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CASE REPORT

Dual (Mixed and Bland) Thrombus in Inferior Vena Cava: A Rare Presentation of Hepatocellular Carcinoma

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ABSTRACT

Budd-Chiari syndrome (BCS) is defined as hepatic venous outflow obstruction at any level from the small hepatic veins to the junction of the inferior vena cava (IVC) and the right atrium. Hepatocellular carcinoma (HCC) is the complication of chronic liver disease and it usually presents as decompensation of the known chronic liver disease. HCC rarely present as BCS. Here, we present a rare case of HCC presenting first time with BCS with involvement of hepatic veins and dual thrombus in the IVC.

Keywords: Liver cancer, Inferior vena cava thrombosis, Budd-Chiari syndrome, Tumor thrombus, Hepatocellular carcinoma.

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INTRODUCTION

Budd-Chiari syndrome (BCS) was first described in 1845 with triad of abdominal pain, ascites and hepatomegaly by George Budd[1] and is defined as hepatic venous outflow obstruction at any level from the small hepatic veins to the junction of the inferior vena cava (IVC) and the right atrium.[2] Hepatocellular carcinoma (HCC) is the complication of chronic liver disease and it usually presents as decompensation of the known chronic liver disease. HCC rarely present as BCS.[3] Here, we present a rare case of HCC presenting first time with BCS with involvement of hepatic veins and dual thrombus in the IVC.

CASE REPORT

A 62-year-old male a known case of diabetes mellitus type II presented with history of abdominal pain, abdominal distension and fever for 20 days, swelling of both the legs without redness or pain for 15 days, and dyspnea and cough for 10 days. Physical examination was unremarkable except pitting pedal edema. His blood investigation at admission were as follows: Hb: 12.9 gm/dl, TLC: 6.8/cumm, platelet: 63 thousand/cumm, INR: 2.1, serum creatinine: 1.27, serum bilirubin: 2.3 gm/dl, AST: 42 IU/ml, ALT: 62 IU/ml, SAP: 122 IU/ml, total protein: 6.9 gm/l, serum albumin: 2.7 gm/l. HBsAg was negative, anti-HCV was positive, HCV RNA of 367,498 IU/ml and alpha fetoprotein was 161 mg/dl. Upper gastrointestinal endoscopy revealed large (grade IV) esophageal varices. Ultrasound of abdomen revealed large intrahepatic mass involving the right and left lobe extending into the hepatic veins and IVC. Triple phase contrast-enhanced computed tomography (CT) of abdomen revealed large enhancing mass with arterial enhancement with early washout involving the segment 7 and 8 of the right lobe and segment 3 and 4a of left lobe. There was tumor extension in the hepatic veins and IVC. In the IVC there were two contiguous different types of thrombi, one of them was tumor thrombus in the intrahepatic and suprahepatic part of IVC and the bland thrombus in the infrahepatic part of IVC (Fig. 1). CECT chest also revealed multiple metastases in the lung. In view of extensive metastatic disease only palliative treatment was offered to the patient. Patient was started on sorafenib and was discharged. The patient is doing well on sorafenib till his last follow-up of 3 months.

DISCUSSION

HCC is fifth common cancer in the world.[4] Common organs of metastasis in HCC are lung, brain, adrenal glands. Though microinvasion in hepatic veins are common in large HCC but BCS is found in less than 1% of all HCC patients.[5] There are diverse manifestations of the HCC with invasion to the main vessels starting from asymptomatic to abdominal pain, anorexia, leg swelling, dyspnea and syncope. HCC usually presents as a decompensation in a known case of cirrhosis; however, HCC can also be the first presentation without previous history of chronic liver disease. HCC presenting

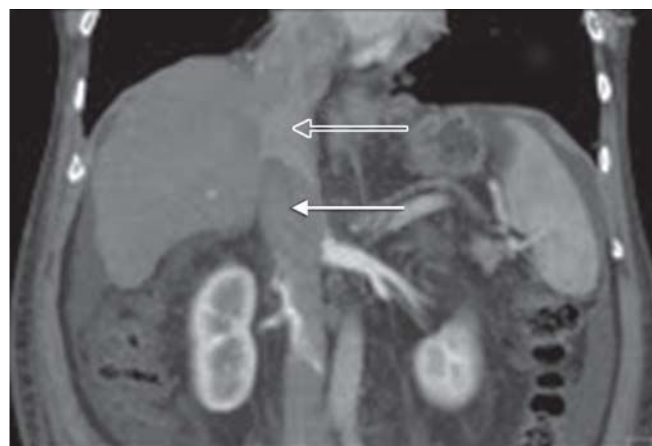

Fig. 1: HCC extensively involving the right lobe of liver with dual thrombus in the IVC, the open arrow shows the tumors invasion whereas the solid arrow denotes the bland thrombus

with extensive disease with metastasis to distant organ does not merit curative treatment and such patients should be offered palliative treatment.

Our patient presented with many interesting findings that include: First time presentation with HCC, extensive involvement of IVC at first presentation, and IVC with the involvement of dual thrombus, tumor and bland thrombus, in the supra- and intrahepatic IVC.

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