

# An Uncommon and Challenging Case of Duodenal Variceal Bleeding

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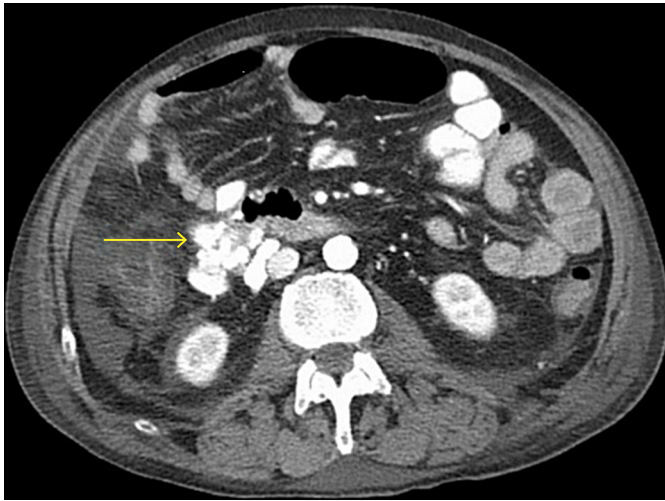
## CASE REPORT

A 59-year-old man with a history of alcohol-induced cirrhosis presented to an outside institution with complaints of hematochezia and hematemesis. Notable laboratory results included hemoglobin 2.8 g/dL, international normalized ratio 1.39, albumin 1.7 g/dL, and total bilirubin 2.2 mg/dL. Esophagogastroduodenoscopy at the outside hospital did not reveal a source of the bleed. He was transferred to our institution for further management. Esophagogastroduodenoscopy was repeated, which showed blood oozing from large duodenal varices in the second part of the duodenum (Figure 1). Abdominal computed tomography showed large periduodenal varices during the arterial phase imaging (Figure 2). Patient emergently underwent transjugular intrahepatic portosystemic shunt (TIPS) placement. The appearance of the periduodenal varices before and after TIPS placement is shown in Figure 3. Patient improved over the next few days with resolution of his acute gastrointestinal bleed.



Figure 1. Endoscopic appearance of the bleeding duodenal varices.

Duodenal varices are an uncommon but devastating cause of upper gastrointestinal bleeding and account for approximately 0.4% of all cases. The duodenal varix is composed of an afferent vessel arising from the pancreaticoduodenal veins or superior mesenteric vein and an efferent vessel that is formed by one of the many retroperitoneal veins that drain into the inferior vena cava.<sup>1</sup> The duodenal bulb is the most common site for the presence of duodenal varices, followed by the second portion of the duodenum. In addition, 25% of patients with duodenal varices also have esophageal varices; however, only 2% have both esophageal and gastric varices.<sup>2</sup> Approximately two-thirds of patients with duodenal varices have cirrhosis; the rest, however, have an extrahepatic cause for portal hypertension such as portal vein thrombosis or obstruction of splenic vein or inferior vena cava.<sup>3</sup> While duodenal varices are within reach of standard endoscopy, varices may be missed if the duodenal folds not carefully examined as was the case in our patient. Due to the rarity of duodenal varices, no randomized trials have compared the efficacy of one treatment modality over the other. Vidal et al evaluated the safety and efficacy of TIPS in 24 patients with bleeding ectopic varices, out of which 5 had duodenal varices.<sup>4</sup> Transjugular intrahepatic portosystemic shunt placement controlled bleeding in 100% of the patients by effectively decompressing the afferent vessels. Complications included shunt dysfunction (51% at 1 year), rebleeding (23% at 1



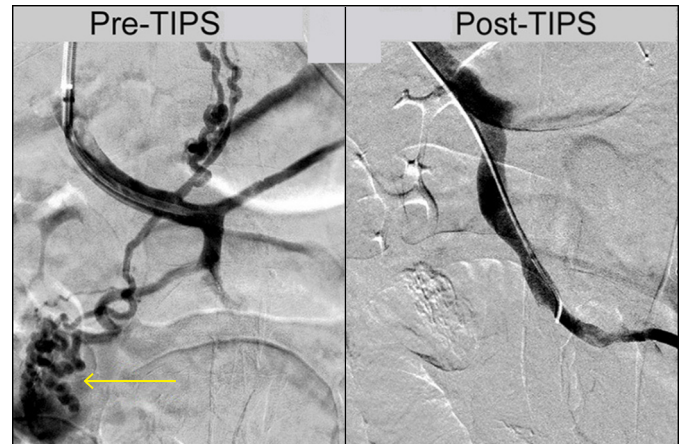
**Figure 2.** Computed tomography showing collection of periduodenal varices (arrow) as evidenced by accumulation of IV contrast.

year), and mild hepatic encephalopathy (29% of patients).<sup>4</sup> It should be noted that, as TIPS placement does not correct the underlying liver dysfunction, it is only a bridge to liver transplantation.

## DISCLOSURES

M. Naseemuddin wrote the manuscript and is the article guarantor. M. Shoreibah wrote and revised the manuscript. E. Underwood provided images. S. Peter wrote and revised the manuscript and provided images.

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**Figure 3.** Appearance of the varices prior to TIPS (arrow) with subsequent resolution after successful TIPS placement.

Informed consent was obtained for this case report.

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