

CASE REPORT

PEDUNCULATED HEPATIC HEMANGIOMA A CASE REPORT

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ABSTRACT

Pedunculated hemangioma is a rare and atypical hepatic angioma. We report the case of a pedunculated hepatic hemangioma presenting as an abdominal sub-hepatic mass incidentally discovered in a 66-year-old woman with anal cancer. The diagnosis was strongly suggested by the vascular features of the lesion on spiral computed tomography (CT) and magnetic resonance (MR) imaging. A surgical removal of the mass was decided to prevent potential risk of ischemic volvulus along the pedicle. Histo-pathological examination confirmed this diagnosis. Contrast enhanced thin sections and subsequent multiplanar reconstructions on CT and MR are very helpful to show the angioma features and the pedicle linking the lesion with the liver.

KEYWORDS

Pedunculated; Hepatic; Hemangioma; Imaging.

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INTRODUCTION

Hemangiomas are the most common liver benign tumors in adults. Their overall prevalence is approximately 7-20%, and occurs more commonly in female gender (1). They are blood-filled lesions with well-defined borders and consist of mono-stratified endothelial cells surrounded by a network of fibrous stromal tissue. Their size may vary from a few millimeters to over 20 cm in diameter (2). Usually, they are intra-hepatic, but may occasionally develop on the extra-hepatic surface as superficial pedunculated lesions. Most of hemangiomas are asymptomatic and discovered as incidental findings during radiological imaging. Typical hemangiomas share common characteristic imaging features which include progressive nodular enhancement from periphery of the lesion which gradually become isodense or hyperdense compared to the liver parenchyma.

On the other hand, atypical hemangiomas vary widely in their appearance, making the diagnosis challenging.

CASE REPORT

A 66-year-old woman with a history of hypertension was recently diagnosed with a stage III anal cancer. A sub-hepatic asymptomatic mass was detected at spiral CT and suspected to be a peritoneal metastasis. Anal cancer was treated by radio-chemotherapy (5FU + Cisplatin+ extern radiotherapy). A careful analysis of CT scan and MR imaging revealed a 6 cm well defined mass, located under and behind the Gallbladder. Contrast injection series demonstrated a progressively peripheral and globularly-enhancement characteristic of hemangioma (*fig. 1 and 2*).

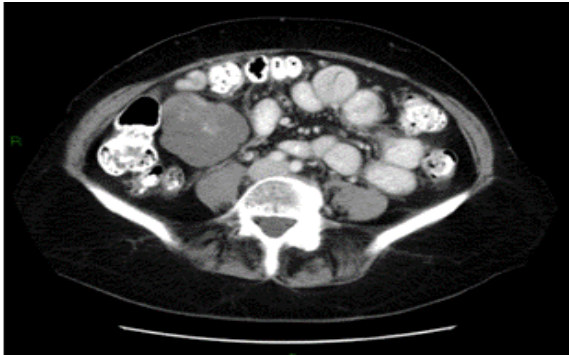


Figure 1: Portal phase axial CT: Nodular peripheral enhancement pattern of the sub-hepatic mass (arrow).

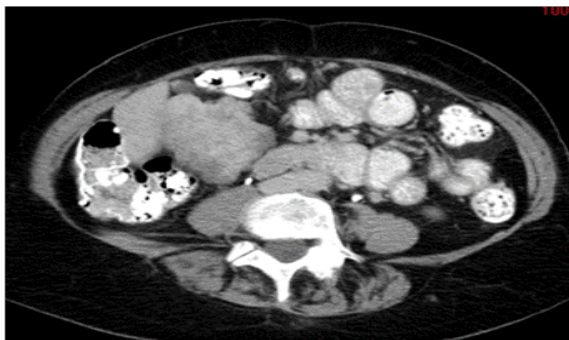


Figure 2: Delayed phase axial CT: Complete enhancement of the mass.

Coronal and sagittal reconstruction showed the pedicle linking the lesion to segment IVb of the liver (*fig. 3 and 4*). A surgical removal of the mass was decided to prevent potential risk of ischemic volvulus along the pedicle. The patient had an uncomplicated postoperative course. Pathological analysis provided a definitive diagnosis of pedunculated hemangioma (*fig. 5*).

