Poor-outcome cellulitis in a cirrhotic patient

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INTRODUCTION

The subject was a 48-year-old male patient. He complained of pain and swelling in the left leg. He had suffered in the past from a severe alithiasic pancreatitis and left hydrocele, which required surgery. The patient reported moderate alcohol consumption. About a year before the present hospitalization, as a result of an episode of jaundice and ascites, he was diagnosed with cirrhosis associated with alcohol consumption and hepatitis B virus, with portal hypertension without esophageal or gastric varices.

Initially, as diagnosed with cellulitis in the lower left limb, a treatment with broad-spectrum antibiotics was started, with a poor clinical response. Edema also developed at the root of the limb, which proved to be resistant to diuretic treatment. Three Doppler ultrasonograms were performed to rule out deep vein thrombosis at this level.

Because symptoms persisted, an abdominal and pelvic CT-angiogram with intravenous contrast was decided. This displayed the presence of an important collateral circulation with communication between the left portal vein, via the umbilical and lower epigastric veins, and a markedly dilated left femoral vein. Lately, an abdominal Doppler ultrasonogram was performed, which demonstrated the existence of caudally directed blood flow from the lower epigastric to the left femoral vein. Due to these findings a multiplanar 3D reconstruction was performed, which showed the whole shunt (Figs. 1, 2 and 3).

In summary, we report the case of a patient in whom an abnormal collateral circulation was established between the left portal venous system and the left femoral vein, which sent venous flow in the caudal direction and interfered with the venous return from the left lower limb. The result of this shunt was the formation of persistent edema and cellulitis resistant to medical treatment.
Once the diagnosis was made, and due to the poor outcome, the interventionist radiology team decided to implant a few metallic coils between the lower epigastric vein and the left femoral vein with the purpose of closing this abnormal communication, and of achieving adequate venous return. However, while waiting to be operated on, the patient died from encephalopathy and hepatorenal syndrome.

**DISCUSSION**

In portal hypertension, a considerable part of the portal blood flow cannot reach the liver and, consequently, it is deviated to the systemic circulation through a wide network of collaterals. These portosystemic collaterals are formed by dilation of pre-existing communications, and normally are closed due to increased hydrostatic pressure in the portal area. We do not know whether other factors, including active angiogenesis, can contribute to the development of this collateral circulation (1). The case we are reporting is interesting because it shows the presence of collateral circulation communicating the portal system with the left femoral vein via a prominent, high-flow venous system, which, until now, has never been described in the medical literature.

The use of a multidetector linear CT port with three-dimensional reconstruction has likely become the technique of choice to recognize the presence of collateral circulation in patients with cirrhosis and portal hypertension (2).

Finally, we would like to point out that embolization of abnormal veins by implantation of metallic coils is a reliable alternative to surgery (3).

**REFERENCES**