

Unusual Presentation of Hepatic Hemangioma: A Case report

Nadia Boujida*, Meriem Boui, Jihane El Houssni, Mohamed Lahkim, Rachida Saouab and Jamal El Fenni

Department of Radiology, Mohammed Vth Military Hospital, Rabat, Morocco

Introduction

Hepatic hemangiomas are the most common benign liver tumors, often found incidentally during imaging studies for unrelated medical conditions. These lesions are typically asymptomatic and rarely cause complications. However, in some cases, hepatic hemangiomas can lead to life-threatening complications, including rupture and hemorrhage. We present a unique case of a hepatic hemangioma complicated by a sub capsular hematoma, initially revealed through the presence of pleural effusion.

Case Report

A 53-year-old female with no significant medical history presented to our emergency department with a two-week history of progressive shortness of breath and pleuritic chest pain. It was not associated with fever, cough, wheeze, or hemoptysis. There was no history of swelling in the lower extremities, weight loss, or anorexia.

She denied any recent trauma or use of medications that could explain her symptoms. On physical examination, the breath sounds were absent over the right lower lung. No adventitious sounds were heard on either side of the chest. The remaining systemic examination was unremarkable.

A basic metabolic profile, a complete blood count, a lipid panel, and the results of liver function tests were all normal.

A chest X-ray revealed a right-sided pleural effusion

A non-contrast computed tomography (CT) scan of the chest was initially performed to investigate the cause of the pleural effusion. The CT scan confirmed the presence of a right-sided pleural effusion without any associated parenchymal pulmonary lesions (Figure 1). At the level of the abdominal images, we observed a subcapsular area measuring 9 mm in depth with a HU density of 55, consistent with a hematoma (red arrow). Additionally, there was a hypodense mass in segment VII of the liver measuring 20x27 mm. Subsequently, we conducted a liver MRI to further characterize the hepatic lesion.

The MRI reveals a hyperintense mass on T2-weighted images compared to the liver parenchyma. On T1 post-contrast images, it displays peripheral nodular and discontinuous enhancement, which progress centripetally on delayed images. Additionally, it appears

hyperintense on diffusion-weighted imaging, consistent with a hepatic hemangioma.

The MRI also confirmed the presence of the hematoma as a hyperintense subcapsular hepatic area on T2 imaging, and the right-sided pleural effusion as hyperintense on T2 imaging (Figure 2).

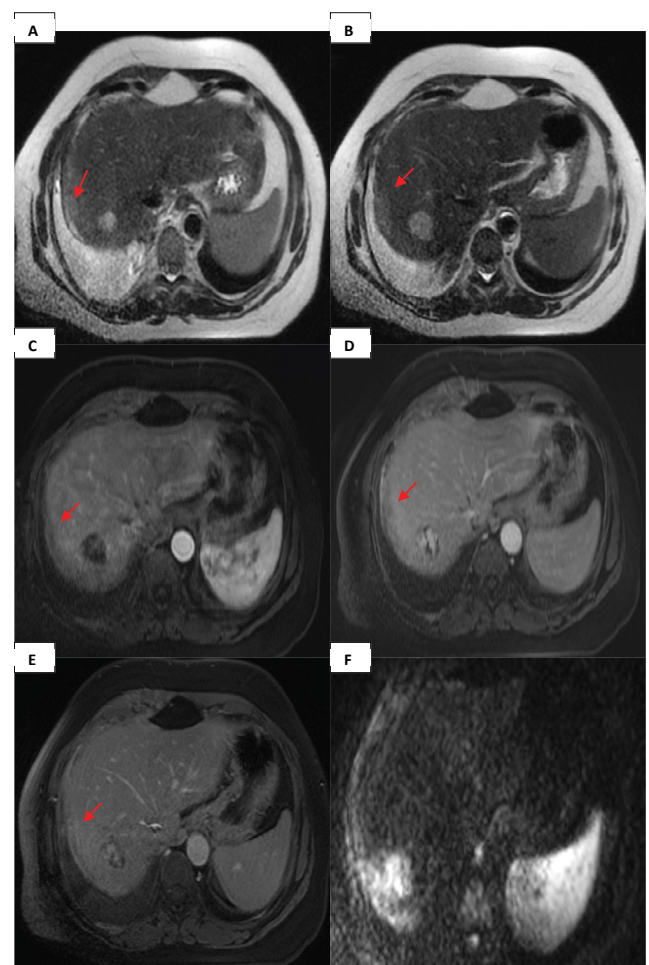


Figure 2: Liver MRI axial views: (A, B) T2-weighted images on two successive levels, (C,D,E) T1-weighted post contrast images obtained at different time intervals after injection of the gadolinium, (F) Diffusion-weighted image.



Figure 1: Non-contrast CT chest: (A) coronal, lung window (B) axial, mediastinal window.

*Corresponding author: Nadia Boujida, Department of Radiology, Mohammed Vth Military Hospital, Rabat, Morocco, E-mail: nadiaboujida21@gmail.com

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Discussion

Spontaneous hepatic bleeding is a rare condition. Most reported cases of liver hematoma often occur during pregnancy as part of severe preeclampsia and HELLP syndrome. Other causes may include the rupture of hepatocellular carcinoma, adenoma, focal nodular hyperplasia, or hemangioma [1]. Rarely, subcapsular hematomas are reported to coexist with pleural effusion [2].

Hemangiomas are the most common benign tumors of the liver, affecting 0.4 to 6.3% of the population. The average age of patients presenting with symptomatic lesions is approximately 45 years. While liver hemangiomas occur in both sexes [3], they exhibit a female predominance of 5:1 and is often an incidental finding with prevalence estimated at 1–20% in the general population [4].

The cause of hepatic hemangiomas remains speculative, and the natural progression of these lesions still inadequately characterized. The factors that determine why some lesions remain inactive or regress while others experience rapid growth remain poorly understood [3].

Histologically, a hemangioma is characterized by blood-filled cavities lined with endothelium and a hepatic arterial blood supply. A typical hemangioma typically exhibits a classic appearance on multiphase images, with discontinuous nodular enhancement and centripetal filling [4].

Small hemangiomas of the liver are generally asymptomatic. The concern in hepatic hemangiomas is that of spontaneous and fatal hemorrhage. Giant hemangiomas, those larger than 4cm, frequently present as an abdominal mass associated with vague symptoms of upper abdominal pain and increased risk of fatal spontaneous hemorrhage [3].

While the size of the tumor varies, there is a notable correlation between tumor size and the risk of rupture. Notably, cases of hemangioma rupture have been reported across a wide range of diameters, even including lesions as small as 1 cm. In a review of reported cases, the mean size of ruptured lesions was 11.2 cm [4].

In this case, the patient's presentation with pleural effusion was reactive to a subcapsular liver hematoma, related to hepatic hemangioma. This case highlights the importance of thoroughly evaluating the liver in any case of pleural effusion without any obvious underlying cause.

Conclusion

This case report emphasizes the need to consider hepatic lesions in the differential diagnosis of patients presenting with right-sided pleural effusion. One should also bear in mind that patients with subcapsular hematomas could also rarely develop pleural effusions, as seen in this patient. Timely imaging and accurate diagnosis are crucial for appropriate management and optimal patient outcomes in cases of hepatic hemangioma complications.

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