

Letters to the Editor

Use of abdominal ultrasound in the diagnosis of hepatic sinusoidal obstruction syndrome (SOS) in a patient receiving a hematopoietic-cell transplant

Key words: Sinusoidal obstruction syndrome. Abdominal doppler ultrasound. Hematopoietic-cell transplant.

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Dear Editor,

We report the case of a 47-year-old male with multiple myeloma who had received three previous hematopoietic cell trans-

plants (HCT). Due to disease recurrence, a new HCT was performed after an appropriate conditioning therapy. Two days later he presented with ascites, jaundice and hepatomegaly. The ultrasound findings were hepatosplenomegaly and moderate ascites. Doppler examination showed signs of hepatic congestion with a slower portal flow, increased resistance in the hepatic artery (Fig. 1) and decreased liver compliance with a single-phase wave of the suprahepatic veins. The diagnosis was confirmed by a transjugular liver biopsy that showed extravasation of red blood cells, edema and subendothelial fibrosis in the centrilobular veins. Treatment with defibrotide was initiated and the patient improved on a clinical and analytical level. Hepatic vascularization and perfusion also improved, the portal vein exhibited a normal diameter, and velocity and flow and the hepatic artery had a rate and resistance index without alterations.

Discussion

Sinusoidal obstruction syndrome (SOS) is an uncommon form of portal hypertension that occurs in HCT recipients who receive

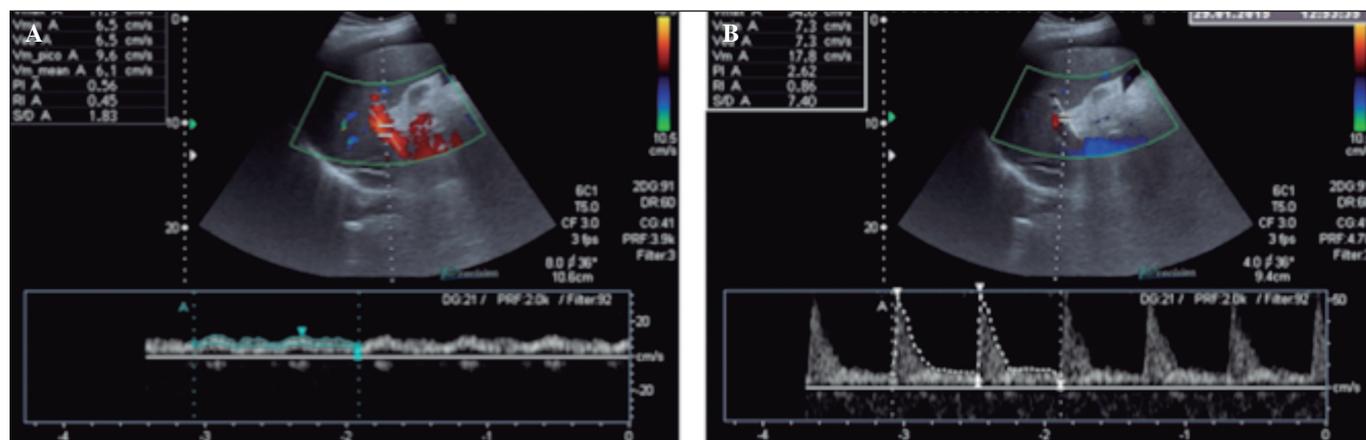


Fig. 1. Doppler ultrasound. A. Hepatic congestion with a slower portal flow (peak velocity 9.6 cm/s). B. Increased resistance in the hepatic artery (resistance index 0.86).

intense conditioning treatments (1). The diagnosis is clinical and it is established using the modified Seattle criteria (2). Histological confirmation is usually not needed (3), although it may be necessary in order to exclude other entities such as graft *versus* host disease or pharmacological toxicity. Doppler ultrasound revealed hepatic congestion (4). Although non-specific, in an adequate clinical and epidemiological context it may aid in the diagnosis of SOS. This disease has a mortality rate that reaches 90% in severe cases. Defibrotide is the only treatment (5) thus, given the high morbidity and mortality, prevention becomes a priority.

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