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Case Study

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SPONTANEOUS POSTERIOR UTERINE RUPTURE OF A PRIOR CAESAREAN DELIVERY -CASE REPORT

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ABSTRACT

The spontaneous posterior rupture of gravid uterus is a rare complication concerning less than one percent of the pregnant women. The authors report the case of a 34-year woman at 37 weeks of gestation of a prior caesarian delivery, referred for mild uterine contractions and developed a sudden abdominal distension with bleeding and fetal distress. The surgical laparotomy exploration in emergency showed the posterior wall of the uterus had ruptured with fetal death. Principles of management, which must be quick and coordinated, are reminded.

KEYWORDS: Posterior Rupture of Uterus, Case Report.

BACKGROUND

Uterine rupture is an obstetric complication that causes significant maternal and fetal morbidity and mortality.[1] The spontaneous posterior rupture of gravid uterus is a very serious obstetrical complication with various etiologies: fetopelvic disproportion, dystocic presentations and misuse of oxytocics, but the rarest and most serious etiology is posttraumatic rupture, which represents 1% of these etiologies. We report a case of spontaneous posterior uterine rupture of a prior caesarian delivery. This is an obstetrical emergency with a vital maternal and fetal prognosis, requiring rapid intervention and multidisciplinary management.

CASE PRESENTATION

34-year-old patient, without any notable pathological history, in 2019, a baby was delivered by caesarean section in the breech position, weighing 3700 g. She had no significant past medical history, and her antenatal care had been uneventful. G2 is the current pregnancy estimated at 37 weeks of amenorrhea according to an early ultrasound.

On admission, the patient had a blood pressure of 100/50 mm Hg, with a heart rate of 115 beats/min, SPO2 100%; GCS 15 and her body temperature was 36.7 °C.

She was admitted to our hospital due to a pregnancy of 37 weeks and regular contractions for 5+ hours. Periodic uterine contractions occurred every 7 min. The patient was accompanied by abdominal pain and vaginal bleeding and had intermittent term after contractions.

Abdominal palpation shows an abdominal contracture and distension.

A quick ultrasound scan shows a fetus with negative cardiac activity and whose biometry corresponds to the theoretical gestational age with an anterior placenta localization. The ultrasound was used but did not show ruptured abdominal fluid.

The patient was taken directly to the operating room for exploratory laparotomy where a complete workup was performed, blood was requested and she was conditioned (two good caliber venous lines, filling, oxygen therapy).

On exploration, we found a revealed a massive haemoperitoneum caused by the rupture of the uterine posterior wall. A haemoperitoneum with approximately 1 liter of blood was recovered. The lower uterine segment was intact and not ruptured. A girl with a body weight of 3400 g was delivered. Apgar scores were zero at 1 min. The placental was completely delivered, and no placental abruption occurred. The patient's uterus was closed in two layers. After removing the blood and clots, a 13 cm-long tear in the posterior wall and active bleeding from the uterine rupture were found. It was suspected that future conceptions would be dangerous, so bilateral tubal ligation was performed at the same time. Our patient's uterine and pelvis showed no abnormalities and, particularly, no evidence of endometriosis. The placenta was sent for pathological examination.

The operation was uncomplicated, and the estimated total blood loss was 2000 ml. eight units of blood were transfused. The patient's postoperative course was regular. The patient was admitted to the intensive care unit for monitoring and then transferred to the gynecology department. She was discharged 8 days later.

FIGURE TABLE LEGEND

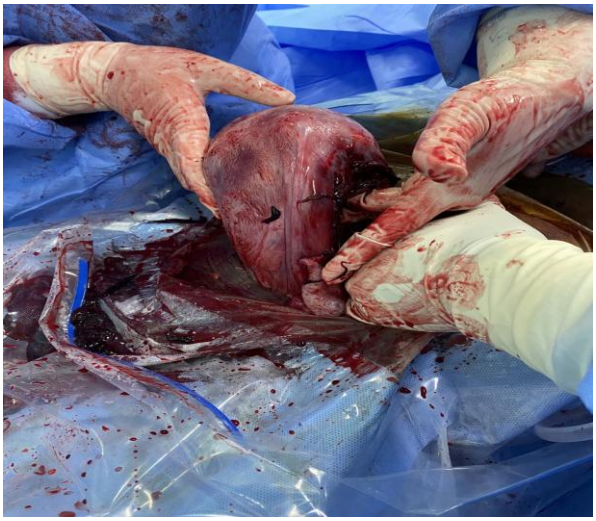

Figure 1: Defect of the posterior wall of the uterus.

