SPONTANEOUS RUPTURE OF AN UNSCARRED UTERUS CAUSED BY NEAR-CORNUAL PREGNANCY WITH PLACENTA ACCRETA AT 4 MONTHS OF PREGNANCY

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SUMMARY

Objective: We present a case of spontaneous uterine rupture caused by near-cornual pregnancy with placenta accreta and emphasize the possibility of uterine rupture at all stages of pregnancy.

Case Report: A 32-year-old woman, gravida 3, para 2, was referred at 16 weeks of gestation under the condition of death on arrival. Uterine rupture with massive internal bleeding was diagnosed. Emergency hysterectomy was performed. There was a sagittal perforating arc near the right cornu from the anterior to the posterior surface over the dome of the uterus. The final histopathologic examination indicated a near-cornual pregnancy with placenta accreta. Complications of massive hemorrhage occurred, and the patient expired due to multiple organ failure.

Conclusion: Spontaneous rupture of an unscarred uterus can occur at any stage of pregnancy. The placental implantation near the cornu with accreta may have been the cause of the uterine rupture in this patient. Noting the site of implantation should be an important component during antenatal sonography. Furthermore, uterine rupture should be included in the differential diagnosis of pregnant women with abdominal pain. [Taiwanese J Obstet Gynecol 2005;44(4):362-364]

Key Words: near-cornual pregnancy, placenta accreta, uterine rupture

Introduction

Spontaneous rupture of an unscarred uterus in early pregnancy is rare; it is a potentially catastrophic event for both the mother and fetus. The prognosis for spontaneous uterine rupture depends on early diagnosis and prompt management. We report a case of spontaneous uterine rupture caused by near-cornual pregnancy with placenta accreta without risk factors at 4 months of pregnancy.

Case Report

A 32-year-old woman, gravida 3, para 2, was referred from a local medical doctor’s clinic under the condition of death on arrival. According to her family and the local medical doctor’s statements, she had suffered from abdominal pain in the morning and visited the clinic for help. No abnormal obstetric finding was found at that time. Loss of consciousness with paleness was noted by her family about 7 hours later. She was then sent to our hospital. A distended abdomen was found on examination. Sonography revealed an empty uterus with the fetus lying in the abdominal cavity; there was also massive fluid accumulation in the abdominal cavity (Figure 1). Uterine rupture with internal bleeding was diagnosed. According to her family’s statement, she did not have any medical history and her previous pregnancies and antenatal care were uneventful. Further
questioning failed to reveal any risk factor leading to uterine rupture, such as dilatation and curettage, insertion of intrauterine device, abdominal surgery, trauma or domestic violence.

Emergency laparotomy was carried out after resuscitation. On opening the abdominal cavity, hemoperitoneum with approximately 4,000 mL of fresh blood and clots were found. The uterus was distorted by an asymmetric enlargement over the right upper portion. There was a sagittal perforating arc near the right cornu, measuring 10 cm in length, from the anterior to the posterior surface over the dome. The perforating arc was coated with placenta-like tissue and blood clots. A dead fetus, with the umbilical cord still attached to the placenta, was lying in the abdominal cavity. The placenta was located within the uterus with partial exposure at the perforating edge (Figure 2). Hysterectomy was performed for hemostasis.

Histopathologic examination revealed that the placental tissue had replaced the whole layer of myometrium at the expanded uterine dome near the right cornu. In the myometrium adjacent to the perforation, there was frequent anchoring of chorionic villi with only a thin decidual layer or even without any intervening decidual tissue, indicating placenta accreta. Together with the marked expanding and pushing pattern of the placenta over the myometrium, placenta percreta was considered.

Postoperatively, complications due to massive hemorrhage occurred: hypoxic encephalopathy, ischemic hepatitis, disseminated intravascular coagulopathy and adult respiratory distress syndrome. The patient expired due to multiple organ failure.

Discussion

Spontaneous rupture of an unscarred uterus, although rare and unexpected, could be a devastating complication of pregnancy. The reported incidence of spontaneous uterine rupture without previous surgery occurs in 1 in 8,000 to 1 in 15,000 deliveries [1]. Most cases of uterine rupture occur during the last trimester or labor. Spontaneous rupture of an unscarred uterus in the first or second trimester is unusual. The majority of such cases has a predisposing factor such as congenital uterine abnormality, intrauterine infection, placenta percreta or cornual pregnancy [2].

There was, however, no contributory risk factor leading to uterine rupture in our patient. Her previous pregnancies had been uneventful. The near-cornual pregnancy with placenta accreta was the most likely cause of the spontaneous rupture of the unscarred uterus. The possible mechanism may be myometrial weakness caused by the previous pregnancies and the abnormal implantation site in this pregnancy. Placenta accreta is a rare but potentially life-threatening complication of pregnancy. The term refers to any placental implantation that results in its abnormal adherence to the uterine wall [3]. Risk factors for placenta accreta include placenta previa, Asherman’s syndrome, submucous leiomyomata, advanced maternal age, multiparity, and prior uterine scarring caused by previous uterine surgery. The overall incidence of placenta accreta is reported to be 1 in 18,000 pregnancies, with placenta percreta being even less common [4,5].

Spontaneous rupture of an unscarred uterus is infrequently recognized because of its rarity. The prompt diagnosis of such uterine rupture is difficult but may be lifesaving for mother or fetus, or both. However, the clinical signs and physical findings may be variable.
Uterine tenderness, hemorrhage and shock are perhaps the most common [6]. Immediate surgical intervention is the cornerstone of treatment once uterine rupture has occurred. The procedures for surgical management should be individualized. The type, location and extent of laceration, age, desire to preserve fertility, and clinical condition should be taken into consideration at the same time [6,7]. Most would agree that hysterectomy, either subtotal or total, is the procedure of choice in these cases. According to previous reports, hysterectomy is inevitable in 50% of cases [8].

Complications of massive obstetric hemorrhage include renal tubal necrosis, hypoxic encephalopathy, pituitary necrosis, adult respiratory distress syndrome and death [1]. The prognosis for spontaneous rupture of the uterus depends on early diagnosis and proper management [9,10]. Delayed treatment or misdiagnosis is dangerous or fatal, particularly if the initial symptoms are vague. From this case, we emphasize that noting the site of implantation is also an important component during antenatal sonography, especially when the implantation is near the cornu. In addition, all clinicians must keep in mind that spontaneous rupture of the uterus should be included in the differential diagnosis of women with unexplained abdominal or pelvic pain in any stage of pregnancy.

References