

Extrauterine pregnancy resulting from late spontaneous rupture of an unscarred gravid uterus: case report

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Summary

Purpose: Rupture of the unscarred grand uterus is a rare obstetric event associated with major perinatal mortality and a high incidence of maternal mortality and morbidity, particularly peripartum hysterectomy. **Methods & Results:** We present the case of a primigravida woman who was admitted at 38 weeks of gestation complaining of intermittent abdominal pain and vaginal bleeding. Although initial evaluation suggested that both mother and fetus were doing well, continuous assessment resulted in cesarean section due to variable decelerations and increasing abdominal pain. An unexpected abdominal pregnancy was discovered resulting from a complete uterine rupture. A healthy infant was delivered and hysterectomy was performed. **Conclusion:** Although extrauterine advanced abdominal pregnancy resulting from late uterine rupture is associated with high maternal and perinatal mortality, a high index of suspicion, close surveillance and ultrasonography can achieve good outcome for both mother and infant. We strongly believe, that this case report contributes to the insight and further knowledge of this rare pregnancy complication.

Key words: Spontaneous uterine rupture; Hysterectomy; Pregnancy.

Case Report

A 39-year-old primigravida was admitted to our hospital with vaginal spotting and intermittent lower abdominal pain especially when the fetus was moving. Obstetrical and gynecological history were negative for previous spontaneous miscarriages, dilatation and curettage or any operation in the uterus or ovaries. The last scan at 23 weeks of gestation had shown an intrauterine pregnancy with normal fetal development, normal amniotic fluid and a placenta previa. The patient mentioned that this was the first episode of vaginal bleeding, which started a few hours prior to her admission.

Clinical assessment showed stable vital signs, and uterine size was equivalent to 38 weeks of gestation. The abdomen was soft and nontender, and there were no contractions. Abdominal ultrasound (US) findings were consistent with a single living fetus in transverse lie, satisfactory growth and parameters well-corresponding to 38 weeks of gestation. The estimated fetal weight was 3.0 kg with normal volume of amniotic fluid. The placenta was adjacent to the cervical os and the fetal head was close to the maternal left abdominal wall. The ultrasonographer did not find the uterus to surround the fetus and this, together with the previous US findings, was very suspicious. The cardiotocograph showed a reactive fetal heart rate pattern, however within eight hours of admission and due to severe variable fetal heart rate decelerations in the presence of persistent increasing abdominal pain, an emergency cesarean section was decided.

The peritoneal cavity was covered with a thick layer of dense tissue. Beneath that mass, a viable fetus was found in a transverse position within a "pseudosac" on a bed of small bowel loops. The male infant weighed 2.9 kg, with Apgar scores of 8 at 1 min and 9 at 5 min. The amniotic fluid was stained with discolored meconium and old blood. At the left uterine lateral fundal region, a large area of rupture measuring about 10 cm in diameter was found, through which the umbilical cord was protruding with no extrauterine placental parts. Uterine decidual membranes were diffused all over the abdominal cavity includ-

ing the omentum, the lateral abdominal walls and the bowel loop surface (Figures 1a, 1b/2). Active heavy bleeding was noticed from the site of the rupture while the placenta was totally covering the cervical os. Hysterectomy and partial infracolic omentectomy were performed, with an estimated blood loss of about 2,000 ml. The postoperative period was uneventful and the patient was discharged five days later.

Histopathology described the growth of placental tissue into the myometrium (placenta accreta) with complete anterior uterine rupture. The microscopic appearance of the placenta was characterized by the presence of multiple infarcts and calcifications. The omentum had decidual reaction and inflammatory infiltration, while inflammation of the fetal membranes clearly showed a chronic subacute intrauterine infection.

Discussion

Uterine rupture in pregnancy is an uncommon but potentially frightening complication that frequently results in life-threatening maternal and fetal compromise. It is defined as a full-thickness separation of the uterine wall and the overlying serosa. Uterine rupture is associated with clinically significant uterine bleeding, fetal distress, expulsion or protrusion of the fetus, placenta, or both into the abdominal cavity, and the need for prompt cesarean delivery, uterine repair, or hysterectomy.

In the present case, the patient's obstetric history did not include a previous cesarean section or any other uterine pathology considered as risk factors including uterine trauma, uterine overdistention, congenital uterine anomalies, placenta percreta or choriocarcinoma that could result in a scarred uterus.

Perhaps the only risk factor was the age of the patient. It has been described that increasing maternal age has a detrimental effect on the rate of uterine rupture [1]. Also, placenta accreta defined as the abnormal trophoblastic attachment and/or invasion into the underlying musculature, could be complicated with spontaneous rupture of the uterus. In our case, placenta accreta was a pathologic

Fig. 1a



Fig. 1b



Fig. 2



Figure 1a, b. — Overview of the abdomen during laparotomy showing the decidual membranes covering the small bowel mesentery.

Figure 2. — Overview of the abdomen during laparotomy showing the decidual membranes covering the omentum.

finding and we doubt whether a detailed US examination of the uterine wall could have revealed abnormal placentation. Finally, malpresentation (transverse lie of the fetus in our case) could be a risk factor for uterine rupture in an unscarred uterus.

Despite the uterine rupture and the resulting abdominal pregnancy, the fetus was still deriving its blood supply from the placenta, while the “pseudosac” was representing a normal amniotic sac. An emergency laparotomy was decided due to fetal distress and increasing maternal abdominal pain. Indeed, abnormal patterns in fetal heart rate were the first manifestation of uterine rupture in 87% of patients while sudden or atypical maternal abdominal pain occurred more rarely [2]. It has been demonstrated that definitive therapy for the fetus is delivery and should be accomplished immediately in order to avoid fetal morbidity and mortality [3], while the most critical aspect in the treatment of the mother in the presence of uterine rupture was hysterectomy. Since the uterus was not deemed repairable and in the presence of intractable (profuse) uterine bleeding, hysterectomy was considered to be the treatment of choice.

Spontaneous uterine rupture and secondary abdominal pregnancy is associated with high perinatal and maternal mortality and morbidity, particularly peripartum hys-

terectomy. The most important early sign of uterine rupture is prolonged and persistent fetal bradycardia. Although abdominal pain and vaginal bleeding remain consistent symptoms, they are less valuable in establishing the appropriate diagnosis.

Since diagnostic error is usual, it is important when a pregnant woman presents with persistent abdominal pain and transverse lie of the fetus, to look for an intact uterus by experienced ultrasonographers, thus minimizing maternal and fetal compromise.

References

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