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Treatment of atypically-localized cavernous hemangioma in abdomen with atypical pain

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ABSTRACT

INTRODUCTION: Hemangiomas are the most common benign lesions of the liver. They usually remain asymptomatic and it is sufficient to follow up with intermittent imaging methods. The case presented herein featured with localization and atypical symptoms.
PRESENTATION OF CASE: A man aged 59 years was admitted with a three-month history of continuous and recently increased abdominal pain, and also early satiety. Computed Tomography (CT) showed a 9 × 6-cm mass that compressed the spleen on the left sub-diaphragmatic area, attached to the inferior part of the diaphragm. The mass was removed laparoscopically and pathology was cavernous hemangioma.
DISCUSSION: Although surgical treatment of cavernous hemangioma of the liver (CHL) remains in the background, for symptomatic patients who have no clear diagnosis, when complications emerge, surgery can be preferable. Here in minimally invasive surgery was performed in this case suffering from atypical abdominal pain.
CONCLUSION: Cavernous hemangiomas of the liver rarely require treatment. Surgery is one of the options in selected cases and abdominal pain is one of the indications. In patients complaining from persistent abdominal pain, if intraabdominal atypical-localized mass was seen in examinations, hemangioma should be remembered in differential diagnosis.

1. Introduction

Hemangiomas are the most common benign solid lesions in the liver and the prevalence in the population is 20% [1]. Cavernous hemangioma of the liver (CHL) occurs with congenital, non-neoplastic, hamartomatous proliferation of vascular endothelial cells that originate from the mesodermal layer [2]. Eighty percent of hemangiomas are cavernous type [3]. CHLs are usually asymptomatic and are detected incidentally. They rarely cause symptoms, but if they become symptomatic the most common sign is abdominal pain. More rarely, they become symptomatic through bleeding, rupture, and compression of adjacent organs [4]. Cavernous hemangiomas of more than 5 cm in diameter are called giant hemangiomas [5].

2. Case

A man aged 59 years with a three-month history of continuous and recently increased abdominal pain, and early satiety was admitted to Istanbul Faculty of Medicine, Trauma and Emergency Surgery Service. The physical examination revealed a palpable mass in the left upper quadrant. With the exception of total bilirubin, which was 1.7 mg/dL, all laboratory tests were found within normal values. Tumor markers were negative. In the computed tomography (CT), a 9 × 6-cm-sized mass was detected in the left diaphragmatic field, superior to the spleen and extended to the gastroesophageal junction (Fig. 1a,b). Magnetic resonance imaging (MRI) showed a well-defined lesion in the left sub-diaphragmatic area attached to the lower face of the diaphragm, which had compressed the spleen (Fig. 2a–d). Laparoscopic exploration was decided for the patient. During the exploration, a sub diaphragmatic mass was detected that was attached to the diaphragm, spleen, and left lobe of the liver with fibrotic bands (Fig. 3a,b). The decision was made to continue the surgery laparoscopically and two 5 mm working ports were introduced. The mass was separated from the fibrotic bands using LigaSure and excised from the abdomen through a Phannesteil incision. The patient was discharged on the second post-op day.

Macroscopic examination of resected material revealed a lobulated mass, 7.5 cm in diameter and 118 g in weight. The cut surface was solid, dark red-black in color and with patchy septal fibrosis. On microscopic examination, the tumor was characterized by blood-

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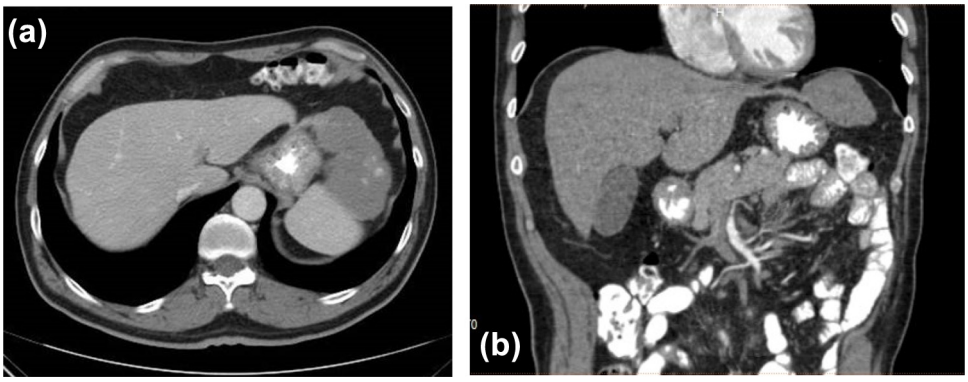

Fig. 1. (a) An axial enhanced CT image shows that a well-defined mildly hypodense solid mass contains several foci of faint calcifications. (b) A thin band formation between the mass and left lobe of the liver is clearly seen in a coronal reformatted CT image.

