

Hepatic hemangioma presenting as a large cystic tumor

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A 62-year-old female chronic hepatitis B patient was referred to our clinic after an incidental cystic tumor in her liver was found on abdominal ultrasound. Her serum alanine aminotransferase level was 31 U/L and the hepatitis B virus DNA titer was 1,900 IU/mL. An abdominal ultrasound revealed a hypoechoic cystic tumor measuring 8.2 × 7.2 cm in the lateral lobe of the liver. A computed tomography (CT) scan showed a large exophytic cyst in the

lateral margin in the left lobe (Fig. 1A-1C). A unilocular cyst with multifocal rim calcifications and a thin intracystic septum was observed (Fig. 1D).

A biliary cystadenoma was initially suspected and a laparoscopic approach was employed for tumor resection. The macroscopic cut section showed a brownish round unilocular cyst measuring 9.0 × 8.0 × 8.0 cm with a dense fibrous wall having small multifocal calcifications (Fig. 2A). The microscop-

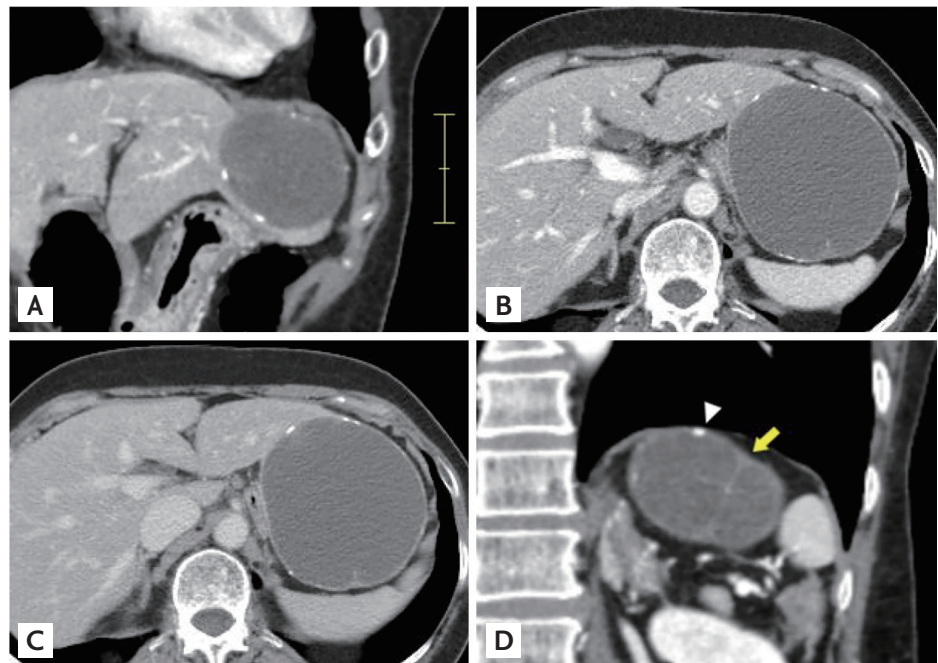


Figure 1. Computed tomography images of an exophytic hepatic hemangioma presenting as a large biliary cystadenoma. (A) Coronal image of the cyst from segment 2. (B, C) Transverse image of the tumor showing multiple fine calcifications in the rim. (D) A focal calcification (arrowhead) and thin septum (arrow).

