping pain abdomen for one day and increased frequency of micturition for one day. Pain started abruptly after she retired to sleep and was initially intermittent in nature progressed by course of one day with increasing in intensity and it was not related to postural changes, not accompanied by vaginal bleeding or leaking per vaginum. She had increased frequency of micturition, but not associated with dysuria. Her prior obstretic history was uneventful with history of three normal vaginal deliveries. On examination, she was anaemic, and haemodynamically unstable with hypotension and tachycardia. On abdominal examination, uterus was corresponding to 28 weeks, tense and tender on palpation. Foetal parts were not palpable. Foetal heart sound could not be auscultated. On vaginal examination, os was parous and 30% effaced. Haemogram showed haemoglobin was 6 gm%. Ultrasound showed single intrauterine dead foetus with transverse lie, and signs of placental abruption was present. Due to hemodynamic instability, preliminary resuscitation was done and after informed consent, laparotomy was decided . Laparotomy was performed under general anaesthesia. Abdomen was opened by longitudinal incision , serosanguinous fluid was present in the abdominal cavity. There was dense adhesion of omentum to anterior abdominal wall. The uterus was congested and bluish black in appearance, the round ligament was palpated in its usual position but during identifying the uterovesical fold, lower segment appeared elongated and twisted, thus uterine torsion was suspected and diagnosed. Uterus was exteriorised and detorsion was done. Hysterotomy incision was given on anterior uterine wall, and a dead male foetus was extracted ,weighing about 1 kg. Placenta was expelled and there was 1000ml of retroplacental clot present. It remained flaccid and appeared gangrenous and devitalised, and foul smelling. Considering the multiparity and gangrenous nature with no signs of contractility the decision for hysterectomy was taken, and proceeded. During second post operative day, she developed septicaemia, but responded to culture sensitive antibiotics. She recovered well to the treatment and discharged on the 6<sup>th</sup> postoperative day, wound was healthy.

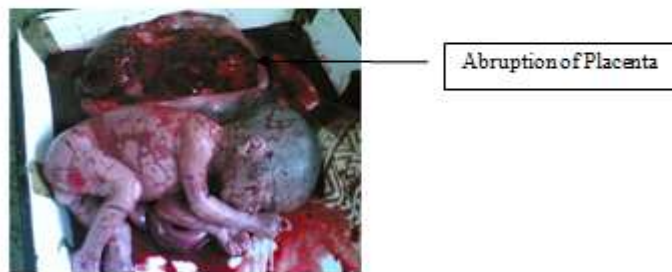
**Figure & Table**



*(Fig. 1: Acute Axial Uterine Torsion at the level of Cervix)*



*(Fig. 2: Detorsion & Uterovesical fold identified)*



*(Fig. 3: Abruptio of placenta & the dead foetus)*



*(Fig 4: Omental adhesion to the anterior abdominal wall)*



*(Fig 5: Necrosed Hysterectomy specimen)*

### III. Discussion

It is an unusual complication of pregnancy and for most obstetricians, it probably represents a 'once in a lifetime' diagnosis. Dextrorotation occurs in two thirds of all the cases and levorotation is found in the other one third<sup>5</sup>. Robinson & Duvall proposed that certain maternal irregular body movements or posture and positions may increase the possibility of torsion, so that it is more commonly found in bally dancers and hackers<sup>6</sup>. The presentation of patient may be in spectrum ranging from asymptomatic<sup>7</sup> to mild abdominal pain and cramping, to shock and maternal death. During labour, it is more commonly diagnosed with failure in cervical dilation, or excessive vaginal bleeding.

Only 2 cases reported to be diagnosed antenatally by MRI. MRI studies proved defective isthmic healing may result in suboptimal restoration of normal cervical length in these cases<sup>8</sup> with the possibility of uterine torsion. Nicholson et al<sup>9</sup> showed, an X- shaped configuration of the upper vagina instead of H shaped but plane should be at level of vagina<sup>10</sup>. Some authors opined that change of placental position maybe be diagnosed in ultrasound as sign of torsion<sup>11</sup> but antenatal diagnosis is matter of chance.

Most patients recovered well, but two required a peripartum hysterectomy for heavy bleeding<sup>12</sup>. One patient resulted in maternal death<sup>13</sup>. The perinatal mortality is variably reported from 12% to 18%, as quoted by Wilson et al<sup>3</sup> and Jensen et al<sup>14</sup>. Maternal mortality is less compared to perinatal mortality.

### IV. Conclusion

This case although similarly reported but the need for peripartum hysterectomy and gangrenous changes of the uterus and high order of torsion i.e. 360 degree associated with perinatal mortality draws our attention towards the consideration of this as differential diagnosis for pain abdomen in third trimester with intrauterine foetal death.

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