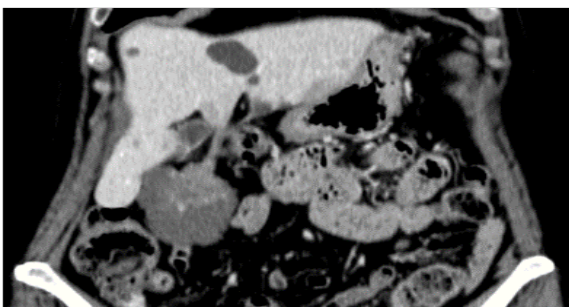


Figure 3: Portal phase coronal CT: Well defined pedicle connecting the mass to segment IVb of the liver (arrow).

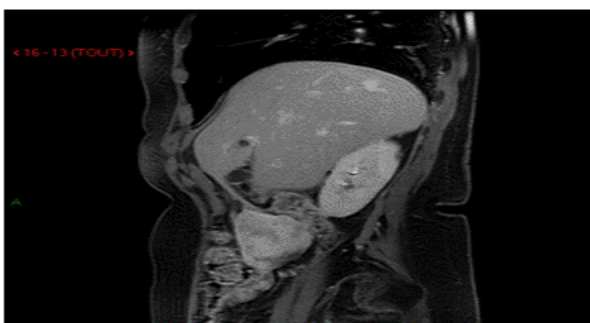


Figure 4: Sagittal gadolinium-enhanced T1-weighted image: Well defined pedicle connecting the mass to segment IVb of the liver (arrow).

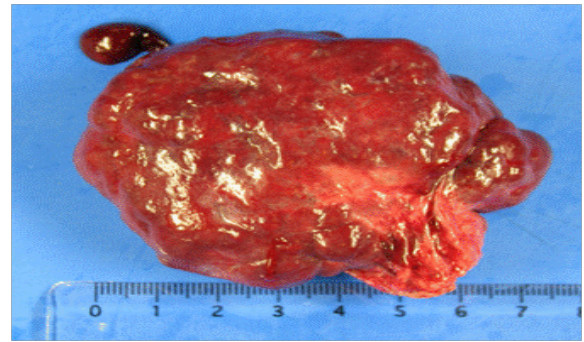


Figure 5: Surgical specimen showing the hemangioma and its pedicle (arrow).

DISCUSSION

Pedunculated Hemangiomas are an atypical form of hepatic angiomas. More than 25 cases reported in the literature, we note a large female predominance with a sex ratio of 1/3 (3-5). They can be asymptomatic and incidentally discovered during routine imaging (case of our patient), or be symptomatic as a result of either mass effect or in particular, any torsion of the pedicle leading to infarction (3, 6). For this reason, surgical resection is usually recommended (4, 5, 7). Histology shows multiple thin blood-filled vessels with hyaline-like degeneration (4,6). The value of ultrasound is usually limited, due to the location, nature, and variable morphology of the lesion (3). On the other hand, current methods of CT and MR imaging are more informative, especially when considering the use of thin sections, contrast enhancement and multiplanar reconstructions. These methods enable to identify the nodular peripheral intense enhancement pattern with increasing intensity in delayed series (8, 9). They also help in identifying the pedicle linking the hemangioma to the liver, which is the key of diagnosis (4, 10). In our case, the tumor showed typical CT findings of hemangioma. MRI provides a better definition than CT for detecting a thin stalk connecting the tumor with the liver (5).

The diagnosis of pedunculated hemangioma undergoing torsion is more difficult due to ischemia and necrosis. Nodular enhancement of the lesion may be partially or totally absent. Hyperintensity in T2-weighted images is lower than in typical hemangioma (5). In

such case, the presence of associated hepatic hemangiomas may help in diagnosis. The inability to visualize the vascular pedicle is the main reason of misdiagnosis of pedunculated hemangioma. In these cases, surgery confirms the diagnosis. Non surgical options include arterial embolisation, radiation or interferon alpha 2-a (11).

CONCLUSION

Hepatic hemangioma is the most frequent benign liver tumour, but the pedunculated form is rare. The characteristics and enhancement patterns of exophytic form are identical to the intrahepatic lesions on CT and MRI, permitting confident diagnosis. Surgical resection is recommended to prevent torsion.

ABBREVIATION

CT: Computed Tomography
 MRI: Magnetic Resonance Imaging
 5FU: 5 Fluoro-Uracyl

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

COMPETING INTERESTS

The authors declare no competing interests.

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AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the [Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals](#) of the [International Committee of Medical Journal Editors](#). Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

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