Two successive cesarean deliveries through separate posterior and anterior hysterotomy due to asymptomatic uterine torsion. A case report

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ABSTRACT

Uterine torsion during pregnancy is a rare obstetrical complication that can be life-threatening for both mother and child. Although torsion usually presents with acute, non-specific symptoms, it can also occur without any symptoms and pose no immediate health threat. Ultimately, the diagnosis of torsion is often made only during cesarean section.

We present a case of a patient who underwent two successive cesarean sections through separate posterior and anterior hysterotomy due to asymptomatic uterine torsion in both cases. During the first cesarean section an incision was inadvertently made in the posterior segment of the uterus. At the second cesarean section the degree of rotation was very different and an anterior hysterotomy was performed. The patient made an uneventful recovery after both deliveries.

If access to the lower anterior uterine segment is not safely available due to uterine torsion, a hysterotomy in the lower posterior uterine segment can be performed. The risk of rupture of a posterior hysterotomy scar in future pregnancies is unclear.

1. Introduction

A certain degree of uterine rotation in pregnancy is normal. In some rare cases, however, an extreme rotation of the uterus, greater than 45°, has been noted. This can occur due to, among other factors, large fibroids [1], uterine malformations or pelvic adhesions [2]. However, several cases of torsion without any discernible anatomic abnormalities have also been documented [2–4].

Torsion can be an acute event and cause problems with the blood flow to the uterus, possibly leading to maternal pain and collapse as well as placental abruption, fetal distress and even fetal demise [5,6]. Yet, albeit less frequently, asymptomatic uterine torsion has been reported in some women [1,3], with no immediate threat to mother or child.

In extreme cases of torsion, the uterus might not yield to attempts at anatomic repositioning during surgery, making it infeasible to perform a hysterotomy in the lower anterior uterine segment during cesarean section. Multiple case reports have been published about a deliberate or inadvertent transverse incision in the lower posterior uterine segment [3–9].

2. Case Presentation

Here we present a case of a woman who had two successive cesarean deliveries, both complicated by extreme uterine rotation. Due to the difference in degree of rotation in both deliveries, the two hysterotomies were performed at different locations.

The patient gave birth a total of three times. All three pregnancies were uncomplicated, with normal fetal development and no maternal problems.

The first delivery, at age 24, was a normal, uncomplicated vaginal delivery.

Between the first and the second delivery she underwent laparoscopic surgery, at age 30, for treatment of endometriosis due to severe pain complaints. A large endometriosis nodule of the vesicouterine pouch was successfully removed laparoscopically, and no other lesions were noted during surgery. She experienced a quick recovery and no further complaints.

The second delivery, at age 32, was a planned primary cesarean section at 39 weeks of gestation because of a transverse fetal lie. A prior attempt at external cephalic version had been unsuccessful. During the cesarean section a rotated uterus was noted. It was initially assumed to
be only 45° rotated, and a presumed anterior hysterotomy was performed. The neonate was delivered without issue. After delivery, the uterus was brought outside of the abdominal cavity. It was then noted that the uterus had actually been rotated 180°, and the hysterotomy had been made in the posterior segment of the uterus. The hysterotomy was sutured without issue in two layers with Vicryl and the uterus was detorted. Total blood loss was 400 mL. The patient made an uncomplicated recovery.

The third delivery, at age 34, was a planned primary repeat cesarean section at 39 weeks of gestation, again with Pfannenstiel incision. The uterus was again rotated, this time in extreme dextroversion. Unlike the previous cesarean, the posterior segment of the uterus was not accessible. Initially only a lateral view of the uterus could be obtained (Fig. 1).

Attempts at a complete anatomic repositioning were unsuccessful.

Ultimately, after proper inspection to delineate the major uterine vessels, an incision was carefully made in the accessible part of the lower anterior segment. The neonate was delivered without complications.

After delivery the uterus was brought outside of the abdominal cavity. The hysterotomy was slightly more lateral than a standard incision (Fig. 2). There was no excessive bleeding. Hysterotomy repair was normal, with suturing in two layers.

Inspection of the posterior uterine segment showed superficial dehiscence of the serosa but no uterine defect of the hysterotomy scar from the first cesarean section (Fig. 3). The remainder of the surgery was uneventful; total blood loss was 350 mL. The patient’s further stay at the hospital was again uncomplicated, and she was discharged three days later.

Since there were now two separate hysterotomy scars, the patient was counselled against a new pregnancy as there is little to no data available on the safety of future pregnancies in such circumstances [6].

3. Discussion

Here we present a case of a patient who underwent two elective cesarean deliveries through separate posterior and anterior hysterotomy. She had a history of endometriosis, and asymptomatic uterine torsion was encountered during both surgeries. During the first cesarean section an incision was inadvertently made in the posterior segment of the uterus. At the second cesarean section the degree of rotation was very different and an anterior hysterotomy was performed. Recovery was uncomplicated after both deliveries.

Preoperative diagnosis of uterine torsion is difficult. It can be asymptomatic, and the possible symptoms are non-specific and similar to those of other obstetric emergencies such as placental abruption and uterine rupture [1–6]. Diagnosis of torsion is usually made only during cesarean section.

If there is a high likelihood of encountering uterine torsion during cesarean section, for example a very large fibroid or a severe uterine malformation is present, a midline laparotomy can be considered. If necessary, the incision can be extended to gain a better view of the anatomy and create more room for manipulations [1]. If torsion is encountered or suspected during surgery, extensive inspection is necessary before performing the hysterotomy to prevent damage to the major vessels or surrounding organs.
A posterior hysterotomy is an alternative when confronted with an inaccessible anterior uterine segment [3–9]. In patients where a hysterotomy was performed in an unusual location, a repeat cesarean section should be discussed in future pregnancies, as the risk of rupture of those uterine scars is unclear [5,7].

**Contributors**

Matthias Boogaerts was involved in the patient’s care during surgery and hospitalization, and in drafting and revising the article to the final form as submitted.

Kathleen Wuyts was involved in the patient’s care during hospitalization, and in revising the article to the final form as submitted.

Henri Joos was involved in the patient’s care during surgery and hospitalization, and in revising the article to the final form as submitted.

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The authors declare that they have no conflict of interest regarding the publication of this case report.

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