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Case Report
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The HELLP Syndrome: Clinical Issues and Surgical Management: A Case Report Study

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Abstract

Spontaneous rupture of liver hematoma is a rare and potentially life-threatening complication of preeclampsia. Short interval between diagnosis and management may enhance the feto-maternal survival rate and prevent further morbidity or mortality. We admitted a 37-year-old woman at 35+4 weeks of gestation for emergency cesarean section after the onset of right hypochondrium pain and we treated liver hematoma rupture with hepatic packing in different time. The newborn was healthy, in perfect cardiovascular and respiratory conditions. At last check-up after 6 months, the abdomen ultrasound showed complete recanalization of the portal vein and normal resorption of hepatic hematomas. The choice of laparotomy and hepatic packing has proved to be a viable option in patients with unstable vital signs and is feasible even in limited resource settings.

Keywords: HELLP syndrome; Preeclampsia; Eclampsia; Liver hematoma; Hepatic rupture; Abdominal packing; Hepatic artery embolization; Partial hepatectomy

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Introduction

HELLP syndrome is associated with serious maternal and fetal morbidity and mortality [1]. A rare and potentially life-threatening complication is the spontaneous rupture of a liver hematoma. The incidence is approximately 1 in 45,000 live births [2]. Clinical presentation is nonspecific: epigastric pain, right upper quadrant pain and shoulder pain [3]. Termination of pregnancy is the definitive treatment with beneficial effects on the mother and fetus. According to the hemodynamic status of the patient, treatment can be conservative through hepatic artery embolization, or surgical with packing of bleeding area [4].

Materials and Methods

A 37-year-old woman at 35+4 weeks of gestation was admitted to OB-GYN Clinic for emergency cesarean section after the onset of right hypochondrium pain (Figures 1-4). The Ultrasound showed a hematoma of the liver in the VII-VIII segments and of the sub-glissian collection. At the splenic level, minimal organized blood collection (1 cm). The lower uterine segment was incised and an alive and viable fetus was extracted. The patient was undergoing to an exploratory laparotomy that confirmed the radiological findings (Figure 5). The macroscopic examination revealed morphological picture compatible with hepatic changes in the course of eclampsia: Fragments of irregular brownish tissue; fragments of hepatic parenchyma with preserved architecture with portal spaces within the limits. Always recognizable the triad artery, vein and interlobular bile duct. In some portal spaces was observed chronic inflammation. Micro-thrombus of fibrin was present in the periportal sinusoids, hemorrhages with regular area of hepatocyte necrosis. In the lobule congestion of the sinusoids and micro-outbreaks of chronic inflammation was observed. A diagnosis of hemoperitoneum and severe pre-eclampsia with liver and splenic bleeding was done.

Xypho-pubic laparotomy

Hemoperitoneum in the amount of 200 cc and subcapsular hematoma of right lobe of liver was highlighted. Two hepatic and one subhepatic laparotomy gauze (compression patch) was applied.

