Case Report

Postpartum Spontaneous Subcapsular Hepatic Hematoma (SSHH)-Conservative Management. Case Report and Review of Literature

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ABSTRACT: Spontaneous subcapsular hematoma of the liver, with no history of preeclampsia and HELLP syndrome (Hemolysis, Elevated Liver enzymes, and Low Platelet count.), represents an exceptionally rare clinical condition in pregnancy and postpartum. The complications can be devastating in terms of fetal and maternal mortality. We hereby present a case of a 33-year-old female that underwent an emergency Cesarean section (C-section) at term with the extraction of a live foetus. Few hours after delivery, she complained of intense epigastric and abdominal pain. The diagnostic work-up suggested a SSHH. The condition was managed conservatively in a multidisciplinary team.

KEYWORDS: *Hematoma, liver, postpartum, ultrasound, conservative*

Introduction

Considered extremely rare, SSHH has an incidence of approximately 1 per 45 000 live births [1].

More than 80% of cases of SSHH have been associated with preeclampsia /eclampsia and/or HELLP syndrome [2].

The right liver lobe is the most common site of subcapsular hematomas [3].

There are no specific symptoms for this condition, however sudden onset of severe, right abdominal pain with radiation to the back and right shoulder, anemia, and hypotension may be useful to suspect SSHH. The final diagnosis can be established by imaging techniques such as ultrasound, computed tomography (CT), or magnetic resonance imaging (MRI) [3,4,5].

SSHH can lead to a potentially fatal incident, the hepatic rupture [6].

Therapeutic options may include from conservative treatment to surgery including hepatectomy and even liver transplant but still exceptional. The conservative management also includes intensive care monitoring with the aim to control and even stop the bleeding. In any case of suspicion of SHHH before delivery, an emergency C-section with exploratory laparotomy is the first line treatment [7].

In the following we present a case of SSHH, without associated patient morbidities, diagnosed in the postpartum period and resolved with conservative management.

Case Report

A 28 year female, with 2 previous C-section deliveries, presented to our hospital at 38 weeks of pregnancy for unsystematized uterine contractions. There was no history of any bleeding disorders, but she related a minimal trauma at the right leg, 2 weeks previously. Her laboratory parameters were in normal range (hemoglobin 11mg%). After admintance, the patient accused intense abdominal pain, without significant contractility registered by tocography. An emergency C-section was performed under regional anesthesia. A live fetus with normal weight and an Apgar score of 9 was extracted with no difficulties. On patient request, a bilateral tubal ligation was done for future contraception. No intraoperatory incidences or complications were noted. The first 24 hours were clinically uneventful, but the postoperative hemoglobin control revealed a significant decreased value, of 6mg%. The patient was hemodynamically stable, with normal blood pressure (120/65mmHg) and normal heart rate (85bpm). An ultrasound exam revealed a subcapsular hematoma of 13cm/7,5cm in the liver (Fig.1.).

