CASE REPORT

Placenta percreta: rare presentation of haemorrhage in the second trimester

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SUMMARY

A 25-year-old woman, third gravid, with previous two miscarriages presented to the emergency at 17 weeks 2 days of gestation with complaints of pain in the abdomen for 1 day and decreased urine output for 2 days. She was in shock. There was no history of bleeding per vaginum, trauma, surgical procedure or medical illness. Her obstetrical history was marked by a spontaneous second trimester miscarriage at 24 weeks that was followed by fever for 1 week. Ultrasound revealed an extra uterine fetus with sac en caul secondary to uterine rupture. She was resuscitated and taken up for emergency salvage laparotomy. The ragged fundal rent was excised and uterine reconstruction was performed. Histology revealed placenta percreta. The patient had a rapid recovery.

BACKGROUND

Haemorrhage in pregnancy usually presents in the first and third trimesters. Though rare, unusual cases of haemorrhage do occur in the second trimester. We present an unusual case of massive intraperitoneal haemorrhage in the second trimester of pregnancy owing to uterine rupture secondary to placenta percreta.

CASE PRESENTATION

A 25-year-old woman, G3P1A2, presented to the emergency department at 17 weeks 2 days of gestation with complaints of pain for 1 day and decreased urine output for 2 days. This was an unsupervised pregnancy except for a first trimester ultrasound performed at 9 weeks of gestation, which showed an intrauterine gestational sac with a single viable fetus corresponding to 10 weeks of gestation. There was no history of bleeding per vaginum, trauma, surgical procedure or medical illness. Her obstetrical history was marked by a spontaneous second trimester miscarriage at 24 weeks followed by fever for 1 week. She subsequently underwent a uterine evacuation of retained products. The procedure was uneventful. In her second pregnancy, which was also an unsupervised pregnancy, she had a spontaneous miscarriage at 6 weeks. There was no postmiscarriage complication or history of uterine curettage. At presentation in the index pregnancy, her examination revealed extreme pallor with tachycardia and a blood pressure of 90/50 mm Hg. Her abdomen was soft with mild tenderness in the umbilical and suprapubic region with a mass corresponding to 20 weeks arising from the pelvis.

INVESTIGATIONS

On ultrasound, a single live fetus with biparietal diameter corresponding to 18 weeks was noted. It was surrounded by a gestational sac and placenta in its posterior lower portion (figure 1). The empty uterus lay below the intact gestational sac. A moderate amount of free fluid was also noted in the abdominal cavity. A diagnosis was made of uterine rupture with fetus in the sac in the peritoneal cavity.

TREATMENT

She was resuscitated and undertaken for emergency laparotomy. There was significant hemoperitoneum of 2 litres. The intact gestational sac was lying in the abdominal cavity. The live fetus was extracted along with a part of the placenta. A large rent replaced the fundus of the uterus. The placenta was densely adherent to the thin fundal wall. The ragged fundal rent wall was partly excised and sent for histopathology, which was consistent with a diagnosis of placenta percreta (figure 2). Uterine reconstruction was performed along with bilateral tubal ligation. The patient received 4 units of blood transfusion.

OUTCOME AND FOLLOW-UP

The patient was discharged in a satisfactory condition on the fourth postoperative day.

DISCUSSION

Uterine rupture has an incidence of 0.07% of which 80% are because of the spontaneous rupture

Figure 1 Diagram showing ultrasound findings of a fetus in a gestational sac protruding out of the ruptured uterine fundus. U, uterus; P, placenta; S, gestational sac; F=fetus.

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Figure 2 Section (H&E x20) showing chorionic villi infiltrating the myometrium (arrows).

of the uterus.¹ Spontaneous rupture of the uterus in early pregnancy is reported but rare.^{2–3} Gardeil *et al*⁴ reported a uterine rupture rate of 1 in 5000 because of placenta percreta. Review of the literature reveals various predisposing factors for adherent placenta that include a history of caesarean section, high parity, morbidly adherent placenta secondary to previous uterine surgeries like myomectomy, abnormal myometrium as in rudimentary horn pregnancy, manual removal of the placenta in previous pregnancies and even post whole body radiation.^{3–10} Uterine rupture has even been reported in primigravidas with placenta percreta in both the second and third trimesters.^{10–11} In his case report of a first trimester uterine rupture and review of the literature, Jang *et al*¹² analysed that the site of uterine rupture involves the lower uterine segment in late gestation, but the uterine fundus is commonly affected in the first trimester. In our patient, the site of rupture was the fundus where the uterine wall was invaded by the placental trophoblastic tissue, making it weak and thin. Uterine curettage or endometritis during previous pregnancies could be the reason for morbidly adherent placenta in our case.

The presenting features include symptoms and signs of shock, pain in the abdomen, shoulder pain and vaginal bleeding.^{3–12} Very rare cases with silent rupture or painless vaginal bleeding have been reported with uterine rupture associated with placenta previa and morbidly adherent placenta.¹³ Our patient presented with a history of pain in the abdomen, decreased urine output, severe pallor and grade 3 hypovolemic shock. However, there was no vaginal bleeding and only mild lower abdominal tenderness was reported. Xia *et al*,¹⁴ in their case report of uterine rupture secondary to placenta accrete, suggested that fetal bradycardia might be considered as a strong predictor of uterine rupture. However, in our patient, the gestational sac was intact with a live active fetus even in the event of massive haemoperitoneum causing maternal shock. Uterine rupture at the site of placenta percreta is more sinister than uterine rupture because of the previous scar.¹² The increased vascularity resulted in the mother losing blood heavily from the uterine rupture site into the abdominal cavity as in our patient. Curiously, there was no vaginal bleeding in our patient.

Emergent surgery is required to stop the haemorrhage and to salvage the patient. Uterine repair along with wedge resection of the uterine flap with adherent placenta could arrest the bleeding and avoid the blood loss associated with hysterectomy of a gravid uterus in a patient already haemodynamically

compromised, as performed in our case. The duration of surgery was reduced and menstrual function was preserved even though the reproductive role of the womb was forgone by tubal ligation. Wang *et al*¹⁵ have reported the use of conservative surgery, that is, bilateral uterine vessel ligation along with excision of the ruptured uterine segment to preserve the uterus. All the same, in case of excess haemorrhage not controlled by simple suturing, we suggest that early decisions for hysterectomy should be taken to prevent morbidity and mortality. Most cases in the literature report emergency hysterectomy to arrest haemorrhage.

Learning points

- ▶ Although rare, uterine rupture should be considered as a differential diagnosis of abdominal pain in early trimesters, especially when associated with free fluid, even with the absence of vaginal bleeding.
- ▶ Abnormal placentation is associated with spontaneous antepartum uterine rupture even in early pregnancy.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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