

## Case Report:

### A twist in the diagnosis ... and the uterus! A case report of third trimester uterine torsion

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#### ABSTRACT

We report the case of a 26-year-old lady gravida 5, with a previous Caesarean section who presented with 2 episodes of convulsions, shock and evidence of intrauterine foetal death. She was known to have epilepsy since childhood. Anticipating a scar dehiscence or rupture uterus she was posted for emergency laparotomy under spinal anaesthesia. Intra-operatively, 180° uterine torsion was evident. The uterus was untwisted and a lower segment caesarean section was performed to deliver the dead foetus. As the uterus remained flabby and did not retract after correction of torsion, subtotal hysterectomy was done. She recovered well after surgery. The present case highlights uterine torsions, a rare but potentially dangerous and unexpected obstetric complication and reiterates the need for a timely intervention for better maternal and foetal outcome.

**Key words:** Uterine torsion, Intrauterine fetal demise, Shock

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#### INTRODUCTION

Dextrorotation of the gravid uterus is a common physiological finding. Rotation of the uterus beyond 45° is pathological uterine torsion and is extremely rare in pregnancy. It is considered as a “once in a lifetime diagnosis” for most obstetricians.<sup>1</sup> It is only sporadically reported in medical literature. Until 1992, only 212 cases have been reported in literature.<sup>2</sup> In this case report we document the rare occurrence of 180° uterine torsion in a pregnant woman which led to severe vascular insufficiency causing intrauterine foetal demise.

#### CASE REPORT

A 26-year-old gravida 5 with one live child, with 36 weeks gestational age was referred to Government Maternity Hospital, S.V. Medical College, Tirupati following 2 episodes of convulsions and decreased perception of foetal movements. She had no history suggestive of

labour pains. Her antenatal period was uneventful and seizure free and she had regular antenatal visits at Government Hospital, Madanapalle and her blood pressure recordings were normal. She was known to have epilepsy since childhood. She had history of 2 intrauterine foetal deaths in 7<sup>th</sup> and 8<sup>th</sup> month respectively, 1 spontaneous first trimester abortion and 1 term pregnancy delivered by caesarean section 3 years ago. At the time of admission she was conscious and coherent, pulse 160/min systolic blood pressure 90 mm Hg; diastolic blood pressure was not recordable. Oxygen saturation was normal and lungs were clear. Obstetric examination revealed a tense abdomen, uterus was full-term, not acting. Foetal parts were not easily palpable and foetal heart sounds were not audible. Per vaginal examination revealed uneffaced cervix and os was closed suggesting that she was not in labour. Abdominal ultrasonography was done

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to confirm intrauterine foetal death. The foetus was in transverse lie, placenta was posterior and mature with no evidence of retroplacental collection. As the patient had a previous history of Caesarean section, had presented with intrauterine foetal death and was in shock, a differential diagnosis of scar dehiscence, uterine rupture uterus, abruptio placenta, were considered. She was resuscitated with intravenous 500 mL of hydroxy ethyl starch and 1000 mL of Ringer's lactate and was posted for emergency laparotomy under spinal anaesthesia after obtaining informed consent.

Abdomen was opened with a Pfannenstiel incision. Uterus was visualized and appeared congested. Uterovesical fold of peritoneum could not be identified. The right round ligament, fallopian tube and ovary were found towards the left (levorotation), were congested, and on careful manipulation were brought to vision through the incision (Figure 1) A diagnosis of 180° uterine torsion was made. Attempts to derotate the uterus were made but failed due to lack of sufficient space. A vertical incision was given converting the initial abdominal incision to an inverted T incision and the gravid uterus was untwisted and brought outside the abdomen (Figure 2). Previous uterine scar was intact. Bladder was separated from the lower uterine segment. Incision was given on the lower uterine segment and a dead male foetus present in transverse lie was delivered as vertex with outlet forceps. Liquor was clear and excess. Placenta was anterior type II in contrast to the pre-observation on operative ultrasonography where it was identified posteriorly. Placenta and membranes were delivered in toto. Retroplacental clot of about 300 g was present suggesting an element of abruption in the background of torsion, which led to intrauterine foetal demise. Uterus appeared arcuate with asymmetrical hypertrophy towards the right (Figure 3). Uterus failed to retract and there was blood loss of about 2 L. Oxytocin 10 U was administered

intramuscularly (I.M.) and as a intravenous infusion 40U/L. Methylergometrine 0.25 mg (I.M.), and per rectal prostaglandin F<sub>2</sub> alpha (PGF<sub>2</sub>α) and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) 1000 µg were also administered. Despite the above measures uterus failed to retract. Uterine arteries were ligated bilaterally but in vain. Subtotal hysterectomy was then performed. The dead foetus weighed 2.4 kg and features were suggestive of a recent intra uterine death. two units of whole blood were transfused intraoperatively. After hysterectomy blood pressure was 80/60 mm Hg, heart rate 150/min, so intravenous dobutamine was started. Dobutamine was later titrated and tapered according to the improvement of blood



**Figure 1:** Operative photograph showing levorotation of uterus by 180° showing the right ovary, tube and ligaments at the incision site



**Figure 2:** Operative photograph showing uterus after derotation



**Figure 3:** Gross specimen of uterus, placenta and the dead foetus

pressure. Post-operatively, 3 units of blood were transfused. Urine output was normal intra- and post-operatively. Patient had post-operative paralytic ileus and recovered following treatment. Delayed suture removal was done on the 10<sup>th</sup> post-operative day. She was discharged on 16<sup>th</sup> post operative day after correction of anaemia and improving her general condition.

### DISCUSSION

Torsion of the uterus is rotation beyond 45°; Rotation upto 720° have been reported. The exact mechanism and aetiology of torsion is not known. In most cases it is associated with uterine distorsion and asymmetry caused by uterine myomas or uterine developmental anomalies.<sup>3</sup> It is also proposed that certain maternal irregular body movements or posture and positions may help trigger the rotation of the uterus with pre-existing structural pathology and intrinsic pelvic pathology.<sup>4</sup> Our patient had an anomalous uterus with malpresentation, polyhydramnios and history of convulsions which could have been predisposing factors. Dextrorotation is found in two-thirds of cases but levorotation also occurs in one third.<sup>5</sup> In our patient, the uterus was levorotated.

Torsion of gravid uterus is difficult to diagnose clinically as they present as acute emergency

with non specific symptoms. Most often the diagnosis is made only intraoperatively. A high degree of suspicion is needed to diagnose this condition antenatally. Modification of placental site compared to previous ultrasonography and abnormal position of uterine vessels across uterus on doppler can help in the diagnosis of torsion.<sup>5</sup> AX shaped configuration of the vagina on magnetic resonance imaging (MRI) compared to normal H shaped structure also helps in the diagnosis.<sup>6</sup> Management comprises an emergency laparotomy and detorsion of the uterus. If detorsion is not possible, delivery of the foetus through a posterior low transverse incision is recommended.<sup>7</sup> This should be followed by an elective cesarean section in the consecutive pregnancy due to lack of evidence regarding the risk of rupture following a posterior uterine incision.<sup>8</sup> Prevention of recurrence of torsion with plication of round ligaments which maintain the uterus in normal anatomical anteverted position has been suggested.<sup>9</sup> Plication of uterosacral ligaments which will resist torsion has also been reported.<sup>10</sup>

Since the year 1960, there is a single report of maternal death due to uterine torsion.<sup>5</sup> Perinatal mortality of 14% has been reported.<sup>2</sup> A high index of suspicion leading to a prompt diagnosis and immediate intervention can significantly improve maternal and foetal outcome.

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