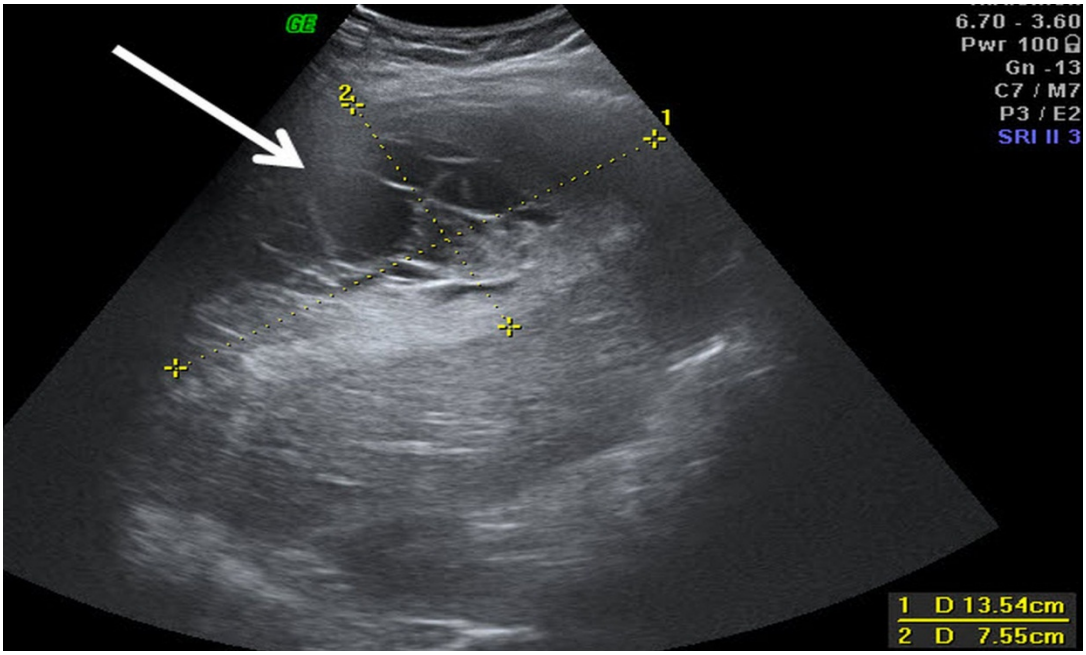

Fig.1. Ultrasound image in Grey scale showing the SHHH aspect

Computed tomography confirmed a large subcapsular hematoma of 17cm/5,7cm (Fig.2.), almost occupying the liver volume causing compression and indentation of liver parenchyma.

