Rare disease

Spontaneous intraperitoneal haemorrhage during pregnancy

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Summary

This is a case report of spontaneous haemoperitoneum caused by ruptured utero-ovarian vessels during the third trimester of pregnancy. The patient presented with acute abdominal pain and hypotension twice to the emergency room. The initial diagnosis was placental abruption and the patient had emergency caesarean section. There was utero-ovarian plexus laceration and suture-ligation was performed. The maternal outcome was good. The infant had birth asphyxia and was extubated on the third day. Both mother and infant were discharged in good condition.

BACKGROUND

Spontaneous haemoperitoneum is a rare condition during pregnancy. It is a very difficult condition to diagnose prior to laparotomy. The morbidity and death rates are approximately 49%.¹ Symptoms are acute abdominal pain, peritonitis, shock, fetal distress or death. We present a case of spontaneous intra-abdominal bleeding during pregnancy. The objective of the present report was to share the experience in diagnosis and management of a rare acute surgical condition in pregnancy.

CASE PRESENTATION

A 37-year-old G5 P4+0 woman, at 38 week gestation. She presented twice to the emergency room. In the first visit her main complaint was generalised abdominal pain and easy fatiguability. The pain was mild-to-moderate in severity, continuous, not labour-like pain, associated with nausea and loss of appetite but no vomiting. There was no history of urinary or gastrointestinal problems. The patient was not on any medication. All deliveries were full-term normal vaginal delivery with no history of preterm labour. On examination, she looked in pain, not pale or jaundiced. Blood pressure was 90/50 mm Hg and pulse was 90/min. Abdominal examination revealed soft and lax abdomen with mild generalised tenderness without guarding or rigidity. Uterine size was appropriate for the gestational age. There was no vaginal bleeding or leaking and there was no cervical changes. She received intravenous fluid and analgesic drug and then sent home after 7 h with some improvement. Her haemoglobin was 12 gm/dl.

Eight hours after discharge from emergency room, the patient was brought by ambulance with severe abdominal pain. This time she also had dizziness and breathlessness. She looked very pale, dehydrated and in agony. Blood pressure was 80/40 mm Hg and pulse was 120/min. Her abdomen was mildly distended with generalised tenderness but no guarding or rebound tenderness.

INVESTIGATIONS

Ultrasound examination showed blood collection in the abdominal cavity and an alive fetus (figure 1). Her haemoglobin level dropped to 8.3 gm/dl.

DIFFERENTIAL DIAGNOSIS

A provisional diagnosis of abruption placenta and possibly uterine rupture was made.

TREATMENT

The patient was immediately taken for caesarean section. Approximately 2.5 litres of clotted and fresh blood was removed once the abdominal cavity was entered. A baby boy in cephalic presentation was delivered with Apgar score of 3, 5 and 8 at 1, 5 and 10 min, respectively. Cord pH was 6.8 and the baby was intubated and admitted to neonatal intensive care unit. Placenta was delivered and there was no evidence of abruption placenta.

After closure of the uterine incision, there was still no evidence of the source of the peritoneal bleeding. The uterus was extracted out of the abdominal cavity to inspect the posterior uterine wall and also to explore the abdomen to find the source of bleeding. There was bilateral superficial laceration involving the posterior uterine wall and active bleeding at the base of the laceration arising from the utero-ovarian plexus bilaterally (figure 2). Suture-ligation to control the active bleeding was performed. Washing and closure of the abdominal cavity was done. Patient received six units of packed red blood cells and four units of fresh frozen plasma.

OUTCOME AND FOLLOW-UP

The patient had uneventful postoperative period. The baby was extubated on the third day with no attacks of

Figure 1 Abdominal ultrasound showing free fluid in the peritoneum.

Figure 2 Posterior uterine wall showing sloughing of the overlying visceral peritoneum and bleeding from the vascular plexus.

fits. Both mother and baby were discharged in good condition.

DISCUSSION

Haemoperitoneum resulting from spontaneous rupture of the utero-ovarian vessels in pregnancy is very rare and associated with high maternal and fetal mortality. There is approximately 100 reported cases.² Primary diagnosis of ruptured utero-ovarian vessels is rare. The preoperative diagnosis is usually haemoperitoneum of unknown cause (37%), placental abruption (26%), uterine rupture (11%) or acute appendicitis (7%). Almost 70% of clinical presentations are acute abdominal pain and 30% are loss of consciousness. The review by Ginsburg *et al*³ reports 18% of cases present with hypovolaemic shock. Most of these cases will present as acute abdomen that need observation and repetition of the baseline investigation to reach a diagnosis of haemorrhagic shock with no specific cause. It is difficult to diagnose and usually it is a two-step diagnosis according to many similar case reports.^{4–6}

Pathogenesis of this condition is obscure. Physiological increasing of blood flow to the utero-ovarian vessels may cause dilatation of these plexuses and predispose to spontaneous rupture. The sudden increase in intravenous pressure associated with increased intra-abdominal pressure or coitus can also cause rupture.

In this case, the patient presented to the emergency department (ER) with abdominal pain. At the first visit

no reason for the pain was found and she was sent home with analgaesic treatment. It would have been more prudent to keep the patient under observation for 24 h, since no diagnosis was reached at that time and she was still in pain.

The second visit to ER she presented with shock. It is very important not to discharge patient without finding the underlining reason for their symptoms. Treating the symptoms will not treat the underlying pathology. This lady barely escaped death due to intraperitoneal haemorrhage because of the prompt intervention in her second visit to ER.

Learning points

- ▶ Obstetricians should be aware of this rare cause of acute abdomen during pregnancy.
- ▶ Observation and re-evaluation of the patient is vital in these cases.
- ▶ Recognition of shock and correction of hypovolaemia is very important.
- ▶ Prompt surgical intervention even when the exact diagnosis is not reached is the key to improve patient survival.
- ▶ Inspecting the posterior uterine wall is crucial for this diagnosis.

Competing interests None.

Patient consent Obtained.

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