CASE REPORT

Uterine torsion mimicking supine hypotension syndrome after regional anaesthesia

Silja Arumugham,¹ Mariam Mathew,¹ Sonali Deoskar,² Jasvinder Sharma²

¹Department of Obstetrics & Gynecology, Sultan Qaboos University Hospital, Muscat, Oman

²Department of Anesthesia, Sultan Qaboos University Hospital, Muscat, Oman

Correspondence to

Dr Mariam Mathew,
mariam1762@gmail.com

SUMMARY

A 40-year-old gravida 5 para2 +2 was admitted at 38 weeks +5 days of gestation for elective caesarean section in view of unstable lie. After spinal anaesthesia, when the patient was positioned supine for caesarean section, she developed acute onset breathlessness and dizziness. Blood pressure was unrecordable. She remained symptomatic with hypotension and bradycardia despite lateral tilt and intravenous atropine. On entering the peritoneal cavity, a congested uterus with torsion in a clockwise direction to almost 180° with the posterior wall facing anteriorly was noted. Immediate attempt to detort the uterus was successful. The patient immediately became symptomatically better and the uterine congestion resolved. Uterine incision was given in the anterior lower segment delivering a healthy baby. High index of suspicion and detorsion of the uterus avoided the inadvertent incision in the congested posterior uterine wall which could have resulted in massive postpartum haemorrhage.

BACKGROUND

Torsion of full-term gravid uterus is a rare but potentially serious obstetric problem. It is only sporadically reported in medical literature. Uterine torsion may be misdiagnosed due to the non-specific clinical presentation. Establishing a clinical diagnosis and prompt management is crucial for reducing the maternal and fetal morbidity and mortality.

CASE PRESENTATION

A 40-year-old gravida 5 para2 +2 was admitted at 38 weeks +5 days of gestation for elective caesarean section in view of unstable lie. Her prior obstetrical history included two full-term vaginal deliveries and two first trimester miscarriages. In current pregnancy, she was diagnosed to have gestational diabetes at 30 weeks of gestation and was controlled with tablet metformin. Serial ultrasound scans showed normal fetal growth with polyhydramnios.

The patient was given spinal anaesthesia in sitting position. After spinal anaesthesia, when the patient was positioned supine for caesarean section, she had acute onset breathlessness and dizziness. Blood pressure was unrecordable. Lateral tilt was given as supine hypotension was suspected. She remained symptomatic with severe hypotension and bradycardia despite intravenous atropine. We decided to expedite the delivery of the baby. On entering the peritoneal cavity, the uterus was congested and bluish with engorged and tortuous

blood vessels in the lower segment. Anatomy of the organs felt distorted. On further exploration inside the peritoneal cavity, torsion of uterus in a clockwise direction to almost 180° was noted with the posterior wall of uterus facing anteriorly. Immediate attempt was made to slowly detort the uterus, which was successful. The patient immediately became symptomatically better and the uterine congestion resolved. Uterine incision was given in the anterior lower segment, delivering a healthy baby boy weighing 3.6 kg with good apgar and cord pH as breech. Interval from the onset of hypotension to delivery of the baby was 6 min. Placenta showed signs of early separation. Uterine incision was closed with double layer of delayed absorbable suture (vicryl). Uterus was exteriorised and careful examination of the uterus and adnexa revealed no abnormalities. Estimated blood loss during the caesarean was 500 mL. The patient made an uneventful recovery.

DIFFERENTIAL DIAGNOSIS

The dramatic presentation of the patient immediately following the regional anaesthesia raised the suspicion of supine hypotension syndrome but uterine torsion was diagnosed during the caesarean section.

OUTCOME AND FOLLOW-UP

Mother had an uneventful postoperative period but developed long-lasting hypertension.

DISCUSSION

Since the publication of the first case of uterine torsion in 1876 by Labbe, there have been many cases reported in the literature. Uterine torsion can occur in all age groups, all parity and at all stages of pregnancy as reviewed by Jensen *et al.*¹ Although the exact aetiology is not known, many abnormalities have been associated with torsion such as fetal malpresentations, uterine fibroids and uterine malformations. The diagnosis is difficult as the symptoms are non-specific and may mimic other pathologies such as abruption. They may present with pain abdomen, vaginal bleeding, shock, urinary and intestinal symptoms.²

Ultrasound and MRI have been used as tools to diagnose uterine torsion antenatally. Modification of placental site compared with previous scan and abnormal position of ovarian vessels across uterus on Doppler was used to diagnose torsion by Gule *et al.*³ X-shaped configuration of upper vagina on MRI as a sign to diagnose torsion was suggested by Nicholson *et al.*⁴ On MRI, vagina is normally seen

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as an H-shaped structure, but with uterine torsion, it may give an X-shaped appearance.

Management of patients with suspected uterine torsion at term is immediate laparotomy, detorsion of uterus and anterior lower segment caesarean section. If detorsion is not feasible, posterior low transverse incision is used to deliver the fetus.^{5 6} In future pregnancies the risk of uterine rupture with a posterior uterine incision is unknown. Owing to lack of evidence, elective caesarean section is recommended for subsequent deliveries.⁷

There are no reports of symptomatic uterine torsion detected after spinal anaesthesia in a perfectly well patient. The presentation of the patient in our case was very suspicious of supine hypotension syndrome which did not improve with lateral tilt, fluids, atropine and ephedrine. Fetal malpresentation with polyhydramnios in presence of lax abdominal wall might have precipitated the uterine torsion on positioning the patient supine from the sitting position in which spinal anaesthesia was given.

High index of suspicion and detorsion of the uterus avoided the inadvertent incision in the congested posterior uterine wall, which could have resulted in massive postpartum haemorrhage. Timely recognition and prompt treatment is required in cases of uterine torsion to avoid adverse maternal and fetal outcomes.

Learning points

- ▶ Diagnosis of torsion of uterus requires a high index of suspicion.
- ▶ Identifying the anatomic landmarks before making the uterine incision for caesarean section helps to avoid inadvertent incision in the posterior uterine wall.
- ▶ Prompt identification and management is necessary to minimise maternal and perinatal morbidity and mortality.

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Competing interests None.

Patient consent Obtained.

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REFERENCES

- 1 Jensen JG. Uterine torsion in pregnancy. *Acta Obstet Gynecol Scand* 1992;71:260–5.
- 2 Deshpande G, Kaul R, Manjuladevi P. A case of torsion of gravid uterus caused by leiomyoma. *Case Rep Obstet Gynecol* 2011;2011:206418.
- 3 Gule P, Adjobi R, Nguessan E, et al. Uterine torsion with maternal death: our experience and literature review. *Clin Exp Obstet Gynecol* 2005;32:245–6.
- 4 Nicholson WK, Coulson CC, McCoy MC, et al. Pelvic magnetic resonance imaging in the evaluation of uterine torsion. *Obstet Gynecol* 1995;85(Part 2):888–90.
- 5 Albayrak M, Berian A, Ozdenir I, et al. Deliberate posterior low transverse incision at caesarean section of gravid uterus in 180 of torsion: a case report. *J Reprod Med* 2011;56:181–3.
- 6 De Ioris A, Pezzuto C, Nardelli GB, et al. Caesarean delivery through deliberate posterior hysterotomy in irreducible uterine torsion: case report. *Acta Biomed* 2010;81:141–3.
- 7 Wilson D, Mahalingam A, Ross S. Third trimester uterine torsion: case report. *J Obstet Gynaecol Can* 2006;28:531–5.

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