



Posterior wall rupture of uterus, after previous cesarean section: Case Report and Review



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Abstract

Uterine rupture is an extremely rare but potentially catastrophic complication of delivery after cesarean section, with an estimated incidence of 0,3-1.7% of pregnancies. Posterior wall uterine rupture with intact scar of lower segment incisions, with a small number of cases, it is most commonly associated with previous uterine surgery or trauma and mostly ends with neonatal stillbirth and hysterectomy. Early detection and prompt intervention are essentials to prevent maternal and fetal morbidity and mortality. A 34 year old woman, gravida 2, para 1, at 32 weeks of gestation period, presented to the department of Gynecology and Obstetrics, complaining of abdominal and lumbar pain, shortness of breath and dizziness. The ultrasound revealed fetal demise, fetus and part of placenta fluctuating in abdominal cavity, a defect of uterus and an amount of free fluid in the abdomen. The patient was hemodynamically unstable and underwent an emergency cesarean section. Was revealed a complete posterior wall rupture. A dead newborn male was delivered. A surgical adequate treatment of the defect and blood transfusion for anemia required, the patient was transferred to the intensive care unit for monitoring and treatment. **Rupture** of posterior wall of uterus is difficult to diagnose, the emergent cesarean section and a prompt team response, is essential to prevent maternal and fetal morbidity and mortality.

Keywords • Posterior wall rupture • Uterine rupture • Previous cesarean section

Introduction

Uterine rupture is a complete division of all three layers of the uterus, a complication of vaginal birth after cesarean section¹⁾. Mostly occurs in pregnant women with previous uterine surgery, cesarean section, there has been reported in non pregnant women when exposed to trauma, infection or malignant tumor.²⁾ Patient with a previous cesarean section incision are 15 -30 times higher risk for uterine rupture, the incidence of uterine rupture is lowest after one previous cesarean section without augmentation and induction, while the incidence of unscarred uterine rupture is very low.³⁾ Mostly those rupture have an etiology of the following: 1) prolonged induction or augmentation of labor 2. Overstretching of uterine wall, 3, Trauma 4. Genetic disorder of weak uterine wall. Uterine rupture occurs for every 5000 to 7000 births.⁴⁾⁵⁾ We present a rare case of posterior wall rupture of uterus, with no history of trauma, no induction and augmentation, with previous cesarean section.

Case report

A 34-year-old pregnant woman, gravida 2, para 1, at 32 weeks of gestation, prior cesarean delivery, was admitted to the Department of Gynecology and Obstetrics at Tetovo Clinical Hospital, Republic of North Macedonia, with complaints of abdominal and lumbar pain that last 24 h, shortness of breath and dizziness. There were no antenatal problems, her past medical history was uneventful as well and no possible previous trauma. Initially the patient was diagnosed with bradycardia and dyspnea, tenderness of abdomen and pain, and then "compensating" with tachycardia and moments of loss of consciousness, low blood pressure. Anesthesiologist and Internist were informed and a blood sample was taken for a suspected anemia, due to bleeding. The ultrasound revealed fetal demise, fetal extremities and part of placenta fluctuating in abdominal cavity, a defect of the wall of uterus and an amount of free fluid in the abdomen. Uterine scar rupture was suspected, the patient was in a possible hemorrhagic shock, caused of bleeding and an emergent cesarean section was performed, under a general anaesthesia. There was found blood and coagulum on abdominal cavity, and an intact lower segment scar. Fetal body and extremities and part of placenta were in the abdominal cavity. A dead newborn male was delivered. The 7cm rupture extended to the right lateral uterine side and right infundibulopelvic ligament was stripped. Beside the severe trauma and blood loss estimated of 2000ml, the rupture was surgically adequately sutured and treated with uterotonics, the uterus was safe. Intraoperative findings correlated with ultrasonography. The haemoglobin was very low and blood transfusion (4 units of packed red cells and 4 units of plasma) for anemia required, the patient was transferred to the intensive care unit for monitoring and treatment. Postoperative, the patient was stable. The patient recovered well and was discharged from the hospital in good condition. At control postnatally, six weeks after delivery, patient showed in a good health.

