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Post-cesarean section rupture of subcapsular liver hematoma. A rare event should be kept in mind

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Summary

The authors report a case of a 30-year-old multipara, 36-week pregnant, complicated by HELLP (hemolysis elevated liver enzymes low platelets) syndrome, with 4th repeat cesarean section. Twenty hours after cesarean section, the patient developed hypovolemic shock and hemoperitoneum and ruptured subcapsular hematoma was diagnosed by ultrasonography and confirmed by CT. Resuscitation was performed with continuous observation in ICU. After 48 hours, hemoperitoneum was evacuated by re-exploration through the same pfannensteil incision without any surgical maneuver in the liver. The subcapsular hematoma was followed and nearly disappeared after one month.

Key words: Subcapsular hematoma; HELLP syndrome; Hemoperitoneum.

Introduction

Rupture of subcapsular hematoma of the liver is very rare during pregnancy. It usually occurs as part of complication of HELLP (hemolysis elevated liver enzymes low platelets) syndrome with an incidence of less than 1% of cases with HELLP syndrome [1]. It usually occurs in the third trimester and nearly 20% of cases occur in peurperium [2].

Case Report

A 30-year-old multipara was admitted to the emergency unit at 36 weeks' gestation. Presented by severe pre-eclampsia complicated by HELLP syndrome (platelet count 60.000, with elevated liver enzyme, ALT 516 but the hemoglobin level was 11 gm/dl), the patient had a history of previous three cesarean sections and severe pre-eclamptic toxaemia (PET) in previous three pregnancies. Ultrasonographic assessment revealed single living fetus with average amniotic fluid, fundal placenta, and biometry nearly 36w.

Cesarean section was performed through a pfannensteil incision using spinal anesthesia. There was no intraoperative problems and adequate hemostasis was confirmed. The patient was admitted to ICU as routine for similar cases and received magnesium sulphate as prophylaxis against eclampsia. Sudden syncope developed 20 hours after cesarean section. Pulse increased to 140 b/m, blood pressure dropped 80/50 mmHg, and ultrasonographic assessment revealed moderate to severe amount of collection; with meticulous assessment large subscapular hematoma 20×3 cm was observed around right lobe of liver (Figure 1). Haematocrit value dropped from 34.7% to 21%, then to 13.5 %, and platelet count dropped to 35,000. Prothrombin concentration decreased to 30%, and CT of the abdomen and pelvis confirmed the above ultrasonographic findings.

Conservative management was advocated as general condition of the patient could not tolerate re-exploration and surgical manipulation of liver. Three units of fresh blood, four units of packed RBCs, and four units of fresh frozen plasma were given, with intensive monitoring in ICU for 48 hours. After correction of general condition (Hb level 10.5 gm/dl, Hct value 31%, platelet count 65,000, prothrombin concentration 82%), the patient underwent exploration after 48 hours through the same incision of cesarean section, evacuation of intraperitoneal collection. About 2.5 liters of old blood was evacuated and intraperitoneal drain was left in

Figure 1. — Ultrasonographic picture of subcapsular hematoma.

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place.

The patient continued observation in ICU for 24 hours, the drain was nearly empty, and vital signs were stable. Discharge from ICU occurred to inpatient room where follow up was continued for five days. The patient was then discharged with weekly follow up by ultrasonography, The hematoma nearly disappeared after one month.

Discussion

Hepatic rupture and hemoperitoneum are very rare but devastating complication of pregnancy. The pathogenesis is not well known but it may due to fibrin clot deposition and activation of the intravascular coagulation or due to periportal hemorrhagic necrosis, inciting capsule distension [3].

In the present case, the rupture of capsule and hemoperitoneum occurred at first day postpartum after cesarean section; this increased the difficulty in diagnosis as the commonest possibility in these circumstances is that the cause of hemoperitoneum is bleeding from uterine incision, especially when the patient is diagnosed with HELLP syndrome and low platelet count.

The meticulous assessment by ultrasonography assisted the present authors to avoid immediate re-exploration of the patient in very adverse general condition without benefit from re-suturing the uterine incision and evacuation of hemoperitoneum. The use of bedside ultrasound enables prompt diagnosis of this complication which is extremely important [4]. Also conservative management of rupture subcapsular hematoma could be good option with intensive monitoring in ICU. Rapid correction of hypovolemic shock is important by fresh blood and fresh frozen plasma.

In conclusion, rupture of subcapsular hematoma after cesarean section is a rare catastrophic event which might be falsely diagnosed as bleeding from uterine incision. Hence it should be kept in mind in cases with HELLP syndrome.

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