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## A young male with primary hepatic epithelioid hemangioendothelioma

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Dear Editor,

A physical examination of a 33-year-old male presenting with liver mass. Laboratory tests such as tumour markers and liver function tests were within normal limit. Enhanced CT examination revealed multiple round-like lesions in the liver (Figs. 1 A-C). Based on the above evidence, it is preliminarily considered that multiple intrahepatic masses are atypical hemangiomas? Further PET / CT scan showed multiple nodules in the liver, adjacent liver capsule depression (Figs. 1 D-E). Epithelioid

hemangioendothelioma may be considered. Subsequently, he underwent a surgical resection and microwave ablation, and postoperative pathology revealed epithelioid hemangioendothelioma (Figs. 1 F). Immunohistochemistry showed CD31 (+), ERG (+), CD34 (partial +). During a 2-month follow-up, the patients had no obvious signs of recurrence and metastasis.

## **DISCUSSION:**

Epithelioid hemangioendothelioma (EHEs) is a tumor derived from vascular endothelium. It was first described by Weiss and Enzinger in 1982 and can be seen in liver, mediastinum, and lung (1). EHEs occur most frequently in the liver (2).

Laboratory tests, such as transaminases (ALT and AST) and tumor markers (AFP and CEA) levels, are not indicators for the diagnosis of HEHE (3). Radiological examination is very important for the diagnosis of HEHE. CT enhancement exhibited a typical 'halo sign', 'capsular retraction sign' and 'lollipop sign'. The main differential diagnosis considered in this case was hepatic hemangioma and hepatocellular carcinoma (4). Some scholars recommend the use of FDG PET/CT for the diagnosis and staging of HEHE.

Pathological examination combined with immunohistochemical staining is the key to correct diagnosis of HEHE. Microscopically, the tumor tissue was composed of atypical epithelioid or dendritic endothelial cells. The positive rates of vascular endothelial markers such as CD31, CD34, and von Willebrand factor were higher in immunohistochemistry staining (3).

The treatment of HEHE depends on the location and systemic spread of the tumor. Surgical treatment is the first choice for the treatment of HEHE. Many studies have reported that the survival rate of patients after partial hepatectomy has been improved (5). In this case, the gallbladder is too close to the tumor, it will inevitably be removed. In addition, patients with HEHE can also use other means including tumor embolization, microwave ablation, chemotherapy. In this case, microwave ablation of liver mass was used to treat HEHE, which can be a new choice for the treatment of this

disease. According to the data, the above adjuvant therapy may be an effective way to prevent recurrence after surgical treatment.

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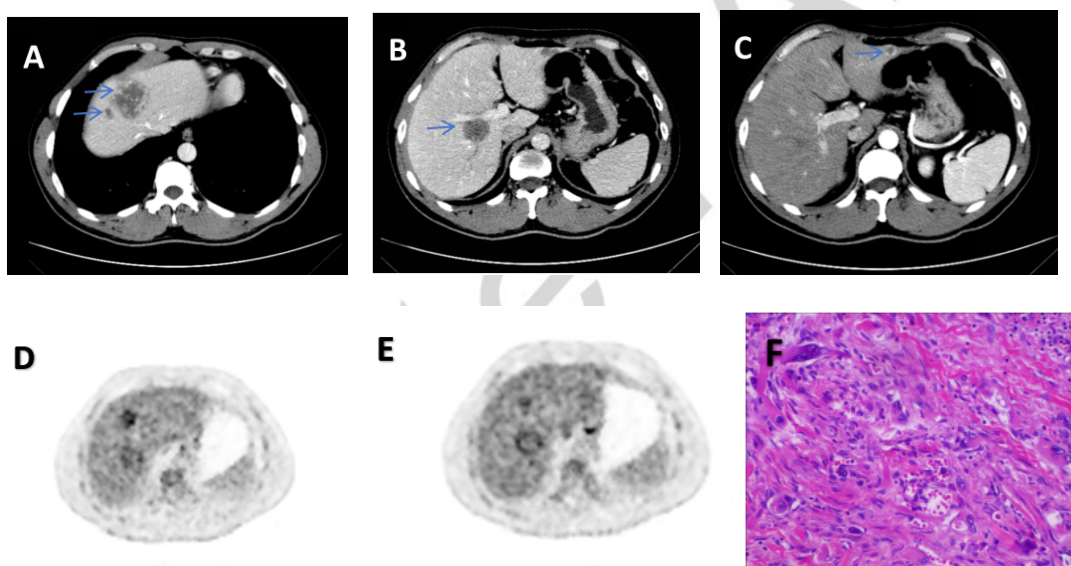


Fig. 1. 33-year-old male patient with primary hepatic epithelioid hemangioendothelioma. A-C. CT-enhanced arterial phase. A. the S4a and S8 segments of the liver showed a round-like slightly low-density lesion with a blurred edge. The size was about 47mm × 44mm, and a few calcifications were seen in it. The enhanced scan showed progressive enhancement. B. the S7 segment of liver showed a round-like slightly low-density lesion. C. the S3 segment of liver showed a round-like slightly low-density lesion. D-E. PET / CT showed multiple slightly low-density nodules and masses with different sizes in the center of the liver, with a small amount of punctate calcification, adjacent to the hepatic capsule depression, forming a typical 'halo sign'

and 'capsule retraction sign'. F. Microscopic examination revealed that under the microscope, the tumor tissue was composed of atypical epithelioid cells. The eosinophilic cytoplasm of the cells contained blank-like lacunae, and several red blood cells could be seen (HE, X40).

Accepted Article