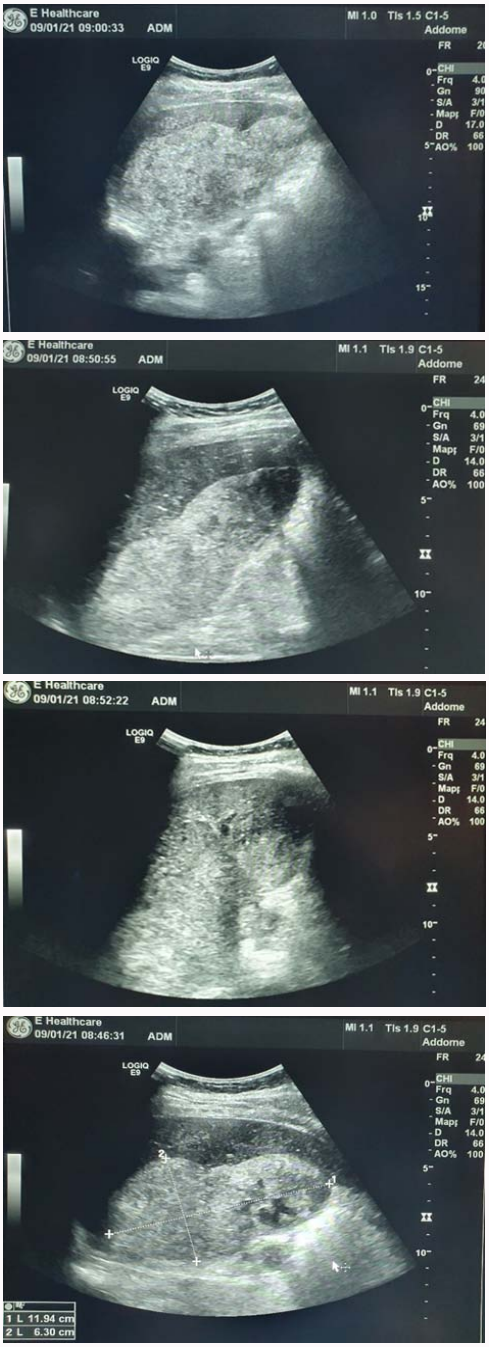

Figure 1-4: The Ultrasound showed a hematoma of the liver in the VII-VIII segments and of the sub-glissian collection. At the splenic level, minimal organized blood collection (1 cm).

The exploration of the splenic lodge showed the presence of bright red blood. Hemostasis with DTC, Tabotamp application, hemostatic glue (Evicel) and two laparotomic gauze (compression patch) in the splenic lodge was applied (Figure 6).

Xypho-pubic relaparotomy (at 48 hours from first)

The laparotomic gauze in the splenic and hepatic lodge was removed. The spleen appeared devoid of lesions without signs of bleeding. The hematoma of right lobe was still visible, but reduced in volume. On palpation of serum-hematic transudation, was repositioned three new laparotomic gauze, two over and one under hepatic lobe.

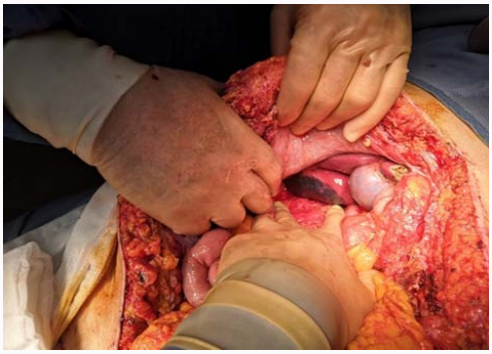

Figure 5: The macroscopic examination revealed morphological picture compatible with hepatic changes in the course of eclampsia.

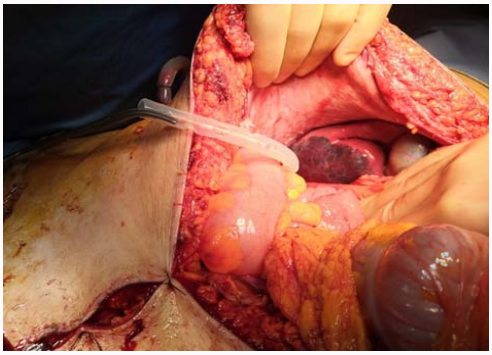

Figure 6: Two tubular drains in the right and left hypochondrium was placed.

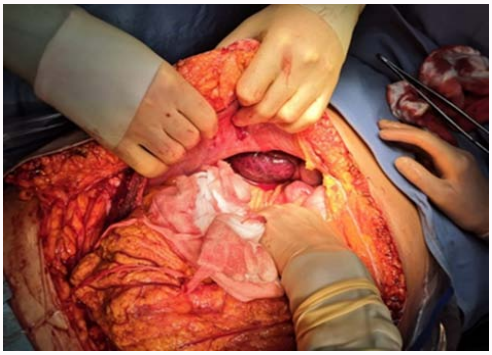

Figure 7: Significant reduction in the volume of capsular hematoma of the right lobe.

Xipho-pubic relaparotomy (at 48 hours from second)

Hepatic depacking was carried. No evidence of pathological splenic fluid. Two other drains: Suprahepatic (upper right) and Douglas (upper left) was applied Figure 7. Significant reduction in the volume of capsular hematoma of the right lobe.

Results and Discussion

The newborn was healthy, weighing 2.2 kg, in perfect cardiovascular and respiratory conditions. After 33 days from first packing, hematomas were stabilized but partial portal thrombosis appeared. At last check-up after 6 months, the abdomen ultrasound showed complete recanalization of the portal vein and normal resorption of hepatic hematomas. Spontaneous rupture of liver hematoma is a rare and potentially life-threatening complication of preeclampsia. Short interval between diagnosis and management

may enhance the feto-maternal survival rate and prevent further morbidity or mortality. In this case report, the patient underwent an emergency caesarean section and was managed with packing of hepatic and splenic hematomas and according to her hemodynamic clinical conditions was operated in different time. The choice of laparotomy and hepatic packing has proved to be a viable option in patients with unstable vital signs and is feasible even in limited resource settings.

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