Non-Cirrhotic Parastomal Variceal Bleed Controlled with TIPS

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Introduction

- **Transcutaneous intrahepatic portosystemic shunt (TIPS)**: procedure performed for treatment of refractory portal hypertension by creating a new connection between portal and hepatic veins
- The two indications with the greatest efficacy are recurrent acute esophageal variceal bleeding and refractory ascites
- TIPS is noted in the literature to be one of the treatments for **parastomal varices (PSV)**
- PSV's present in patients with stomas who may or may not have pre-existing portal hypertension
- We present a case of a non-cirrhotic patient who presented with refractory bleeding from PSV's and was successfully treated with TIPS.

Patient Presentation

- A 59-year-old male with a history of spinal tumor status post resection complicated by T4 paraplegia with subsequent colostomy placement, prior episodes of GI bleeds, obesity, and untreated hepatitis C presented in **hemorrhagic shock**
- Patient claims he filled ~ 5 colostomy bags with bloody output
- Associated lightheadedness, weakness, chest pain, palpitations, nausea, and abdominal pain
- CTA A/P no evidence of active bleeding; presence of peri-colonic varices around the colostomy site draining into the portal venous system via the splenic vein, and normal portal vasculature

Images

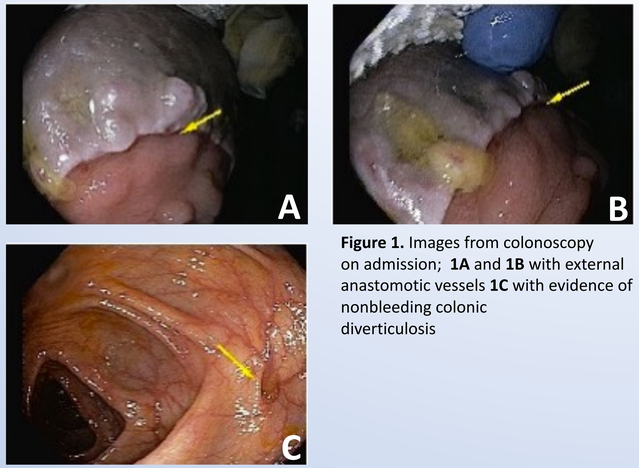

Figure 1. Images from colonoscopy on admission; **1A** and **1B** with external anastomotic vessels **1C** with evidence of nonbleeding colonic diverticulosis

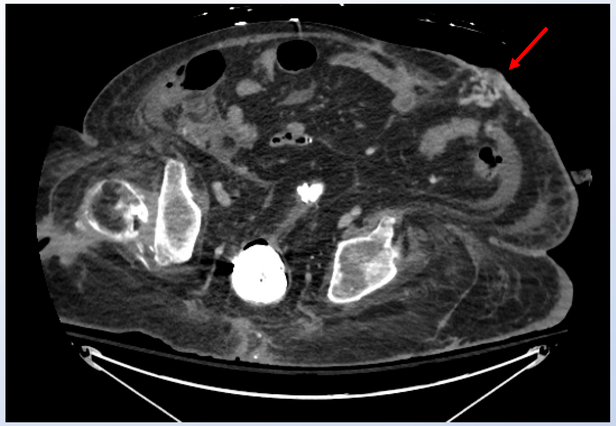

Figure 2. CTA showing presence of dilated parastomal vessels

Clinical Course

- Patient with active bleeding in ED and transfused 3 units packed RBC's with improvement in his hemodynamics but less than appropriate response (**Hgb: 6.3 to 8.5**)
- Admitted to ICU for management of acute GI bleed and shock
- On day two of admission, the patient had a massive bleed and required multiple blood products
- Endoscopies showed no evidence of esophageal varices however colonoscopy showed non-bleeding diverticulosis and external bleeding anastomotic vessels
- There were adequate views of the peristomal and stomal lumen without visualization of bleeding stigmata or luminal varices
- IR successfully performed TIPS followed by sclerotherapy and variceal embolization. Hepatic vein pressure gradient was measured at **10 mmHg** pre-TIPS, and **6 mmHg** post-TIPS
- Liver biopsy revealed chronic hepatitis with moderate steatosis, and bridging fibrosis with occasional regenerative nodules
- The patient was discharged a few days later and has had no recurrent bleeding

Discussion

Varices are a common complication of portal hypertension in patients with cirrhosis or any disease pathologies that cause collateral veins to form and enlarge between the portal and systemic systems. In this case report, the patient did have a history of untreated HCV, a concerning risk factor for cirrhosis, however portal pressures were on the higher limit of normal at **10mmHg.** In this patient, it is likely the slightly elevated portal pressure that predisposed him to developing varices however one must think about post-surgical anatomical changes. Post-surgical adhesions or scarring can also lead to PSV formation due to thrombosis of the mesentery or an obstruction due to adhesions or scarring[2,6]

Most commonly, varices will develop between the left gastric vein and esophageal veins, the rectal veins, and the paraumbilical veins. However, patients with stomas and portal hypertension, collateral venous channels to the anterior abdominal wall can develop, forming parastomal varices. Usually, the afferent portal venous feeders are supplied by the superior mesenteric vein[6]. In this patient, CTA noted that the parastomal varices ultimately drained into the portal venous system through the splenic vein (Figure 2).

Unfortunately for these patients, parastomal varices frequently go undiagnosed until a major GI bleed occurs. About **27-50%** of patients with portal hypertension and a stoma develop parastomal varices[3], and of those 3-5% will develop significant bleeding leading to increased mortality[5]. In patients with stomas, it is important to make both patient and physician aware of complications, including parastomal variceal bleeding. In this case report, the patient had previous episodes of GI bleeding with endoscopic evaluation however no intervention. Regardless of a diagnosis of cirrhosis in a patient like this, variceal bleeding should be on the differential.

Contact

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