Hepatocellular Carcinoma with Para-Celiac Lymph Node Metastasis Presenting as Unknown Primary Neoplasm in the Post-Liver Transplant Setting

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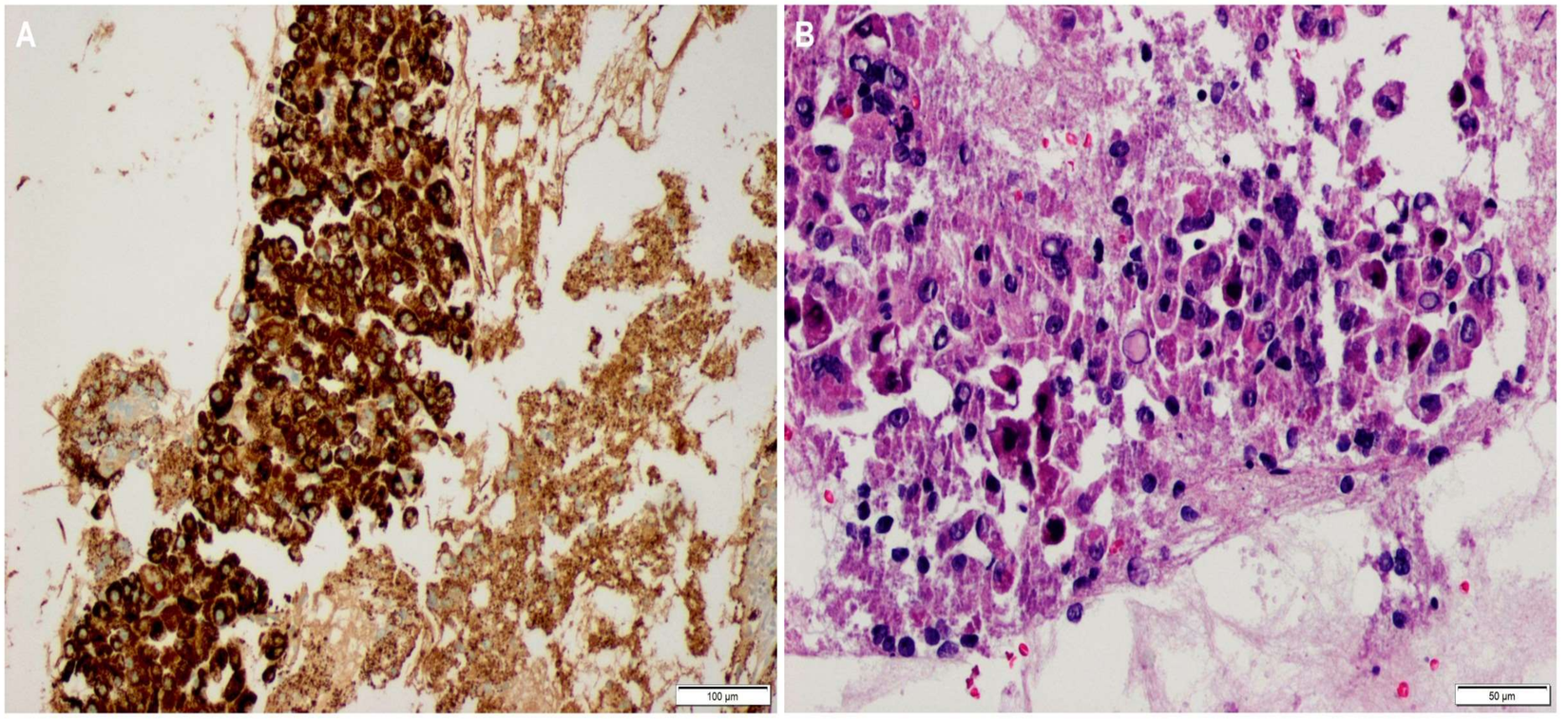
Introduction

Metastatic hepatocellular carcinoma (HCC) without primary liver lesion is an exceedingly rare clinicopathologic entity. Only a handful of case reports have been reported to date, mostly involving bony structures without primary liver cancer. To our knowledge, we hereby present the first case of metastatic HCC involving the para-celiac lymph nodes in the post-liver transplant setting.

Case Description/Methods

A 73-year-old male who previously underwent liver transplant for non-alcoholic steatohepatitis was admitted to gastroenterology for the evaluation of a suspicious pancreatic tail cyst. He denied acute gastrointestinal symptoms. Laboratory studies revealed normal liver enzymes. CT abdomen and pelvis was remarkable for a 2-cm lesion located under the right hemidiaphragm, posterior to the right hepatic lobe. Subsequently, the patient underwent diagnostic EUS with biopsy for both lesions. EUS revealed an irregularly shaped oval cyst in the tail, round cysts in the body and neck, and a complex of small cysts in the pancreatic head. The 45 x 55-mm para-celiac mass was irregularly shaped, hypoechoic, homogenous solid lesion, located lateral to the celiac axis. It had well-defined endosonographic borders. Immunostaining of the fine-needle biopsy (FNB) of the para-celiac mass was positive for Hep Par-1 and pancytokeratin, consistent with metastatic HCC **(Figure 1; Panels A&B)**. Fine-needle aspiration (FNA) of the pancreatic cysts was negative for malignancy. Alpha-fetoprotein level was 11.1 ng/mL. The diagnosis of HCC of unknown primary in the post-transplant setting was finally made. The patient then underwent an uneventful surgical resection.

Figure 1: Immunostaining of the para-celiac mass



Discussion

To our research, this is the first reported case of metastatic HCC without primary liver lesion involving the para-celiac lymph nodes in a post-transplant patient. With regard to pathogenesis, one theory implicates the presence of ectopic liver tissue that transforms into HCC. The presence of micro-HCC that regresses spontaneously or gets destroyed by the immune system can also be a plausible explanation. Standard diagnostic protocol for HCC consists of imaging (CT or MRI) and/or biopsy. Even in patients with cirrhosis, the diagnostic modality of choice is imaging and liver biopsy is less frequently performed.

Biopsy is recommended for atypical hepatic lesions on imaging or nonclassical enhancement patterns or detection in the absence of cirrhosis. No standardized treatment exists for metastatic HCC with unknown primary. This report illustrates that clinicians should consider HCC while evaluating patients for the primary origin of metastatic carcinoma.

Figure 1

Figure 1: Immunohistochemical analysis of the endoscopic ultrasound-guided fine-needle biopsy (FNB) specimen indicating positive status for Hep Par-1 and pancytokeratin.