Spontaneous rectus sheath haematoma in pregnancy

Introduction

This article presents a case of a spontaneous massive rectus sheath haematoma (RSH) with subsequent vaginal delivery. RSH has been associated with premature caesarean section delivery where the presentation is thought to be a placental abruption.

Discussion

Spontaneous RSH is uncommon in pregnancy. Clinically RSH in pregnancy can be difficult to differentiate from placental abruption or other intra-abdominal acute pathology such as uterine rupture, ovarian torsion or degenerating uterine leiomyomas (Ramirez et al, 1997).

Anatomically both rectus abdominis muscles are encased in the rectus sheath, and separated by the linea alba at the mid line. The superior and inferior epigastric vessels run along the posterior border of the muscle, within the sheath along its entire course. Tearing of these vessels or rupture of the rectus abdominis muscle will cause a RSH (Zainea and Jordan, 1988). A rupture of inferior epigastric vessels below the arcuate line of Douglas can lead to signs of peritoneal disease or rarely rupture into the peritoneal cavity. This has contributed to misdiagnosis as placental abruption.

The incidence of RSH in pregnancy is unclear. Only five cases have been reported in the last 25 years in the English medical literature; none in the first trimester. The most common associated, possible causative factor was coughing (73% of cases) followed by labour (18%) (Humphrey et al, 2001).

Kaftori et al (1977) first reported the use of ultrasonography to make the diagnosis of RSH. Computed tomography and magnetic resonance imaging scans have been used to provide further diagnostic information. Both are expensive and less convenient than ultrasonography. In 50% of cases the initial diagnosis was incorrect and in the majority of cases it was thought to be a placental abruption (Humphrey et al, 2001).

In the case of a small and clinically stable RSH, expectant management is the treatment of choice. However, if the haematoma is large with peritoneal signs, severe pain or a haemodynamically unstable patient surgical intervention is often needed. The most common operation is evacuation of the haematoma, ligation of bleeding vessels if noted, and placement of a sub-rectus drain (Ducatman et al, 1983). There were no reported recurrences of RSH after expectant or open surgical management. When severe abdominal pain is encountered in pregnant patients, RSH should be considered in the differential diagnosis. An incorrect initial diagnosis may lead to an increased rate of exploratory laparotomy, caesarean section delivery, prematurity, and perinatal morbidity and mortality.

A literature search showed a lack of experience of vaginal delivery when a severe RSH presented in late pregnancy. The authors consider it safe to allow patients with a history of RSH to deliver vaginally.

Case Report

A 20-year-old, primiparous, Caucasian woman presented at 32 weeks and 6 days gestation with sudden onset severe left-sided abdominal pain. She denied any history of recent trauma, falls or vaginal bleeding. She had no history of previous abdominal pain in this pregnancy and had booked at 9 weeks gestation. Her booking weight was 96 kg with a body mass index of 39 kg/m^2 and her booking haemoglobin was 13.6 g/dl. No relevant past medical or surgical history was noted and so far her pregnancy had been uneventful.

Clinically she was very distressed with the pain, was sweaty and had cold extremities. Her pulse was 130/minute, blood pressure was 130/87 mmHg and her temperature was 36.4°C. Abdominal examination revealed marked tenderness in the left upper quadrant of the abdomen over the upper pole of the uterus, which had a symphysiofundal height of 34 cm. Her haemoglobin was 8.8 g/dl, white cell count was 9.1x10^9/litre, and platelet count was 454x10^9/litre with a normal clotting screen. The cardiotocograph (CTG) was normal. On ultrasound scan a large haematoma was noted associated with the left uterine wall. This was directly associated with her tenderness. With a presumptive diagnosis of placental abruption a decision was made to perform emergency caesarean section delivery under general anaesthetic.

At laparotomy a large rectus sheath haematoma (RSH) was noted. There were no signs of intraperitoneal bleeding and the uterus was 32 weeks in size. Both tubes and ovaries appeared normal. Caesarean delivery was not performed. About 400 ml of blood clot was evacuated from the left rectus muscle. No active bleeding vessels were noted. The peritoneum was closed followed by the rectus sheath after leaving a sub-rectus drain in the haematoma cavity. Postoperatively fetal CTG monitoring remained normal. She did not require blood transfusion. On her second postoperative day her haemoglobin was 9.7 g/dl and the abdominal drain was removed. She was allowed home on the fifth postoperative day on oral ferrous sulphate. At 34 weeks sonographic fetal biometry was on the 50th centile, liquor volume was normal and the haematoma was resolving (size 72 mm x 60 mm x 35 mm). She was seen again at 36 and 38 weeks. At 39 weeks and 2days she presented in spontaneous labour and proceeded to a forceps delivery, for failure to progress, of a 2.81 kg healthy baby. Her 6-week postnatal follow-up scan showed complete resolution of the RSH.

Conclusions

RSH is a rare cause of abdominal pain in late pregnancy. It may occur spontaneously and should be suspected if there is a history of coughing. Extensive RSH can mimic placental abruption. Awareness of the condition in pregnancy and diagnostic ultrasound might avoid a premature caesarean section. Vaginal delivery seems safe after surgical management of RSH in pregnancy. **BJHM**

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