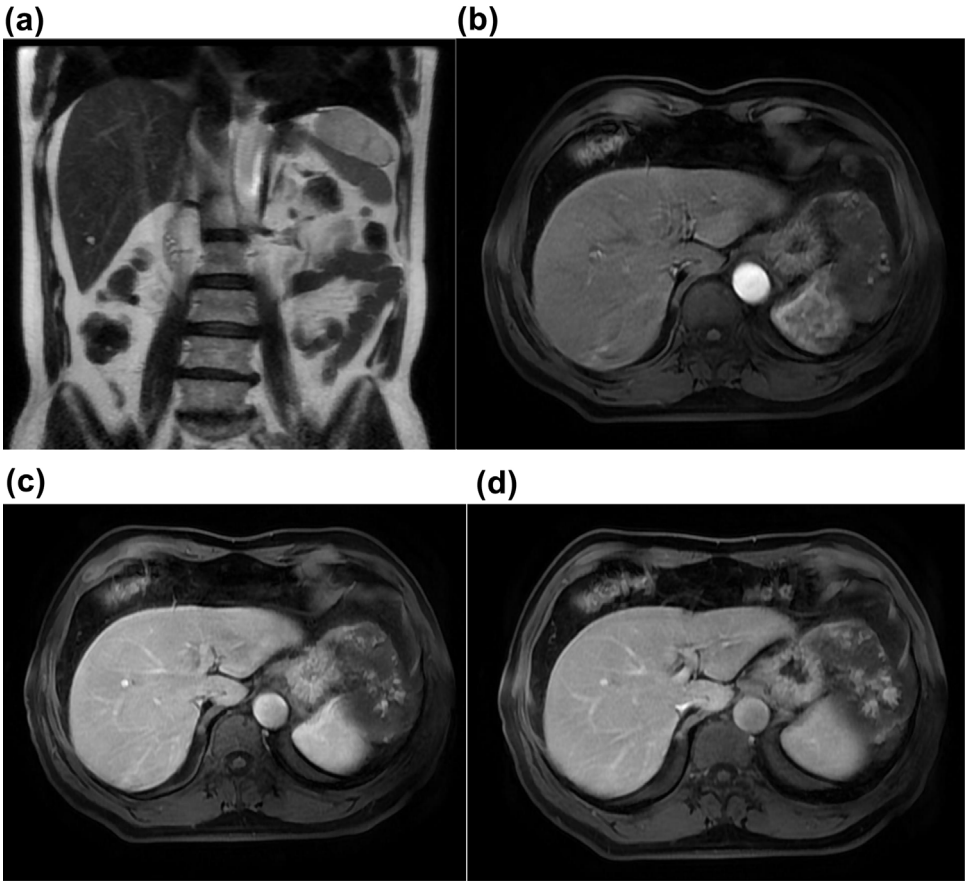

Fig. 2. (a) The lesion seen as markedly hyperintense in T2W coronal MR image. Axial contrast enhanced T1W MR images obtained in arterial phase (b), portal phase (c) and hepatic venous phase (d) show the lesion with heterogeneous patchy enhancement in a increasing manner.

filled cavernous vascular channels, consistent with the diagnosis of cavernous hemangioma (Fig. 4).

3. Discussion

Hemangiomas are the most common benign lesions of the liver. They mostly remain asymptomatic and do not cause complications [6]. Surgery is considered in the presence of progressive abdominal symptoms, spontaneous or traumatic rupture, fast-growing lesions, Kasabach-Merrith syndrome, and lesions that have no clear diagnosis [4,7]. Management of CHL ranges from observation to a variety of radiologic and surgical interventions. Surgical interventions include liver resection, enucleation, hepatic artery ligation, and rarely, transplantation [4]. In our case the patient was complaining of increasing pain and early satiety. Pain and early satiety was thought to be due to compression of the mass into the stomach. Thereby, the location of the cavernous hemangioma, the inability to clearly distinguish from malignancy, and the patient's increasing abdominal symptoms provided for the decision for surgery. Due to the inability to assess the invasion of the surrounding tissue with the pre-op with the view of assessing its operability, the initial method was decided not to be open but laparoscopic. After being satisfied that no invasion of the lesion to the surrounding tissue had occurred, rather it was only bound by fibrotic bands to liver and diaphragm, we decided to continue the surgery laparoscopically. Laparoscopic resection of hemangioma is not recommended as a