Hepatocellular Carcinoma in a Non-Cirrhotic Patient Treated with Left Hepatic Trisegmentectomy: A Case Report

[1]James S. Love MD; [2]Sarang Thaker MD, MS; [3]Alexander Pan MD; [4]Josi Herren, DO; [5]Alberto Fratti, MD; [6]Grace Guzman, MD; [5]Mario Spaggiari, MD; [2]Sean Koppe, MD

[1]Department of Internal Medicine, [3]Division of Gastroenterology and Hepatology, University of Illinois at Chicago College of Medicine, Chicago, IL
[2]Division of Gastroenterology and Hepatology, Northwestern University, Chicago, IL
[4]Department of Radiology, Division of Interventional Radiology, University of Illinois at Chicago College of Medicine, Chicago, IL
[5]Department of Surgery, Division of Transplant Surgery, University of Illinois at Chicago College of Medicine, Chicago, IL
[6]Department of Pathology, University of Illinois at Chicago College of Medicine, Chicago, IL

Abstract

Hepatocellular carcinoma (HCC) is the 5th-most common cancer and the 3rd-most common cause of cancer-related mortality. Chronic liver disease is the most important risk factor for HCC and 80% of cases are in patients with cirrhosis. HCC has an insidious presentation in patients without cirrhosis and is often found incidentally. Herein, we present a case of a rare variant of HCC in a patient without cirrhosis and highlight its insidious nature as well as surgical treatment.

Case Presentation

- 68 yo man with history of HTN, HLD, DM, CAD
- Chief complaint: acute RUQ abdominal pain, not associated with any particular inciting event
- Liver profile, lipase, INR, basic labs unremarkable
- 1-year history of 20lb unintentional weight loss
- CT abdomen 1 year prior with single hyperdense lesion suspicious for hemangioma

Images

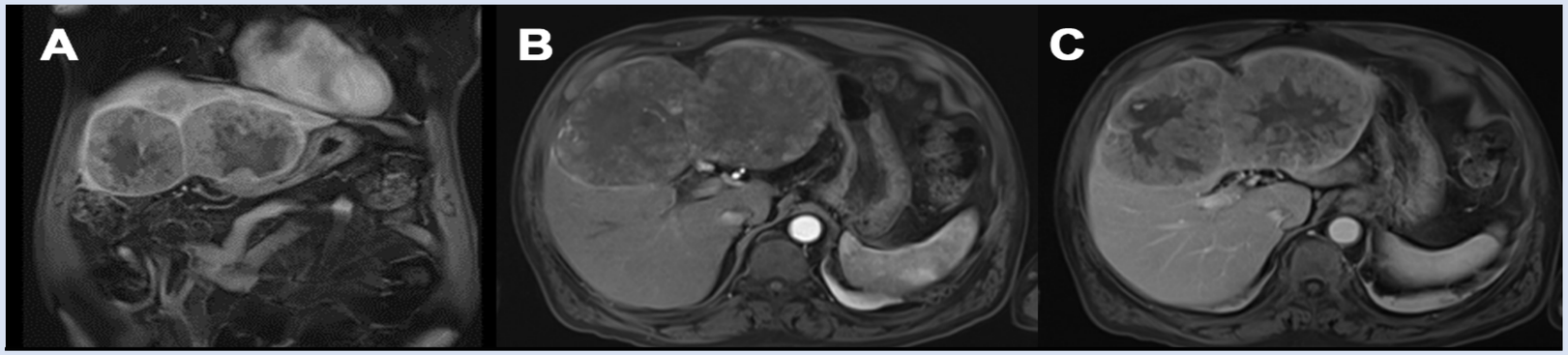

Figure 1: (A) Coronal and (B) axial arterial phase MRI through the abdomen demonstrating heterogeneously enhancing bi-lobed mass with non-enhancing central scar. (C) Axial portal venous phase MRI demonstrating portal venous washout with non-enhancing central scars in a bilobed mass.

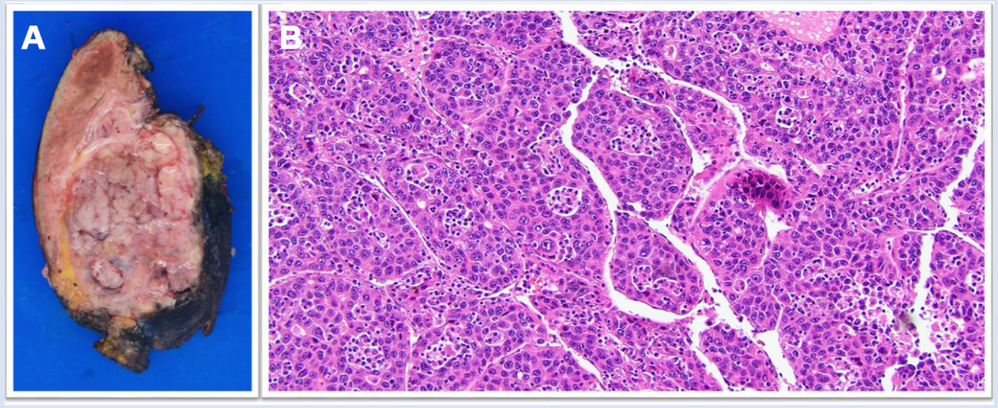

Figure 2: (A) Gross specimen demonstrating tumor. (B) Histology demonstrating macrotrabecular variant HCC.

Clinical Course

Abdominal ultrasound with hepatomegaly and a heterogenous mass.

CT with contrast of the abdomen with a large mass involving segments 2, 3, 4, 5, and 8 measuring 19.8 cm in largest dimension.

→

MRI imaging concerning for fibrolamellar variant HCC *without* imaging findings suggestive of cirrhosis.

Chronic liver disease work-up negative, Alpha fetoprotein 150,000 ng/ml.

→

Biopsy of normal liver parenchyma excluded cirrhosis, yielded mild mixed vesicular steatosis (20%) and stage 2 fibrosis

→

Multidisciplinary discussion took place and patient underwent successful left hepatic trisegmentectomy.

Pathology consistent with macrotrabecular-massive variant of HCC with lymphovascular invasion

Discussion

- **Macrotrabecular-massive variant hepatocellular carcinoma (MTM-HCC) is an incredibly rare and aggressive subtype, reported in as few as 5% of HCC cases**
- **Histologically, MTM-HCC is characterized by trabecula >6 cells in thickness**
- **If residual liver volume is ≥40% of original, curative resection is recommended in non-cirrhotic HCC patients; unfortunately, recurrence rate is high**
- **For patients who have HCC recurrence without macrovascular invasion or extrahepatic spread, liver transplantation can be considered**
- **This case highlights the rarity of non-cirrhotic HCC and benefit of multi-disciplinary discussions to create individualized treatment plans**