Antepartum uterine rupture in a woman with previous iatrogenic uterine perforation

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DESCRIPTION

A 32-year-old pregnant woman, *gravida 2, para 0*, presented at 34 weeks of gestation with lower right quadrant abdominal pain, radiating to the lumbar region.

She had a history of pre-viable premature rupture of membranes at 22 weeks of gestation due to cervical insufficiency 2.5 years before. Considering the poor prognosis, she had requested a termination of pregnancy, which was complicated with retention of placental fragments. She was then subjected to uterine curettage, during which uterine perforation was suspected. The situation was managed expectantly, without further complications. During the current pregnancy, a McDonald cerclage was placed at 14 weeks of gestation.

At admission, the patient was haemodynamically stable, with normal abdominal physical examination and inconclusive right costovertebral angle tenderness test. Gynaecological examination and ultrasonography (US) revealed no significant findings; cervical length was 16 mm. Cardiotocography showed reassuring fetal status and a pattern of uterine irritability. Her clinical situation remained stable during the first 23 hours following admission, after which she showed a progressive clinical deterioration, culminating with the eventual onset of acute abdomen. Abdominopelvic US revealed free peritoneal fluid, and blood tests showed a fall in

Figure 2 Newborn's facial deformity (edematous and erythematous left side of face), probably a consequence of protrusion through the uterine laceration which prevented more severe blood loss. (Photograph provided by the patient).

Figure 1 Coronal plane of the abdominopelvic MRI scan, showing a transmurular defect on the uterine fundus (on the right side) and fetal parts protruding through the uterine wall (arrow).

Patient's perspective

What can I say about the most memorable experience of my life? When I was admitted to the A&E with abdominal pain, I never thought it could be something so serious. But in the morning after being hospitalised, I was sick and then felt an unbearable pain, the worst I'd ever felt. I wasn't able to stand. I realised there and then that something very serious was going on. I asked to speak with my obstetrician and I didn't let anyone examine me until she was present. I knew she would believe me about the pain I was feeling at that moment (after all, the medical team who had looked after me and witnessed everything had downplayed it, claiming that it was a gastroenteritis). I only calmed down after speaking with her. She explained to me that they were going to carry out some tests to understand what was happening. Long hours of uncertainty went by, but with the best outcome we could have hoped for. I owe it to the medical team that always accompanied me, believed in me and never gave up on us. If we are here today to tell the story, we owe it to them (especially to my obstetrician, to the operating team, as well as the neonatal unit). My sincere thanks to everyone. (Translated from Portuguese)

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Images in...

haemoglobin level of 1 g/dL and elevated inflammatory markers. Simultaneously, acute appendicitis had been deemed unlikely on observation by general surgeons and excluded by pelvic MRI.

The MRI led instead to the suspicion of a uterine rupture. **Figure 1** shows the MRI scan result, which reveals a transmural defect on the uterine fundus, on the right side, and fetal parts protruding through the uterine wall.

An exploratory laparotomy was performed 32 hours after admission, confirming the uterine rupture by the presence of a moderate haemoperitoneum and a transmural fundal tear (6 cm x 3 cm), with protrusion of fetal parts. A lower segment caesarean section was performed and the fetus extracted in pelvic presentation. The fundal tear was successfully repaired. The patient received 2 units of packed red blood cells after surgery and was discharged on the fourth postoperative day without any complications.

The newborn presented an Apgar score of 7 at 1' and 9 at 5' and weighed 2720 g. He had a facial deformity, as shown in **figure 2**. This was probably a consequence of protrusion through

the uterine laceration, which is what likely contained the haemorrhage, enabling a positive outcome for both mother and child. The baby recovered well and the facial deformity disappeared. He stayed in the neonatal unit for 8 days due to prematurity, with a favourable course and no associated complications. His psychomotor development has been normal to date (5 years).

Contributors AS wrote the case report and assisted in antenatal appointments and inpatient care; JAS made the diagnosis, was the main surgeon and reviewed the manuscript; GR was responsible for the emergency care, was the assistant surgeon and reviewed the manuscript; CC followed the patient in antenatal and postnatal appointments, contributed for diagnosis and management of care and reviewed the manuscript.

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Learning points

- Although a prior caesarean section is considered the main risk factor for uterine rupture in resource-rich countries,¹ women with any uterine scar, including from uterine perforation, should also be considered at risk.^{2,3}
- Medical staff should keep a high level of suspicion for uterine rupture in such pregnant women presenting with acute abdomen, even before labour.⁴

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