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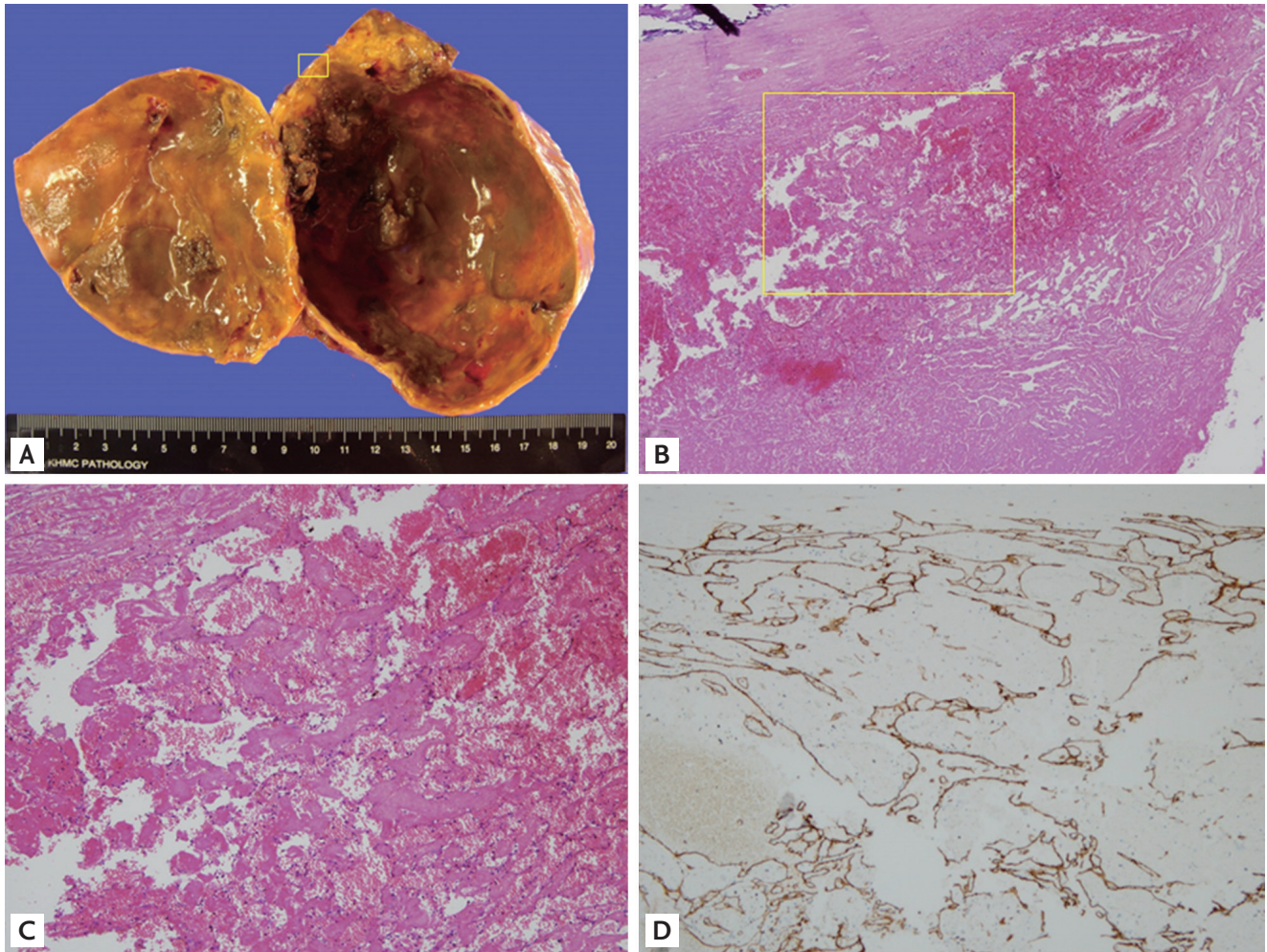


Figure 2. Histological view of the cystic tumor. (A) A macroscopic cut section showing a brownish round unilocular cyst with a dense fibrous wall. (B) Microscopic view of the small papillary lesion and cystic wall (the box in Fig. 2A, H&E, $\times 40$). (C) Mono-layered endothelial cells and fibrous stroma mixed with blood (the box in Fig. 2B, H&E, $\times 100$). (D) Immunohistochemical staining strong positivity for CD34, suggesting an endothelial origin ($\times 100$).

ic view of the cystic wall and small papillary remnants in that showed a dense fibrous wall without lining epithelium. The majority of the solid portion was almost completely necrotized and the remaining lesion had mono-layered endothelial cells and fibrous stroma mixed with blood cells, which indicated hepatic hemangioma (Fig. 2B and 2C). Immunohistochemical staining revealed strong positivity for cluster of differentiation 34 (CD34) and CD31 and negative for cytokeratin 19 (CK19), suggesting an endothelial origin (Fig. 2D). The cystic degeneration following the near-complete necrosis may have altered the presentation of this exophytic hemangioma into that of a cystic tumor.

Hepatic hemangiomas are the most common benign

solid tumors in the liver. With ultrasound and CT scans becoming more accessible than ever, the detection of atypical hemangiomas mimicking malignant tumors has increased as well. As this case showed that a hepatic hemangioma can be misdiagnosed as a biliary cystic neoplasm. Thus, hepatic hemangiomas should be included in differential diagnoses of cystic tumors.

Written informed consent was obtained from the patient.

Conflict of interest

No potential conflict of interest relevant to this article was reported.