

Letters to the Editor

Hepatic rupture and hemoperitoneum in a pregnant woman with HELLP syndrome

Key words: Hepatic rupture. HELLP syndrome. Pregnancy.

Dear Editor,

HELLP syndrome (microangiopathic hemolytic anemia, elevated liver enzymes, GOT > 70 IU and LDH > 600 UI –and thrombocytopenia, platelets < 100,000/mL–) is a serious complication of preeclampsia (4-15% of cases of severe preeclampsia) and carries a high maternal and fetal mortality (1-25% and 10-60% respectively), mainly because of its complications such as the rupture liver (1). We present a case of hemoperitoneum due to rupture of hepatic subcapsular hematoma in pregnant women with HELLP syndrome.

Case report

A 25 years old, 39 weeks pregnant woman, who consults for interscapular pain. During her stay in the emergency she presents sudden hypotension (blood pressure 80/40 mmHg) and supraumbilical abdominal pain. Information on the hemogram and coagulation studies revealed: hemoglobin 10.2 g/dL, hematocrit 30.3%, platelets $23 \times 10^3/\mu\text{L}$, prothrombin activity 66%, APTT: 36.1 seconds and D-Dimerus 10.79 micrograms/mL. A cardio-tocographic control revealed fetal bradycardia and an emergency cesarean section was performed delivering a healthy child (2900 g). A considerably amount of blood was noticed in the abdomen and the surgeon was called. Midline laparotomy was enlarged and about 900 ml of blood were aspirated from the cavity. A large bilateral subcapsular liver hematoma was found (Fig. 1A) and two tears in the liver capsule (segment

IVb and V segments of 5 and 3 cm respectively) had active bleeding. Hemostasis was achieved with packing maneuvers and placement of several plates of Tachosil™ (Nycomed Pharma, Zurich, Switzerland). Two suction drains were placed in the right subdiaphragmatic and subhepatic area. Preoperative analysis showed: hemoglobin 3.9 g/dL, hematocrit 11.5%, platelets: $17 \times 10^3/\mu\text{L}$, prothrombin activity 72%, APTT: 32 seconds, GOT 1060 U/L, GPT 873 U/L, LDH: 1941 U/L. Two red cells concentrates and 7 units of platelets were transfused. Post surgery, the patient was transferred to the ICU, where she was additionally transfused (two red cells concentrates, 700 ml of plasma and 7 units of platelets), and corticosteroids treatment was established (dexamethasone) up to normalization of platelet numbers. Assessment of haptoglobin showed hemolysis (1 mg/dL, normal value 30-200 mg/dL). On the fourth day she went to the ward and was discharged the 16th day. A subsequent abdominal CT scan showed a large subcapsular liver hematoma without laceration or free fluid (Fig. 1B).

Discussion

Spontaneous rupture of a subcapsular liver hematoma in pregnancy is an uncommon entity (1/45,000-1/250,000 pregnancies) that has a high maternal and fetal mortality (10-59% and 42-80% respectively) and is associated in most cases, with the HELLP syndrome. This syndrome usually occurs during the 32-34 weeks gestational although 10-30% of cases it does so in the immediate postpartum period (2-5). The analysis of our patient a month before showed no alterations in the numbers of platelets or liver tests, so it can be considered a HELLP syndrome making its debut with liver hematoma. Although the exact mechanism of the formation and rupture of subcapsular hematoma is not clear there is evidence of a vascular origin (endothelial dysfunction) which would produce a disseminated intravascular coagulation, hypovolemia, liver ischemia and hemorrhage with the development of hematoma. Any episode of minor trauma or hypertension facilitate the hepatic rupture. The diagnosis of hepatic subcapsular hematoma in HELLP syndrome is usually done after rupture (6). The acute onset of ab-

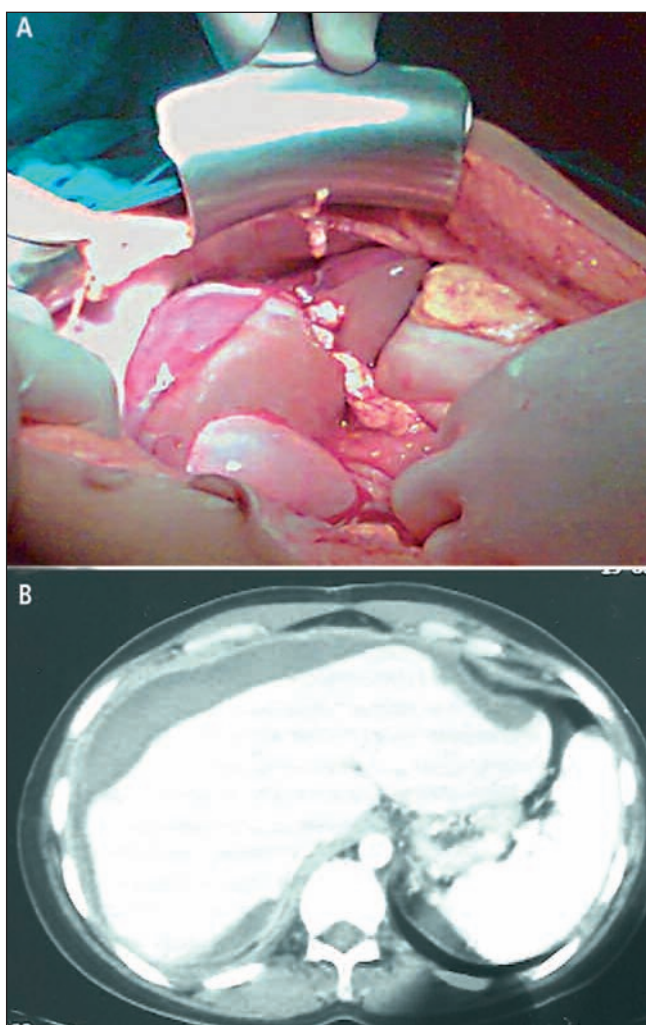


Fig. 1. A. Laparotomy and an extensive subcapsular liver hematoma in shown. B. Postoperative CT shows subcapsular hematoma.

dominal pain in a pregnant women with severe preeclampsia or HELLP syndrome should lead to ruled out liver injury by imaging techniques. The diagnosis of hepatic subcapsular hematoma necessitates urgent cesarean fetal extraction. However, some

authors have argued in recent years conservative management: continuous monitoring, volume expansion, pharmacological vasodilation corticosteroids to improve fetal and maternal status (2). The liver rupture during pregnancy requires immediate laparotomy although has been reported several cases with no active bleeding or coagulopathy treated conservatively (2,5). The degree of hepatic laceration published ranges from minor to extensive parenchymal rupture and has been able to establish some correlation between his severity and the severity of thrombocytopenia (2). Most injuries occur in the right lobe (6). Surgical management ranges from the evacuation of the hematoma, compression with gauze packs, the hepatorraphy, ligation (or embolization) of the hepatic artery and the application of hemostatic material, until the completion of hepatectomy and in exceptional cases, liver transplantation (1,3,5).

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