Digestive and Liver Disease 52 (2020) 924–925

Contents lists available at ScienceDirect

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld

Image of the Month

Giant liver fibrous tumours metastatic from atypical recurrent meningeal neoplasia

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A 71-year-old woman presented to the emergency room of an academic hospital for biliary vomit of one week duration. Her past medical history was remarkable for a recurrent atypical meningeal neoplasia, diagnosed ten years earlier, treated with surgical excision and radiotherapy in 2008, then only with radiotherapy in 2013, 2015, 2017. Blood tests revealed increased serum gamma-glutamyltransferase and alkaline phosphatase. At physical examination, hepatomegaly was noted; abdominal ultrasound revealed multiple inhomogeneous hypo-echoic hepatic lesions (the largest 11 cm in diameter). An abdominal computed tomography (CT)-scan

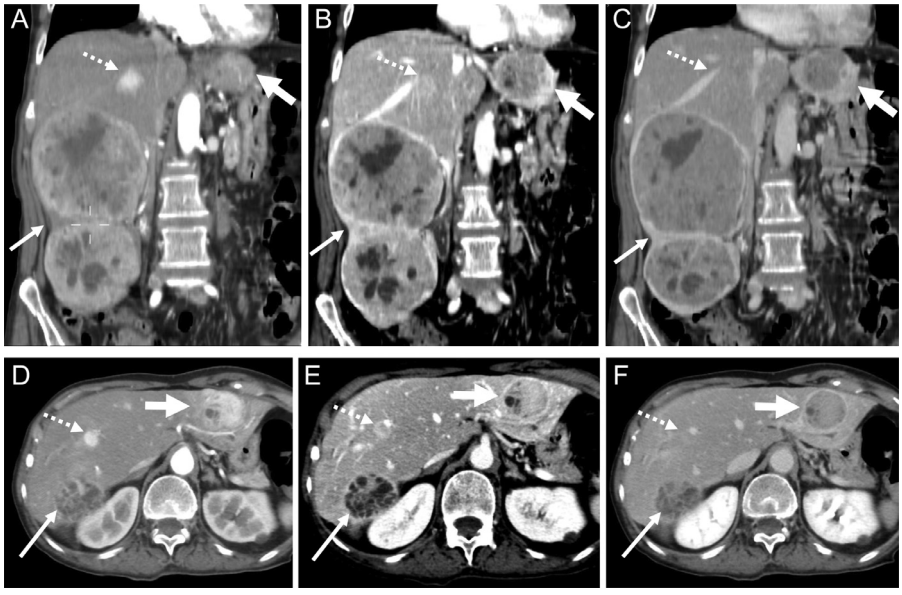

Fig. 1. Contrast-enhanced abdominal computed tomography. (A, D) arterial phase; (B, E) portal phase; (C, F) late venous phase.
(A-C) Coronal plane. Four hepatic lesions showing different dynamic behaviour according to size: the smaller lesion has a homogenous arterial enhancement, a central wash-out during portal phase and it becomes isodense during late venous phase (thin dotted arrows); the larger three lesions show inhomogeneous, mainly peripheral arterial enhancement with appearance of portal rim enhancement, which becomes more pronounced during late venous phase (thin and thick solid arrows).
(D-F): Axial plane. Three additional hepatic lesions showing different dynamic patterns according to size: the smaller lesion has a homogenous arterial enhancement, a central portal wash-out and it becomes isodense during late venous phase (thin dotted arrows); the larger two lesions show inhomogeneous arterial enhancement with rim enhancement during portal and late venous phase (thin and thick solid arrows).

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https://doi.org/10.1016/j.dld.2020.03.001

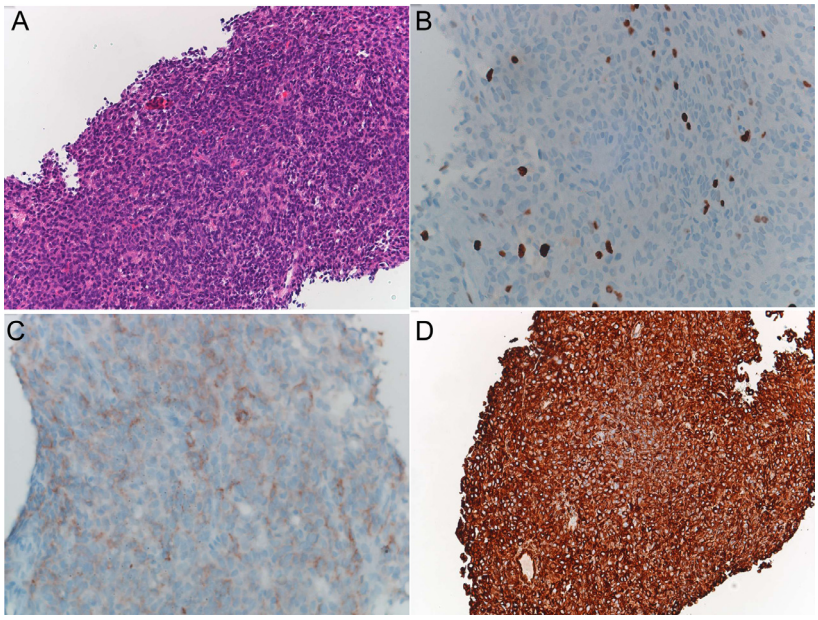

Fig. 2. Microscopic findings of liver biopsy. (A) Neoplastic proliferation composed by small, oval-roundish cells, stained by Hematoxylin and eosin (200 X). (B) Proliferative index (Mib-1) (400 x). (C, D) Focal and diffuse immunostaining of neoplastic cells with anti-Epithelial Membrane Antigen (EMA) and CD34 antibodies, respectively; (C: 400X), (D: 200 X).

showed that the hepatic lesions had an inhomogeneous enhancement during the arterial phase, followed by a pronounced rim enhancement with some non-enhanced areas during the portal phase. The brain CT scan showed no recurrence of meningeal neoplasia. However, a fine-needle percutaneous liver biopsy performed in the left lobe showed proliferation of oval to short spindle-shaped cells separated by different amount of fibrous collagen. Immunohistochemistry demonstrated the presence of CD34 and Epithelial Membrane Antigen positive cells. The final pathological diagnosis was metastatic fibrous tumour originated from meninges Figs. 1 and 2.

Solitary fibrous tumour is a rare mesenchymal neoplasia that can affect several sites within the human body. It seldom originates from the meninges; the accuracy of imaging modalities in the diagnosis of liver metastases originating from this tumour is limited. Immunohistochemistry is essential to achieve a definitive diagnosis [1].

Declaration of Competing Interest

All the authors declared that they do not have anything to disclose regarding funding or conflict of interest with respect to the manuscript entitled “Giant liver fibrous tumors metastatic from atypical recurrent meningeal neoplasia”.

Reference

[1] Yugawa K, Yoshizumi T, Mano Y, Kurihara T, Yoshiya S, Takeishi K, Itoh S, Harada N, Ikegami T, Soejima Y, Kohashi K, Oda Y, Mori M. Solitary fibrous tumor in the liver: case report and literature review. Surg Case Rep 2019;5(1):68.