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Torsion of the Pregnant Uterus

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A 31-year-old woman, with a history of previous cesarean section and right oophorectomy, was admitted for a repeat cesarean section. After the commencement of surgery uterine torsion was diagnosed because of the anterior position of the remaining left ovary and tube, the absence of normal uterovesical peritoneum, and extremely engorged vessels in the lower uterine surface. Posterior classical hysterotomy was performed and a healthy female baby was delivered. Following delivery of the baby and suturing the incision site of the uterus, the contracted uterus was detorted and put back in the pelvic cavity. Extreme uterine torsion of 180° at term is a rare obstetric event. This paper presents a case of uterine torsion at full term pregnancy in which the delivery and repositioning of the uterus was successful.

Key Words: Uterine torsion, cesarean section, hysterotomy

INTRODUCTION

Extreme uterine torsion, at term, is a rare obstetric event. Usually it cannot be diagnosed before delivery, and the final diagnosis is only made at the time of laparotomy. Due to vessel engorgement in the broad ligament and anterior placement of ovaries, the usually held method of low flap transverse cesarean section cannot be performed. A classical hysterotomy on the posterior surface of the uterus might be necessary. Here we report a case of uterine torsion of more than 180° detected at laparotomy for a repeat cesarean section.

CASE REPORT

A 31-year-old, Korean woman, gravida 3 para 1, with 1 previous delivery by lower flap transverse cesarean section was admitted. This surgery was 5 years earlier for cephalopelvic disproportion, and a healthy male baby weighing 4100 gm was delivered. The only other previous surgery was for appendectomy and right oophorectomy 11 years ago, otherwise her medical history was unremarkable. The patient's last menstrual period was June 18, 1999, and her expected date of delivery was March 25, 2000. Physical examination was unremarkable. The patient was a 160 cm, 72 kg, well-developed woman with no pelvic, abdominal wall, or skeletal abnormalities. She was transferred to the Department of Obstetrics and Gynecology, Yonsei University College of Medicine for the current pregnancy at 28 weeks' gestation. Three visits were made before delivery. At 31 weeks' gestation an ultrasound examination had revealed a fetus appropriately grown for 31 weeks' gestation. There was no fetal anomaly, breech presentation, placenta previa marginalis, and amniotic fluid volume was normal. The patient was seen on March 8, 2000 at 37 weeks' gestation and an elective cesarean section was scheduled at 38 weeks' gestation on March 16, 2000.

The abdomen was opened through the previous Pfannenstiel incision scar. There was only minimal intraperitoneal adhesion. Prominently engorged vessels, especially in the broad ligaments, were noted on the lower surface of the uterus. Uterine malposition was evident by displacement of the left tube and ovary to the right side of the pelvis secondary to a 180° laevorotation of the uterine corpus around the lower uterine segment. Previous right oopho rectomy was noted. Attempts to rotate the gravid

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Fig. 1. The classical hysterotomy repair site on the posterior surface of the 180° rotated uterus. The left ovary on the right side of the patient and prominently engorgement vessels on the lower surface of the uterus are noted.

Fig. 2. Anterior surface of the uterus after cesarean section where the previous incision scar is noted. The left ovary is properly sited on the left side.

uterus to its correct anatomic position were unsuccessful due to its enlarged size. As the gravid uterus would not yield to anatomical repositioning, delivery through a deliberate posterior classical hysterotomy was unavoidable. Due to the transverse lie of the fetus, internal podalic version was performed, and a healthy baby girl was delivered without difficulty by breech presentation. The placenta and membranes were delivered completely. The classical posterior hysterotomy incision was repaired in 2 layers (Fig. 1).

After closure of the incision site, the contracted uterus was rotated back, by 180°, to the correct anatomical position. The previous transverse lower uterine incision was intact, and the bladder was in its normal position. The lower uterine segment was distorted and had numerous tortuous varicosities of the posterior uterine external surface (Fig. 2).

No pelvic or uterine masses were evident. Complete hemostasis was achieved and blood loss was about 800 ml. The patient recovered well from her surgery and was discharged on the 5th postoperative day. She was followed up 6 weeks later, and the whole body and pelvic examination revealed to be normal.

DISCUSSION

Axial torsion of the pregnant uterus is considered to be a physiological condition if it does not exceed 45°. Extreme torsion of 180° at term is a rare perplexing obstetric event to the physician.[1] Among these rarely reported torsion cases, rotation to the right was found in two thirds while rotation to the left was found in only one third.[2] Abnormal presentation of the fetus, leiomyoma of the uterus, uterine malformations, large ovarian cysts, and pelvic adhesion are known factors associated with pregnant uterine torsion.[3] The diagnosis is usually established only after opening the abdomen, or sometimes even after closure of the uterine incision.[4]

In this case the patient was asymptomatic, but acute abdominal pain or failure of cervical dilatation in spite of strong uterine contraction had been reported.[5] Kovavisarach and Vanitchann reported a case where the woman presented with acute abdominal pain and shock, probably as the result of placental abruption.[6] A patient who suffers sudden onset of abdominal pain and shock in late pregnancy, together with fetal death in utero, may have torsion of the uterus with or

without concealed placental abruption. Due to compression, the resultant high uterine venous blood pressure causes abruptio placentae and then fetal death.

Suspicion of uterine torsion was raised in this case, because of the anterior position of the remaining ovary and tube, the absence of the normal uterovesical peritoneum, and extremely engorged vessels in the lower uterine surface. With the findings described above, uterine torsion should be considered and any predisposing factors investigated. Hemostasis should be affirmed after closing the uterus in the usual 2 layers. Postoperative manual correction is easily performed, as was done in this case.

In the report of Mustafa et al. bilateral plication of the round ligaments was tried to prevent immediate postpartum recurrence of the torsion. They suggested that this procedure may help in keeping the uterus in anteversion, reduce posterior uterine adhesion, and future dyspareunia.[7] Pelosi III and Pelosi suggested that the round ligament plication may prevent recurrent torsion in the immediate puerperium.[8] Factors causing uterine torsion require investigation, and the effectiveness of preventive methods such as round ligament plication should also be analyzed.

The discovery of term uterine torsion should not concern the physician, and after the diagnosis is made, one should proceed accordingly.

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