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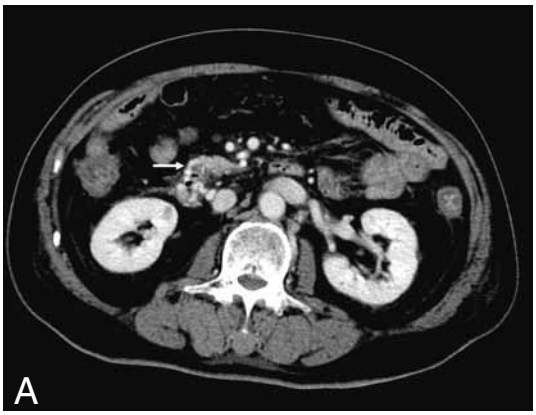
IMAGES IN CLINICAL RADIOLOGY



Duodenal varices

L. Yi-Lan, S. Wen-Ko, L. Yu-Peng[1]

A 76-year-old man had a history of liver cirrhosis secondary to chronic hepatitis B infection. A hepatoma had also been noted 2 years previously. This time, he presented initially at the emergency department because of dysuria and fever for 2 days and tarry stool since the afternoon. The initial upper gastrointestinal endoscopy revealed esophageal varices, gastric ulcer, and duodenitis that was not actively bleeding. Proton pump inhibitors were prescribed. Unfortunately, massive blood stools were noted 3 days later. Emergency esophagogastroscopy and colonoscopy were performed, but no active bleeder was detected. Contrast-enhanced abdominal computed tomography (CT) showed duodenal varices in the second and third portions of the duodenum (Fig. A). The feeding vein of the varices was the pancreaticoduodenal vein originating in the superior mesenteric vein, while the right testicular vein was the draining vein (Fig. B). Owing to the persistent massive bleeding, surgical variceal ligation was performed, following which the patient had no further bleeding episodes.

Comment

Hematemesis and melena are common presentations in patients with portal hypertension. However, bleeding from a duodenal varix is extremely rarer than that from esophageal or gastric varices, but is often massive and life-threatening.

The etiology of duodenal varices can be classified into intrahepatic (e.g., in cirrhosis) or extrahepatic (e. g., in portal, splenic, or superior mesenteric vein thrombosis). Liver cirrhosis with portal hypertension remains the most common cause of duodenal variceal bleeding. Most of the duodenal varices are located in the duodenal bulb, but varices in the second and third portions of the duodenum are also seen. It may be the bleeder when neither upper nor lower gastrointestinal endoscopy reveals a bleeding site in a patient with portal hypertension and gastrointestinal hemorrhage.

The blood flow in duodenal varices is frequently high and therefore, the resulting bleeding is profuse, with a high mortality rate of up to 40%. Endoscopic variceal ligation and endoscopic injection sclerotherapy are widely accepted primary therapies for esophageal variceal bleeding, but recurrence and rebleeding are not uncommon. Interventional radiological procedures such as balloon-occluded retrograde transvenous obliteration (BRTO) and transjugular intrahepatic portosystmeic shunt (TIPSS) seem to be more effective in selected cases. Surgical variceal ligation or shunt placement may be necessary in cases of intractable hemorrhage.

The common feeding vein is the pancreaticoduodenal vein originating from the portal vein or superior mesenteric vein. The right gonadal vein and right superior capsular vein function as the draining veins. Multislice helical CT is a powerful diagnostic modality for evaluating the overall status of portosystemic vessels. The axial source and multiplanar reformation images can provide detail anatomy and help in treatment planning.

1. Department of Radiology, Hsinchu Mackay Memorial Hospital, Taiwan, R.O.C.