Hyalinised hepatic haemangioma mimicking malignancy: an incidental finding

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DESCRIPTION

Haemangioma is the most common benign hepatic tumour of the liver; despite being common, sclerosing haemangioma is a rare entity with a female predominance.¹ Based on their imaging features, an atypical haemangioma can be distinguishable from malignancy. Factors responsible for haemangioma degeneration are increased degree of fibrosis, scar formation and thrombosis of its vascular channels, which is called a sclerosing or hyalinising haemangioma, which can lead to its end stage where it is completely sclerosed or hyalinised.^{2,3} These sclerosing haemangiomas are asymptomatic and are therefore often incidentally found. The process of sclerosis changes the radiologic characteristics of these haemangiomas. Subsequently, it renders their reliable diagnosis using only imaging characteristics nearly impossible as sclerosing haemangiomas have an imaging appearance that makes them indistinguishable from malignancy, such as metastasis, hepatocellular carcinoma or cholangiocarcinoma. CT is characterised by a lack of early enhancement on dynamic contrast-enhanced CT images and may or may not demonstrate degrees of peripheral enhancement in the late phase; thus, it is difficult to definitively differentiate hyalinised haemangioma from malignant hepatic tumours.⁴ The surgical approach for resection of hepatic

Figure 1 (A) Ultrasonography image, craniocaudal view, at midaxillary line demonstrates an irregular margined hyperechoic lesion in segment VI of the liver (white arrow). (B) Magnetic resonance cholangiopancreatography, coronal image, T2-weighted image demonstrate an ill-defined hyperintense lesion with adjacent capsule retraction (white arrow). (C,D) Triple-phase contrast-enhanced CT, non-contrast coronal and arterial phase axial images, respectively, demonstrate an ill-defined hypodense lesion in C and subtle peripheral nodular enhancement of the lesion in D marked as a white arrow. Adjacent hepatic capsular retraction is evident.

Figure 2 Triple-phase contrast-enhanced CT (CECT) of the abdomen (A–C) coronal images, portal, venous and equilibrium phase, respectively, demonstrate progressive centripetal filling of the lesion with a relatively isodense appearance in the equilibrium phase (white arrow) suggest a diagnosis of the hepatic haemangioma. (D) CECT of the abdomen, the coronal image in venous phase demonstrate significant capsular depression suggestive of degenerative changes in the adjacent lesion suggestive of sclerosis.

sclerosing haemangioma is controversial. Most of the previously reported tumours were resected due to preoperative misdiagnosis as hepatic malignancies. Percutaneous needle biopsy is not considered adequate because of the possibility of disseminating cancer cells if the tumour is malignant.

A woman in her 60s came to the emergency with a complaint of reported upper abdominal pain and vomiting for the past few days. Her physical examination shows no localised sign of pathology. Vitals were unremarkable, and the patient was conscious of time, place and person. The patient

Figure 3 Histopathology image of the liver lesion (x40) demonstrating abundant sclerotic stroma (black arrow) and compressed vascular outlines marked as asterisk, suggestive of benign lesion (hyalinised hepatic haemangioma).

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Images in...

was admitted to the hospital for further evaluation. Liver function test demonstrated raised serum aspartate aminotransferase (49 IU/L), alanine aminotransferase (56 IU/L) and gamma-glutamyl transferase levels (151 IU/L). Serum tumour markers, including alpha-fetoprotein and PIVKA-II, were within normal limits. Serologic tests for hepatitis B and hepatitis C virus were negative. Complete blood count revealed low haemoglobin. The patient was further advised for ultrasonography, which revealed an irregular heterogeneously hyperechoic lesion in the segment VI with retraction of the hepatic surface (figure 1A). Magnetic resonance cholangiopancreatography (MRCP) was advised to further characterise the lesion, which showed a small, ill-defined abnormal T2-hyperintense lesion in segment VI of the liver with adjacent capsular retraction (figure 1B). Based on the ultrasonography (USG) and MRCP, differential diagnosis of cholangiocarcinoma and haemangioma was made. Triple-phase contrast-enhanced CT of the abdomen and the pelvis showed an ill-defined hypodense lesion in segment VI with subtle peripheral nodular enhancement on arterial phase with progressive centripetal contrast filling became isodense to surrounding liver parenchyma on delayed phase (figures 1C, D and 2). Capsular

retraction was evident; however, no obvious focal dilatation of the intrahepatic biliary radicals was noted. Based on these findings, diagnosis of benign hepatic haemangioma was made. The lesion was biopsied and sent for histopathological examination. Histopathological examination revealed dense stroma surrounding the obliterated and compressed vessels. Endothelial cell outline and obliterated lumen was also seen (figure 3). Thus, the diagnosis of the hyalinised hepatic haemangioma was made. The patient was assured about the benign nature of the lesion.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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Learning points

- Due to variable degrees of degeneration, hyalinised hepatic haemangioma can mimic hepatic malignancy.
- Triple-phase contrast-enhanced CT remains best non-invasive imaging modality to diagnose hyalinised hepatic haemangioma and unnecessary interventions can be avoided.
- Biopsy and histopathological examination remains the gold standard to confirm the hyalinised hepatic haemangioma.

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