Hepatitis C Virus, Splenic Vein Thrombosis, and Lymphoma

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An 85-year-old man suffering from compensated liver cirrhosis due to hepatitis C virus (HCV) infection visited our hospital monthly. In 2004, splenic vein thrombosis was detected in a routine checkup for hepatocellular carcinoma by abdominal ultrasonography. He was asymptomatic and afebrile. Physical examination revealed only mild hepatomegaly. Laboratory tests showed decreased platelet count and serum albumin and elevated alanine aminotransferase, all of which had unchanged for several years. A contrast-enhanced abdominal computed tomography (CT) scan documented a filling defect in the splenic vein originating from the splenic hilum (panel A). Based on a diagnosis of splenic vein thrombosis, warfarin administration was started following systemic heparin infusion to maintain a PT-INR of approximately 2.0.

Unfortunately, in abdominal CT scans one month later, the thrombus had further extended to the portal vein and a new hypovascular tumor was detected at the splenic hilum (panel B). Considering the possibility of primary neoplasm of vascular origin such as hemangioendothelioma, we performed splenectomy, distal pancreatectomy, and thrombectomy. Macroscopically, the thrombus arose from whitish tumor in the splenic hilum. Histological examination revealed infiltration of monotonous mononuclear cells in the splenic vein, which were positive for CD20 (panel C). Thus, the revised diagnosis of diffuse large B-cell lymphoma was made. Although systemic chemotherapy was begun

soon after, the patient succumbed to pneumonia.

HCV is known to possess lymphomagenesis (1-3). In this case, the infrequency of intravascular involvement and lack of typical clinical features delayed the diagnosis of lymphoma. In HCV-infected patients presenting with idiopathic splenic vein thrombosis, the possibility of lymphoma should be considered.

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Figure Legend

(**A**) Contrast-enhanced abdominal CT scan reveals splenic vein thrombosis (arrows). Abnormal mass or lymphadenopathy was not found.

(**B**) Contrast-enhanced abdominal CT scan one month after initiation of warfarization demonstrates extension of thrombus to the portal vein (arrow) and new appearance of a hypovascular splenic mass.

(**C**) Histological findings demonstrate monotonous mononuclear cells filling the splenic vein (left, hematoxylin and eosin staining, x400). These cells were positive for CD20 (right, x400).