Spontaneous Uterine Rupture in a Pregnant Woman with Previous Hysteroscopic Septum Resection: Case Report

Histeroskopik Septum Rezeksiyon Öyküsü Olan Gebe Bir Kadında Spontan Uterus Rüptürü

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Geliş Tarihi/*Received:* 11.04.2013
Kabul Tarihi/*Accepted:* 15.12.2013

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ABSTRACT Spontaneous uterine rupture is a rare complication in primigravid women before labour. The diagnosis of uterine rupture may be challenging due to lack of specific symptoms. A 19 years old nulliparous pregnant woman was admitted to emergency room with the complaint of abdominal pain, listlessness and vomiting. Ultrasonography revealed 35 weeks singleton fetus with bradycardia and free fluid in the abdominal cavity. An emergency caesarean section was performed due to fetal distress and a 2640 g weighting infant was delivered with Apgar scores of 2 and 5 at 1 and 5 minutes respectively. A 2 cm in diameter fundal laceration was observed and repaired primarily. The post-operative course was uneventful and the patient was discharged from hospital in good condition. In conclusion, uterine rupture may be presented in various clinical pictures, this is important for physician and counselling of all pregnant women; especially those who have had previous uterine surgery.

Key Words: Uterine rupture; hysteroscopy

ÖZET Doğum eylemi öncesi primigravida gebelerde spontan uterus rüptürü nadir bir komplikasyondur. Uterus rüptürü tanısı spesifik bulgular olmaması nedeniyle zor olabilir. 19 yaşında nullipar gebe hasta acil servisimize karın ağrısı, halsizlik ve kusma şikayetleri ile kabul edildi. Yapılan ultrasonografide 35 haftalık bradikardik tek fetus ve abdominal kavitede serbest mayi saptandı. Fetal distres tanısıyla acil sezaryen yapıldı ve 1. dakika Apgarı 2, 5. dakika Apgarı 5 olan 2640 g ağırlığında bebek doğurtuldu. İki santimetre büyüklüğünde fundal laserasyon saptandı ve primer onarıldı. Postoperatif takibinde problemi olmayan hasta iyi durumda taburcu edildi. Sonuç olarak, tüm gebeler, özellikle de uterus cerrahisi geçirmiş olanların takibinde hekimlerin farklı klinik varyasyonlar göstermesi nedeniyle uterin rüptür açısından dikkatli olması gerekmektedir.

Anahtar Kelimeler: Uterus rüptürü; histeroskopi

Turkiye Klinikleri J Case Rep 2014;22(4):241-3

Spontaneous uterine rupture is an obstetric emergency associated with poor fetal and maternal outcome. The incidence of uterine rupture in unscarred uterus ranges from 1 in 8000 to 1 in 15000 pregnancies in literature.[1] An increased risk of uterine rupture is associated with uterine scars caused by previous caesarean section, myomectomy and hysteroscopic procedures.[2,3] Spontaneous uterine rupture usually occurs during labour and it is uncommon in nulliparous women. We present a case of a spontaneous uterine rupture at 35 weeks of gestation in a primigravid woman with a history of operative hysteroscopy for uterine septum resection, associated with

nonspecific symptoms, massive intra-abdominal haemorrhage.

CASE REPORT

A 19 years old nulliparous woman was admitted to our emergency room at 35 weeks gestation because of upper abdominal discomfort, listlessness and vomiting. In her medical history, diagnostic laparoscopy and operative hysteroscopy for resection of uterine septum were performed 11 months ago. The operation record reported no complication. She had no medical problem. In vaginal examination cervix was enclosed, the fetal head was at station -2. Physical examination revealed abdominal tenderness and epigastric sensibility. On admission blood pressure was 90/60 mm Hg with maternal tachycardia (120 pulse/minute). Ultrasonographic examination showed fetal bradycardia about 80-90 pulse/minute, massive free fluid in Morrison pouch and inter-intestinal area. The amniotic fluid index was 5 cm in four quadrants with cephalic presentation. Placenta was on the anterior wall of the uterus.

An emergency caesarean section was performed for acute fetal distress without expecting blood test results. Under general anaesthesia, Pfannenstiel incision was performed. Massive hemoperitoneum was detected and approximately 1000 ml blood was removed. A laceration in 2 centimeter in diameter, located in the midline uterine wall was noted with active bleeding (Figure 1). Chorioamniotic membrane was totally ruptured and amniotic fluid leakage was prominent. A 2640 g female infant was delivered with Apgar scores of 2 and 5 at 1 and 5 minutes respectively. Abdominal exploration with intestinal areas was performed carefully. The uterine defect was repaired with continuous double-layer closure using 1/0 synthetic multifilament absorbable suture.

