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A hypervascular liver mass

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Clinical case

A 49-year-old woman—on remission 7 years after the surgical resection of a lower left limb melanoma—presented with persistent right-upper quadrant pain associated with nausea and vomiting. Physical examination was unremarkable. Laboratory tests were within normal range, except for an elevated gamma-glutamyl transferase of 73 U/L (normal <38). An abdominal ultrasonography revealed a right liver mass. Magnetic resonance imaging (MRI) of the liver showed a 10 × 9 × 7.5 cm heterogeneous mass located within segment VII, with central necrosis (Figure 1). Abnormal vessels were observed in the surrounding liver parenchyma (Figure 1, arrow). Overall, imaging suggested a hypervascular mass within a non-cirrhotic liver. The patient underwent a fine-needle biopsy that showed proliferation of small vessels but that did not provide a definitive diagnosis.

What is the most likely diagnosis and which management would you recommend?

(A) Metastatic melanoma, referral to oncology for immunotherapy
(B) Angiosarcoma, proceed with right hepatectomy
(C) Anastomosing hemangioma, proceed with right hepatectomy
(D) Hepatic small vessels neoplasm, proceed with surveillance

The patient underwent a laparoscopic right hepatectomy, with an uneventful postoperative course. Gross examination of the specimen showed a well-demarcated gray-brown spongy-like mass and histologic analysis revealed proliferation of small capillaries. Immunohistochemical staining demonstrated strong CD34 positivity (Figure 2), with a very low mitotic index (Ki67). These elements confirmed the diagnosis of anastomosing hemangioma of the liver (AHL).[1]

Originally described in the genitourinary tract, anastomosing hemangiomas were recently reported in the gastrointestinal tract and in the liver. AHL is a newly recognized entity.[2] Its

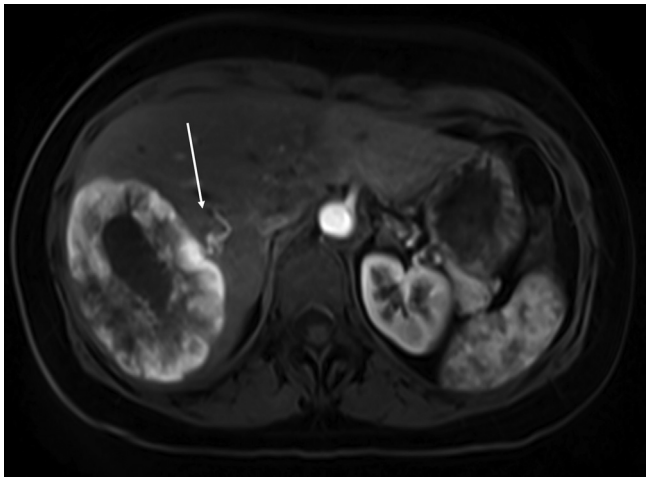

Figure 1. Liver magnetic resonance imaging (MRI) revealed a hepatic mass located within segment VII (10 x 9 x 7.5 cm) with lobulated and well-defined borders. Axial T1wi obtained at the arterial phase demonstrates spontaneous T1wi hypointensity, heterogeneous arterial enhancement with abnormal vessels in the surrounding liver parenchyma (arrow).

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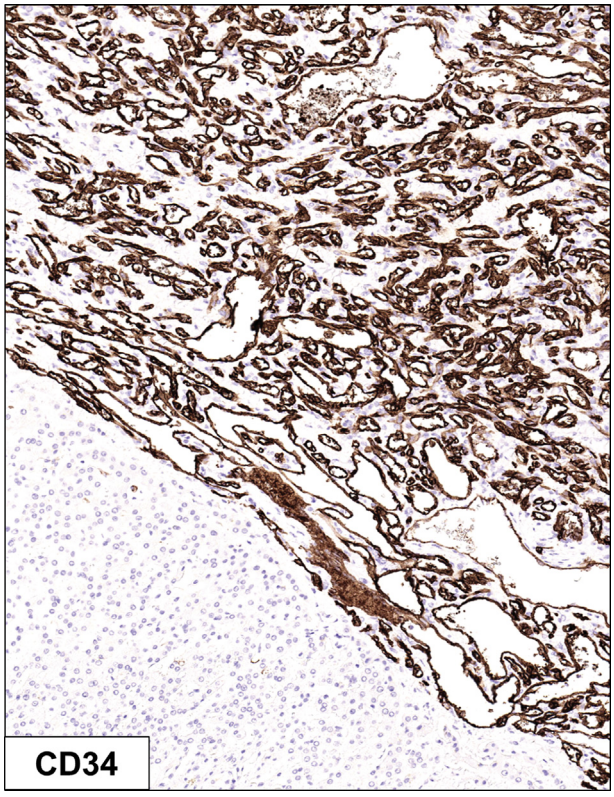

Figure 2. Microscopic evaluation of the mass with CD34 immunostaining confirming its vascular nature and highlighting the sharp demarcation from the liver parenchyma.

diagnosis can be challenging, as it can mimic other neoplasms like hepatic small vessels neoplasm (HSVN) or angiosarcoma, both on imaging and in core biopsy.[3] Data on AHL remain scant, relying on case reports and small series.[2] Although there is no evidence supporting a biologic aggressiveness of these tumors, current recommendation is for complete resection and close follow-up.

In conclusion, AHL is a newly recognized type of tumor. Clinicians involved in the management of liver tumors should be aware of this entity and integrate it in the differential diagnosis of hypervascular hepatic lesions. Future multicenter and molecular studies are needed to refine our understanding of AHL and its outcomes.

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Conflict of interest/Disclosure

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