# Endoscopic Coiling of Mesenteric Varices Causing Stomal Bleeding Caused by Extensive Portal Vein and Superior Mesenteric Thrombus

Rebecca M. Haug, M.D.,[1] Mark Radlinski, M.D.,[1] Terri Rodee, R.N., B.S.N.,[1] Vanessa M. Shami, M.D.[1]

1. Division of Gastroenterology and Hepatology, Department of Medicine, University of Virginia, Charlottesville, VA, USA

## INTRODUCTION

- Ectopic varices are collateral vessels located outside the gastro-esophageal area.
- Small bowel varices, while a relatively uncommon result of portal hypertension can be a life-threatening cause of bleeding.
- We present a case of refractory stomal bleeding secondary to mesenteric varices, treated with endoscopic ultrasound (EUS) guided coiling.

## CASE BACKGROUND

- A 54-year-old male presented with history of ulcerative colitis status post proctocolectomy and ileostomy, primary sclerosing cholangitis (PSC), and auto-immune hepatitis (AIH) overlap syndrome treated with a deceased donor liver transplant in 2019.
- This was further complicated by portal hypertension secondary to portal vein and superior mesenteric vein thrombus.
- The patient presented with refractory stomal bleeding at this ileostomy site requiring multiple blood transfusions (Figure 1).
- An interventional radiology (IR) approach from the portal system was not feasible given thrombosis in the portal vein and superior mesenteric vein, and percutaneous IR approach was also felt to be suboptimal given the depth of the peri-stomal varices.
- Thus, the patient underwent ileoscopy with EUS guided coiling of the terminal/culprit branches of the mesenteric varices.

## CASE IMAGES

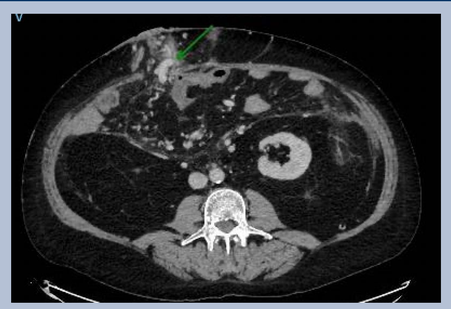

**Figure 1:** Prominent mesenteric varices extending into the area of the stoma noted on CT imaging

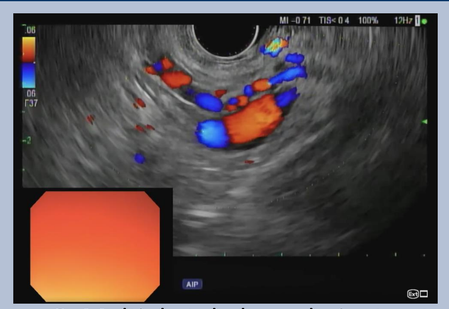

**Figure 2:** Multiple tubal anechoic structures consistent with varices were noted with flow seen on doppler examination.

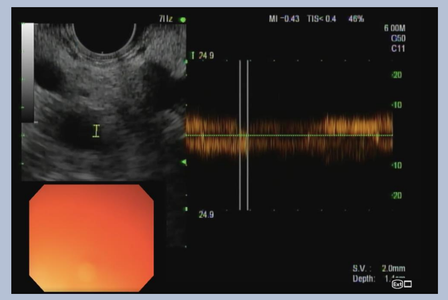

**Figure 3**: Varices were confirmed on pulse wave doppler

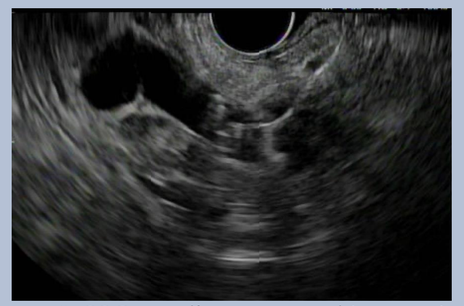

**Figure 4:** 22G needle punctured into varix and embolization coils inserted

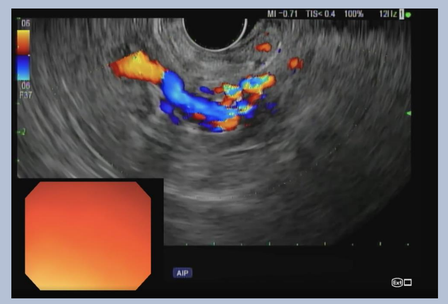

**Figure 5:** Reduced doppler flow post-embolization

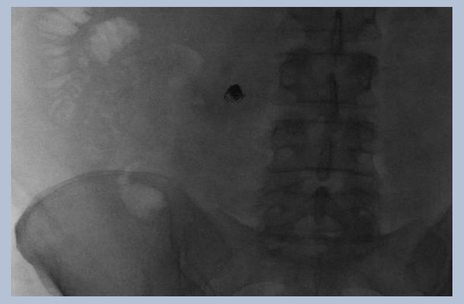

**Figure 6:** Status post successful endoscopic coil embolization on post-procedure X-Ray

## CASE DESCRIPTION

- The linear echoendoscope was introduced through the ileostomy and advanced approximately 5-10cm.
- Multiple tubal anechoic structures consistent with varices were noted with flow seen on doppler examination (Figure 2.) This was confirmed on pulse wave doppler (Figure 3.) A large feeding variceal vein towards the patient's left side was punctured with a 22G needle (Figure 4.) Saline was injected and it was visualized on EUS to confirm location.
- Next, embolization coils (8mm x 2, 10mm x1) were inserted for varix eradication. Reduced flow downstream of the site was confirmed on doppler exam after embolization (Figure 5.)
- Brief fluoroscopic images showed appropriate placement of coils in the patients right lower quadrant, without any migration. There was no significant flow toward the lumen on EUS after coiling (Figure 6.)
- Since this procedure, the patient's stomal bleeding resolved.

## DISCUSSION

- Small bowel varices in the setting of significant portal hypertension are a rare but clinically significant cause of gastrointestinal bleeding.
- EUS-guided interventions such as coil embolization can be an effective treatment modality, especially in patients who are poor interventional radiology candidates.