Figure 2: Defect of the posterior wall of the uterus.

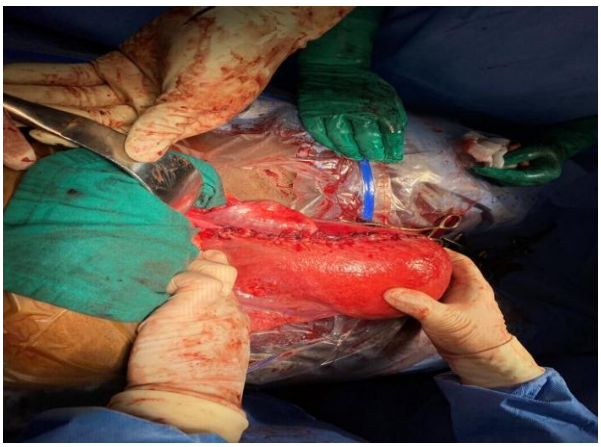

Figure 3: A 13-cm-long tear was shown. Continuous suture and embedding were performed.

DISCUSSION

Spontaneous rupture of the posterior wall of the uterus in pregnancy is rare and potentially a catastrophic event for both the mother and the foetus.[3,4] Nonspecific signs and symptoms lead to misdiagnosis and delayed treatment. In this case, no predisposing factors, classic signs and symptoms, including decreased fetal heart rate, uterine contraction, abdominal pain, changes in the station of the presenting part, bleeding or shock were found. The patient felt only uterine contraction aggravations and abdominal swelling. We performed an urgent laparotomy based on the previous caesarean delivery history in breech presentation. Both the patient and the newborn were fortunate to have a good outcome.

In 2011, Stefano Uccella[5] wrote a review of spontaneous pre-labor uterine rupture in a primigravida. Some risks in those cases included a history of uterine surgeries, such as caesarean section or myomectomy, uterine damage due to trocar insertion, uterine perforation and other risk factors, such as uterine anomaly, uterine curettage, uterine diverticula, and Ehlers-Danlos syndrome. The patient had only a history of caesarean section, with no other uterine operations, but the rupture site was not found in the uterine scar. She had no other risk factors.

Le-Ming Wang[6] reported a spontaneous uterine rupture on the posterior wall due to placenta percreta. In this case, the placenta was located on the right lateral and anterior wall of the uterus so that its occurrence should not be related to placenta factors. Unscarred uterus multiparity is one of the most important factors in uterine rupture. The stretching, tearing or bruising of repeated childbirth makes the uterine wall very weak, so the chances of rupture increase with every subsequent pregnancy. The patient had a medical termination of a missed miscarriage at seven weeks and a caesarean section. It was not clear if this rare event of spontaneous rupture may be attributed to the weakening of the uterine wall.

Traditionally, spontaneous rupture of the posterior wall of the uterus is rare, and the rupture is often easily covered by the intestinal loop and omentum so that some minor symptoms are ignored. Ultrasonography plays a critical role in diagnosing uterine rupture based on the demonstration of a myometrial defect associated with intraperitoneal and extra peritoneal haemorrhage.[7] In this case, we failed to find extra peritoneal haemorrhage. However, it is important to maintain a high index of suspicion for uterine rupture in women presenting with some or all of these features, regardless of any known risk factor.[8] Prompt recognition of uterine rupture, early diagnosis and expeditious recourse to laparotomy are critical to influencing perinatal and maternal morbidity.

CONCLUSION

The posterior wall, is very rare and easy to ignore due to non specific clinical symptoms. Haemoglobin reduction

and haemoperitoneum in patients caution us to closely consider uterine rupture.

DECLARATIONS

Guarantor of Submission

The corresponding author is the guarantor of submission.

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Availability of data and materials

Supporting material is available if further analysis is needed.

Competing interests

The authors declare that they have no competing interests.

Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Ethics approval and consent to participate

Ethics approval has been obtained to proceed with the current study. Written informed consent was obtained from the patient for participation in this publication.

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