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Case Report

A case report: placental abruption complicated by disseminated intravascular coagulation, atonic postpartum hemorrhage, massive transfusion and obstetric hysterectomy

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ABSTRACT

Placental abruption is a potentially life-threatening obstetric emergency caused by premature separation of the placenta from the uterine wall. Severe abruption may be associated with intrauterine fetal death, disseminated intravascular coagulation (DIC), major hemorrhage and renal or other organ dysfunction. The case represents a 25-year-old G6P5L5 woman at 35 weeks and 6 days of pregnancy who presented with severe abdominal pain and absent fetal movements. Clinical assessment and ultrasonography were consistent with placental abruption with intrauterine fetal death and a large retroplacental clot. Laboratory evaluation showed severe anemia and features of coagulopathy. Emergency lower-segment cesarean section was undertaken. A male baby was delivered by vertex presentation but did not cry after birth. Approximately 1500 ml of retroplacental clots were removed, and the uterus was found to be floppy and atonic. Obstetric hysterectomy was performed for definitive control of hemorrhage. The patient required extensive transfusion of blood and blood products, was managed for DIC, remained vitally stable after resuscitation, and was discharged on postoperative day 11. This case emphasizes rapid recognition, prompt operative management, aggressive correction of coagulopathy, and timely definitive control of severe obstetric hemorrhage.

Keywords: Placental abruption, Disseminated intravascular coagulation, Intrauterine fetal death, Atonic postpartum hemorrhage, Obstetric hysterectomy, Eemergency cesarean section, Maternal hemorrhage

INTRODUCTION

Placental abruption is the premature separation of a normally implanted placenta after 20 weeks of gestation and before birth of the fetus. It is an important cause of bleeding in the second half of pregnancy and can result in serious maternal and fetal morbidity and mortality.[1] Severe cases may lead to massive hemorrhage, hemorrhagic shock, disseminated intravascular coagulation, acute kidney injury and intrauterine fetal death.[1,2] The condition requires rapid clinical assessment and timely delivery and hemorrhage control.[1,2]

The present case describes severe placental abruption complicated by DIC, intrauterine fetal death, atonic postpartum hemorrhage and the need for obstetric hysterectomy.[1,2]

CASE REPORT

Case presentation

A 25 year old woman, G6P5L5, with a history of previous full-term normal vaginal deliveries, presented at 35 weeks and 6 days of pregnancy with severe abdominal pain and absent fetal movements. On examination, her

pulse was 94/min, blood pressure was 120/76 mmHg and oxygen saturation was 98%. She was pale and had edema. Urine albumin was reported as +1. The uterus corresponded to approximately 34-36 weeks, was tender and contractions were present. Fetal heart sounds were absent. Per vaginal examination showed a cervix dilated to 4-5 cm, 40-50% effaced, with show present and leaking present. Membranes were reported to be absent.

Table 1: Investigations

Parameters	Findings
Hemoglobin	5.7 g/dl
Platelet count	1,62,000/µl
PT / INR	PT reported as 1.11 INR
APTT	38 seconds
D-dimer	>8000
Ultrasonography	Approximately 36 weeks' period of gestation; intrauterine fetal death; 6.5 cm retroplacental clots

The clinical picture and ultrasonographic findings supported a diagnosis of severe placental abruption with intrauterine fetal death. The markedly elevated D-dimer and subsequent clinical course were consistent with DIC

Management

The patient was managed as an obstetric emergency. One pint of whole blood was issued urgently. After preoperative medication, she was shifted immediately to the operating theatre and emergency lower-segment cesarean section was performed.

A male child was delivered by vertex presentation but did not cry after birth. Approximately 1500 ml of retroplacental clots were removed. The uterus was floppy and atonic, and obstetric hysterectomy was performed for definitive control of bleeding.

Transfusion and postoperative management

The poster documents substantial transfusion of blood and blood products. Intraoperatively, the patient received 2 pints packed red cells (PCV), 2 pints whole blood and 4 pints fresh frozen plasma (FFP). Postoperatively, the recorded pulse was 156/min and blood pressure was 110/76 mmHg, with hemoglobin 4.3 g/dl and platelet count 69,000/µl. PT was reported as 1.19 INR and D-dimer remained >8000, with the patient described as being in the phase of DIC.

Immediate postoperative transfusion included 3 pints FFP, 3 pints random donor platelets (RDP), 6 pints whole blood, 6 pints PCV, 12 pints FFP and 16 pints RDP, as documented in the submitted poster. The source case report summarizes the total postoperative transfusion support as 40 units of blood and blood products. Following resuscitation and postoperative management, the patient remained vitally stable and was discharged on postoperative day 11.

Figure 1: Couvelaire uterus / operative specimen

DISCUSSION

Placental abruption is an important cause of antepartum hemorrhage and can progress rapidly to severe maternal and fetal complications. The clinical presentation may include abdominal pain, uterine tenderness, contractions and vaginal bleeding, although bleeding may be concealed within the uterus. Severe abruption may result in consumption of coagulation factors and disseminated intravascular coagulation.[1,2,3]

In the present case, severe abdominal pain, absent fetal movements, fetal demise and a large retroplacental clot were consistent with significant placental separation. The patient had severe anemia at presentation and subsequently developed a clinically significant coagulopathy requiring extensive blood-product support.[1,2,7,8]

The combination of emergency cesarean delivery, atonic postpartum hemorrhage and DIC created a high-risk situation in which rapid control of bleeding was essential. Approximately 1500 ml of retroplacental clot was removed and the uterus was described as floppy and atonic. Obstetric hysterectomy was therefore undertaken as definitive surgical control of hemorrhage.[4,5,8]

This case illustrates the importance of early recognition of placental abruption, immediate preparation for massive transfusion, prompt correction of coagulopathy, appropriate operative delivery, and timely escalation to definitive surgical management when hemorrhage is life-threatening.[3-5,7,8]

Learning points

The case report inferred that placental abruption is a time-critical obstetric emergency requiring rapid assessment

and intervention.[1] Severe abruption may be complicated by intrauterine fetal death, disseminated intravascular coagulation and major maternal hemorrhage.[1,2] Atonic postpartum hemorrhage can follow severe abruption and emergency cesarean delivery and requires immediate treatment. When bleeding is life-threatening and conservative measures are insufficient, obstetric hysterectomy may provide definitive hemorrhage control. Additionally, early multidisciplinary resuscitation and adequate replacement of blood and blood products are essential for maternal survival.[2]

Patient outcome

Following emergency cesarean delivery, obstetric hysterectomy, correction of coagulopathy and extensive transfusion support, the patient remained vitally stable. She was discharged on postoperative day 11.

CONCLUSION

Severe placental abruption can rapidly lead to intrauterine fetal death, DIC and life-threatening maternal hemorrhage. Management requires prompt diagnosis, timely delivery, aggressive resuscitation and correction of coagulation abnormalities. In cases of uncontrolled atonic postpartum hemorrhage, obstetric hysterectomy may be necessary for definitive control of bleeding. This case highlights the importance of coordinated obstetric and transfusion management in improving maternal outcome.

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