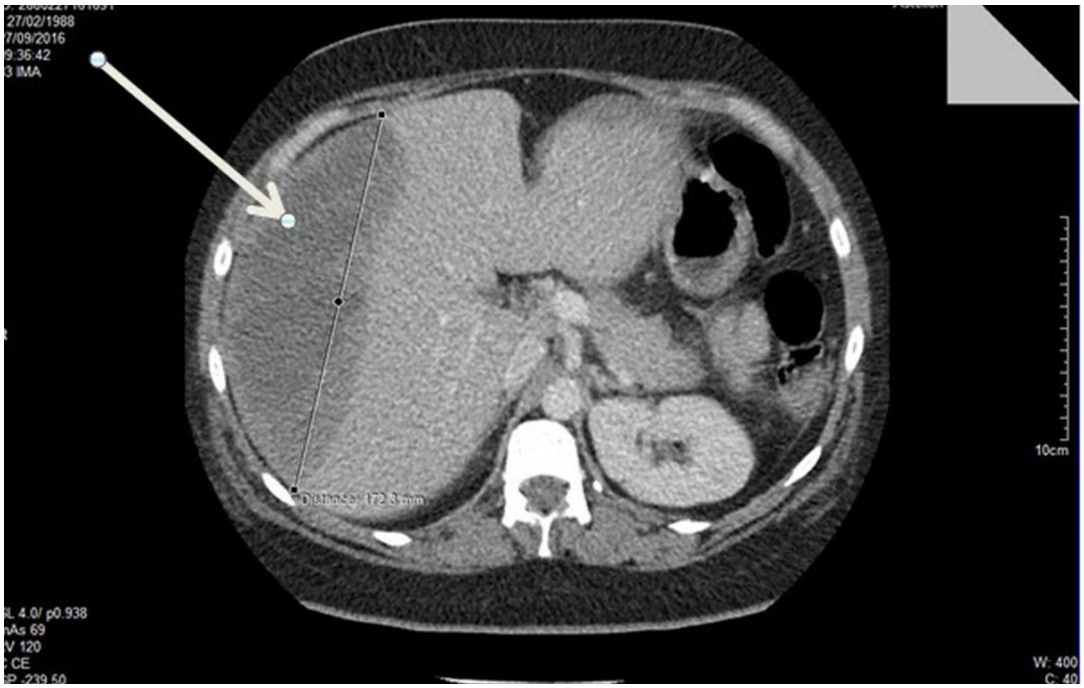

Fig.2. Computer tomography image showing the SHHH

On the 5th day after delivery, we decided to transfer the patient to a General Surgery Unit for a close monitoring and drainage intervention or hemostasis if needed. The patient was conservatively managed, and remained stable, with complete bed rest, prophylactic antibiotics and analgesics. However, she required 3 Units of blood transfused. Her condition remained static and on the 10th day after delivery, she was discharged. At discharge, the sonographic assessment showed similar dimensions of the hematoma, but changed in aspect. The patient remained asymptomatic during 6 months follow-up visits, with serial sonographic scans that showed gradual decrease in the size of the hematoma (Fig.3).

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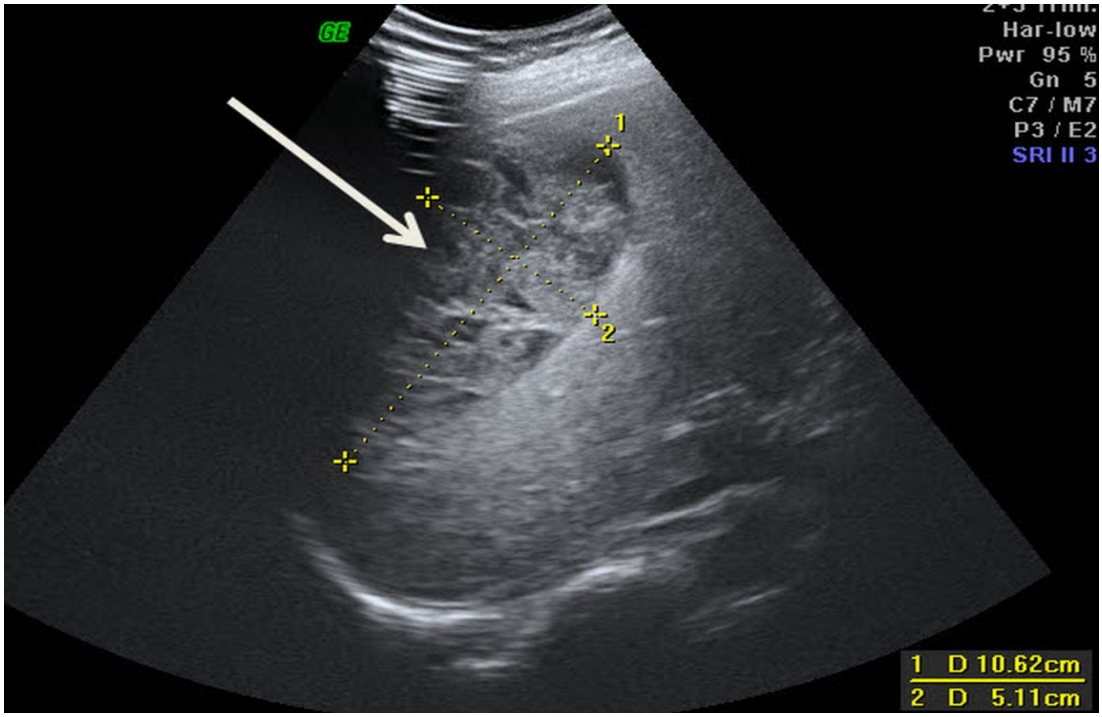

Fig.3. Ultrasound image in Grey Scale at 2 months after discharge, showing a smaller SHHH

The reported case underlines that SSHH should be suspected if any unusual abdominal pain is described by the patient in the third trimester or at/after delivery. Subclinical trauma, described by the patient 2 weeks previously, could have been a possible cause, although there was no direct trauma to the abdomen.

Discussion

SSHH was firstly described in 1844 [8], as an accumulation of blood between the capsule of Glisson and the liver parenchyma. The etiopathogenesis remains unclear until today [9].

The initiating event was considered a fibrin deposition in the hepatic sinusoids that can lead to platelet activation, thrombus formation, occlusion of capillaries, and subsequent hepatic hemorrhage and necrosis [10].