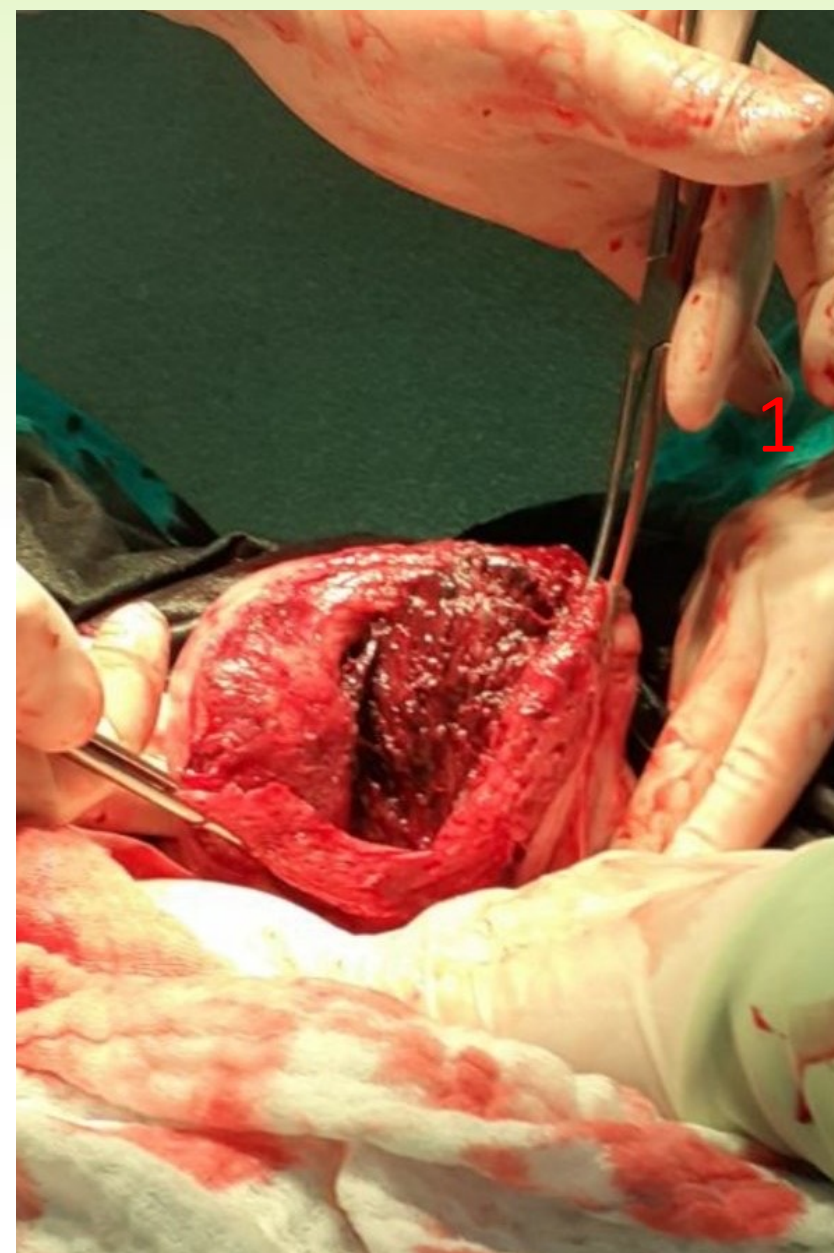


Figure 1 .2. Posterior wall uterus rupture, after the delivery of the fetus

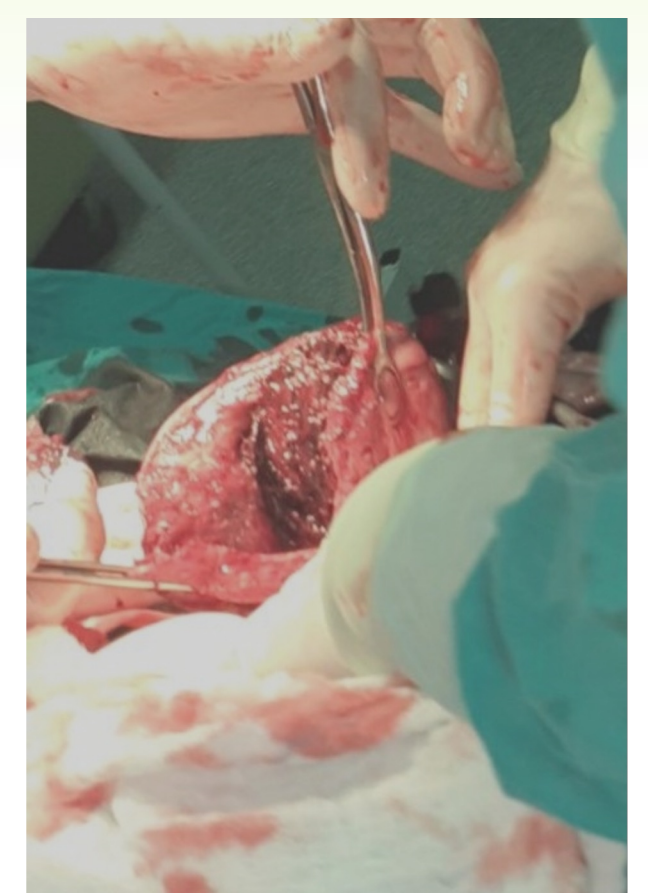


Figure 3. Sutured defect of the uterus

Discussion and Conclusion

Uterine rupture as a defect that involves all the layers of uterus, otherwise the dehiscence that is a partial defect, with intact serosa but may progress to rupture, are quoted with an incidence of 0.7-5.1/ 10000 births⁶⁾. Uterine rupture in an unscarred uterus are very rare, 4.54/ 100000⁷⁾. The incidence of perinatal death associated with uterine rupture is 1-2 /100 and maternal death 1/1000000. In most cases the rupture will occur via the uterine scar of previous cesarean section or surgery. An abnormal structure of uterine wall, or a rigid anterior uterine scar can be the major cause of an atypical rupture of posterior wall.²⁾ On all cases of posterior rupture, were recognised factors predisposing uterine rupture during vaginal delivery after previous cesarean section that are induction, augmentation, fetal malposition, multiparity, polyhydramnios and placenta accreta. None of these causes, was our case. The first signs of posterior wall uterine rupture are similar to those of other complication in pregnancy that follow a massive blood loss, abruption of placenta, rupture of incision of previous cesarean section. Pathological CTG, or absent fetal heart rate, include the haemoperitoneum symptoms: abdominal pain, abdominal tenderness, shoulder tip pain, abnormal vaginal bleeding, shortness of breath, hypovolemia. Early recognition and prompt intervention are essentials to prevent maternal and fetal morbidity and mortality.

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