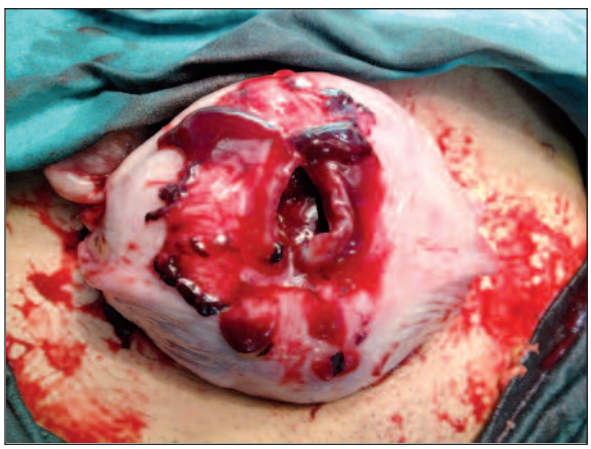

FIGURE 1: Rupture on midline uterine fundal wall.

Haemoglobin concentration was 8.3 g/dL. She was transfused with three units of red cell pack and 3 units of fresh frozen plasmas. The patient was discharged from hospital at postpartum day 3 in good health. The baby was intubated and stayed in intensive care unit for two weeks.

DISCUSSION

Uterine ruptures are usually thought of as a complication of pregnant women with previously scarred uterus and virtually always occur in labour.[4] There are such risk factors for rupture of unscarred uterus; grand multiparity, feto-pelvic disproportion and malpresentation, stimulation agents (oxytocin-prostaglandin), macrosomic-hidrocephalic fetus, placentation abnormalities such as placenta percreta, increta, accreta.[2] Previous uterine surgery, (caesarean section, myomectomy, partial uterine resection and hysteroscopy) especially caesarean section is the most predisposing factor for uterine rupture in pregnancy.[5] Uterine perforation during operative hysteroscopy or hysteroscopic metroplasty without complications may also be associated with uterine rupture in subsequent pregnancy.[6] Our literature review revealed 43 cases of spontaneous uterine rupture associated with previous uterine surgery that were reported between 1950 and 2013.[7] In 38 of these cases, myomectomy, placenta accreta, and excision of adenomyosis were the predisposing factors for the uterine rupture. In only five cases, previous hysteroscopic septum resection was the underlying factor.

As in the present case, the primary repair of the ruptured area is the surgical treatment of choice (35/43), however, hysterectomy may be needed in those cases that have intractable bleeding despite

repair (8/43). Additionally, in accordance with our case, uterine rupture secondary to previous hysteroscopic septum resection was always treated with primary repair in the five reported cases. In patient with history of hysteroscopic surgery, uterine rupture is usually seen after 32 weeks of gestation.[8] Time interval between pregnancy and hysteroscopic metroplasty is not a major risk factor for uterine rupture.[9] Thermal vascular damage, deep tissue necrosis and injury of myometrium are the causes of uterine rupture in hysteroscopic metroplasty.

The diagnosis of uterine rupture may be challenging due to lack of specific symptoms. Most common symptoms are tachycardia, hypotension, uterine bleeding and abdominal pain. In certain cases the absence of vaginal haemorrhage may give a false sense of security similar to our case.[10] Fetal heart rate suddenly decreases in cardiotocography. Ultrasonography is useful in antenatal diagnosis of spontaneous uterine rupture. Free peritoneal blood, peritoneal hematoma and an empty uterus can be seen on ultrasonographic examination.

Fedele et al. concluded that reproductive outcomes in the patients with residual septum of not over 1 cm was similar to that in patients with normal or near-normal uterine morphology after surgery.[11] Based on this to decrease the risk of uterine rupture in future pregnancy, it may be valuable to limit resection of septum before 1 cm to the uterine fundus.

In conclusion, we have presented a rare case of spontaneous uterine rupture at 35 weeks prelabor gestation of a metroplastic uterus. Uterine rupture may be presented in various clinical pictures, this is important for physician and counselling of all pregnant women; especially those who have had previous uterine surgery.

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