Over 200 cases of SSHH associated to pregnancy are described by the literature, as a prelabor finding in 85% of cases or postpartum in 15% of cases [11].

In the present case, there were some symptoms before delivery, but SSHH was not suspected. The diagnosis was established in early postpartum. The right lobe is the most frequent location of the SSHH, in 75% of cases, as it was also described in our case [12].

Frequently, this condition is usually diagnosed in a context of preeclampsia /eclampsia complicated with HELLP syndrome, but can also occur when there is an association with trauma, blood disorders, Ehlers Danlos disease, graft-vs-host disease or preexistent hepatic lesions such as hemangioma, tumors or adenoma [12].

A SSHH without previously mentioned anomalies is extremely rare, the first case being described in 2013 [13].

More, the clinical presentation of SSHH is not specific, but the right quadrant pain is almost always present [1].

As HELLP syndrome is the main cause for SSHH, symptoms secondary to high blood pressure such as headaches, nausea, vomiting and epigastric pain, may be present. If SSHH has led to spontaneous rupture, the haemoragic shock clinics are constant [11].

Although this is a rare pathology and most of the cases are missed during anamnesis and clinical exam, still the physicians should be aware of the specific symptoms because of the gravity of this condition. The diagnosis can be established by performing an ultrasound exam. In most of the cases, the imaging assessment is able to describe the SSHH as a hypoecogenic area, different from the rest of the liver structure [12,14,15] and also to suspect a possible rupture if important intraperitoneal fluid is present [16,17].

In our case, the ultrasound was performed in immediate postpartum period, when we noted a marked decrease of the hemoglobin level without any signs of active bleeding or other

anomalies. The scan showed the SSHH as a heterogenous collection in the hepatic area, as previosly described. Some consider the CT exam to be more precise than the ultrasound scan in detecting and describing a SSHH or hemoperitoneum [12,18].

In our case the CT confirmed the sonographic findings and strengthened the diagnosis. MRI has not proved until now its detection power of this condition, but still an MRI evaluation can be useful in diagnosing possible preexistent hepatic lesions [11,12,19].

When dealing with type of disorder a C-section with the rapid extraction of a viable fetus is recommended. In our case, the diagnosis was made after the intervention. The conservative approach of the SSHH is worldwide accepted, as the surgical intervention is proved to worsen the maternal prognosis [12].

We decided to transfer the patient to a General Surgery unit for careful monitoring and intervention in case of acute SSHH complication. If the Glisson capsule is ruptured, than the surgery becomes imperative [11,12,20] to establish a good hemostasis; in difficult cases, partial hepatic resection may be required. Successful liver transplantation has been reported in pregnancy associated SSHH rupture in 2 cases, one with preeclampsia [21] and another with hepatocellular adenoma [22].

Embolisation of the hepatic arteries has also been proposed in the management of a rupture SSHH in a stable patient, which is extremely rare, or in patients with SSHH with no spontaneous regression [23,24].

Our case had a favorable evolution under conservative management and no surgical or invasive procedures were needed. The SSHH follow-up may include repeated CT or ultrasound exams for evaluating of the spontaneous regression of the hepatic hematoma [11,12].

Our patient had a CT control exam before discharge and ultrasound scans weekly during 6 months follow-up. The SSHH had a constant and uneventful regression.

Less than 10 cases of spontaneous hepatic hematoma with no relation with hypertensive disorders have been reported until now [25].

Our case report intents to highlight that SHHH should be suspected in the presence of an upper right abdominal pain with no other explanation.

Conclusions

The presentation of this case report and short review of literature has the intention of raising awareness regarding this condition as its early recognition, that may prove life-saving for the mother and child in the respective cases.

The involvement of a multidisciplinary team including experienced obstetricians, surgeons, and neonatologists should be considered a cornerstone in management of these cases to enhance the survival chances.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review.

Conflict of interests

The authors declare that they have no conflict of interests.

Author contribution

Marius Cristian Marinaş and Gabriel Florin Răzvan Mogoş equally contributed to the manuscript.

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