

Case Reports

A novel case of an adenomyosis-related uterine rupture in pregnancy

U. Indraccolo, A. Iannicco, G. Micucci

Complex Operative Unit of Obstetrics and Gynecology, Hospital of Civitanova Marche, Area Vasta 3 – Marche, Civitanova Marche (Italy)

Summary

To date, few cases of uterine rupture related to adenomyosis have been reported. The current case report briefly describes a novel case of an adenomyosis related uterine rupture, while focusing on few symptoms that this kind of uterine rupture may have. Due to increasing rate of adenomyosis in Western countries, practicing obstetricians should carefully take in account silent uterine rupture related to adenomyosis.

Key words: Adenomyosis; Uterine rupture; Pregnancy.

Introduction

Spontaneous uterine rupture of the unscarred pregnant uterus is an uncommon accident. Miller *et al.* [1] have reported that uterine rupture in unscarred uterus in labor is linked with prostaglandin use, oxytocin infusion, malpresentation, and multiparity. Before the onset of labor, however, Sun *et al.* [2] have reported that sometimes the uterine rupture of unscarred uterus may not relate with any risk factors. More recently, Nikolaou *et al.* [3] have suggested why adenomyosis may be another risk factor for uterine rupture of unscarred uterus after reviewing 12 cases. Therefore, readers may feel interesting to assess the clinical course of the aforementioned uterine rupture in a pregnant woman with adenomyosis.

Case Report

The patient was 37-years-old, with two previous uneventful pregnancies and vaginal deliveries. The year before her actual pregnancy, she underwent laparoscopy with adhesiolysis for chronic pelvic pain. During ultrasonographic scans and vaginal examinations in the actual pregnancy, the gynecologist found a huge nodule of the uterine posterior wall, diagnosing an adenomyosis. The pregnancy was uneventful until 36 weeks, when the patient complained of nausea and abdominal pain. A cardiotocography (CTG) at this time was normal, but ultrasonography shows a large image resembling a hypoechoic cyst between the uterine fundus and the liver. It was suspected to be the cause of the symptoms. Moreover, the fetus was in breech presentation. In the succeeding hours, abdominal pain increased and the patient underwent another CTG. Regular uterine contractile activity was found, but the patient was not laboring,

based on cervical exploration. Repetitive variable decelerations depicted an abnormal CTG pattern, leading the onward obstetrician to perform a cesarean section. A healthy fetus was extracted in breech (Apgar 9-10). At the delivery of the placenta, the obstetrician found a large pouch of amnion behind the placenta, which was removed by pulling the placenta. The uterus was externalized from the abdomen. At this time, a three-cm tear in length on the uterine fundus, close to the right angle, was surprisingly found. The tear was not bleeding significantly and it was easily sutured (Figure 1). Moreover, no cysts were found at exploration of the abdomen and of the adnexa, but the obstetrician confirmed the diagnosis of wide zones of adenomyosis on the entire uterus, with signs of decidualized endometriosis in the pelvis. The post-cesarean course was uneventful.



Figure 1. — Uterine tear during suture.

Revised manuscript accepted for publication September 24, 2014

After epicrisis, the patient was informed that she likely suffered from a primitive rupture of the uterus occurred not-in-labor and without the common complications as bleeding and fetal distress. The suspected cyst was a pouch of amnion herniating across the uterine tear. Patient was counseled that the uterine rupture could reoccur in another pregnancy and that it was likely to be caused by adenomyosis.

Discussion

The present authors were unable to strongly relate the uterine rupture to the behavior of the adenomyosis in a pregnancy. A severe burning damage of the uterus during the previous laparoscopy could have occurred. However, they believed that laparoscopy with adhesiolysis should not involve the uterine wall. Moreover, the multiparity *per se* should not justify the uterine rupture not-in-labor. Therefore, they mostly agree with what was already reported by Nikolaou *et al.* [3]: that perhaps transmural adenomyosis leads to splay of uterine smooth fibers and uterine rupture not-in-labor. Such interpretation could explain the evolution of the present case, with herniation of the amnion across the uterine tear in absence of significant bleeding and severe pain.

In conclusion, the transmural adenomyosis during pregnancy can be a subtle risk factor for uterine rupture, because it could favor the splaying of the smooth muscle without symptoms. Since adenomyosis rate is increasing in women, practicing obstetricians should carefully consider the possibility of a subtle uterine rupture due to adenomyosis during pregnancy.

References

- [1] Miller D.A., Goodwin T.M., Gherman R.B., Paul R.H.: "Intrapartum rupture of the unscarred uterus". *Obstet. Gynecol.* 1997, 89, 671.
- [2] Sun H.D., Su W.H., Chang W.H., Wen L., Huang B.S., Wang P.H.: "Rupture of a pregnant unscarred uterus in an early secondary trimester: a case report and brief review". *J. Obstet. Gynaecol. Res.*, 2012, 38, 442.
- [3] Nikolaou M., Kourea H.P., Antonopoulos K., Geronatsiou K., Adonakis G., Decavalas G.: "Spontaneous uterine rupture in a primigravid woman in the early third trimester attributed to adenomyosis: a case report and review of the literature". *J. Obstet. Gynaecol. Res.*, 2013, 39, 727.

Address reprint requests to:
U. INDRACCOLO, M.D., Ph.D.
Via Montagnano, 16
62032 Camerino (MC) (Italy)
e-mail: ugo.indraccolo@libero.it