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Lower GI Bleeding in a Patient with Cirrhosis and History of Colorectal Cancer

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Question: A 65 year old man with history of colorectal cancer treated with left hemicolectomy and transverse colon colostomy 6 years ago was admitted to the hospital with bloody colostomy output. His other medical history was notable for type II diabetes, obesity and heavy alcohol use. He has had intermittent bloody colostomy output for the past three years. It was bright red blood that would fill his ostomy bag. This has been treated at other hospitals with periodic admission for blood transfusion and also with local cautery. A stomal revision was planned but was not performed because of unknown reasons. On admission he was hemodynamically stable, and his blood pressure was 190/100. Physical examination was unremarkable except for pallor, mild splenomegaly and colostomy. There were no stigmata of chronic liver disease. His labs included white blood cell count 2.7/mm^3, hemoglobin 9.7 g/dl, platelets 56,000/mm^3, normal electrolytes, urea nitrogen 12 mg/dl, creatinine 1.0 mg/dl, AST 30 IU/ml, ALT 18 IU/ml, alkaline phosphatase 55 IU/ml, total bilirubin 1.4 mg/dl, and International Normalized Ratio of prothrombin time 1.2. On the third day of admission, he had another episode of bright red blood that filled the colostomy bag associated with light-headedness and hypotension. His hemoglobin dropped to 7.6 g/dl. He responded well to resuscitation with 0.9% normal saline and 4 units of packed red blood cells. An EGD showed a normal esophagus and mild portal hypertensive gastropathy. The colonoscopy through his colostomy showed normal colon and terminal ileum. A CT-angiography was performed (Figure A) and the patient was referred to Interventional Radiology for further management.

What is the diagnosis?

Answers to the Clinical Challenges and Images in GI Question: Image #: Peri stomal varices secondary to portal hypertension

CT angiogram showed extensive porto-systemic venous collateral formation arising predominantly from large collaterals originating from the inferior mesenteric vein (IMV) near the portal splenic confluence and filling extensive stomal variceal formations

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surrounding the colostomy (Figure A). For treatment, he underwent percutaneous embolization involving portal venous angiograpy with selective cannulation of the IMV that was feeding the stomal varices (Figure B), followed by embolization of the stomal varices with alcohol and lipiodol sclerosant and coils (Figure C). The final transhepatic splenoportogram showed the occluded IMV and improved hepatopetal flow (Figure D). He was also started on nadolol. He did not have any further evidence of bleeding, and he was subsequently discharged from the hospital 2 days later.

In the setting of portal hypertension, esophageal and gastric varices cause the majority of bleeding complications. Ectopic varices develop at sites other than the esophagus or stomach, including vessels found in the small bowel, colon, rectum and stoma among other sites which drain into the portal venous system. Ectopic varices cause significant bleeding in a rare subset of patients and are often times more difficult to diagnose with mortality rates reaching 40% for missed bleeding ectopic varices.[1] Computed tomographic angiography is an effective diagnostic tool in localizing ectopic varices as the source of obscure bleeding. The ectopic varices including rectal and stomal varices, are reported to cause 1-5% of variceal bleeding episodes.[1] Local therapy for stomal varices is effective but recurrent bleeding is the rule, and sclerotherapy is not advisable as it can cause significant injury to the stoma.[1] TIPS, surgical shunts and liver transplantation are considered the established definitive therapies for bleeding ectopic varices. Recently, a number of interventional radiologic procedures such as balloon occluded retrograde transvenous embolization and percutaneous embolization have been described as effective treatment, but establishing the duration of the effect still requires further evaluation.[2,3]

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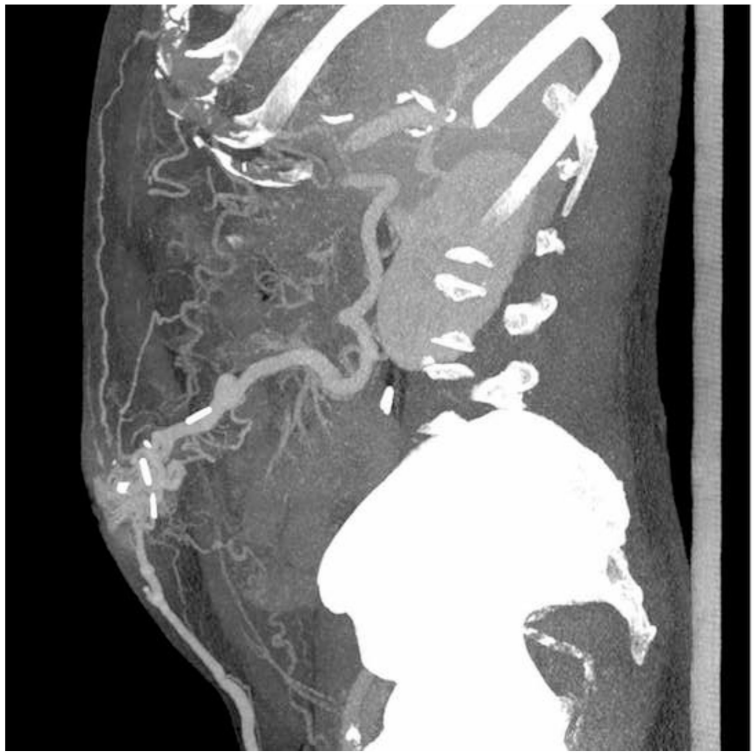

Figure A.

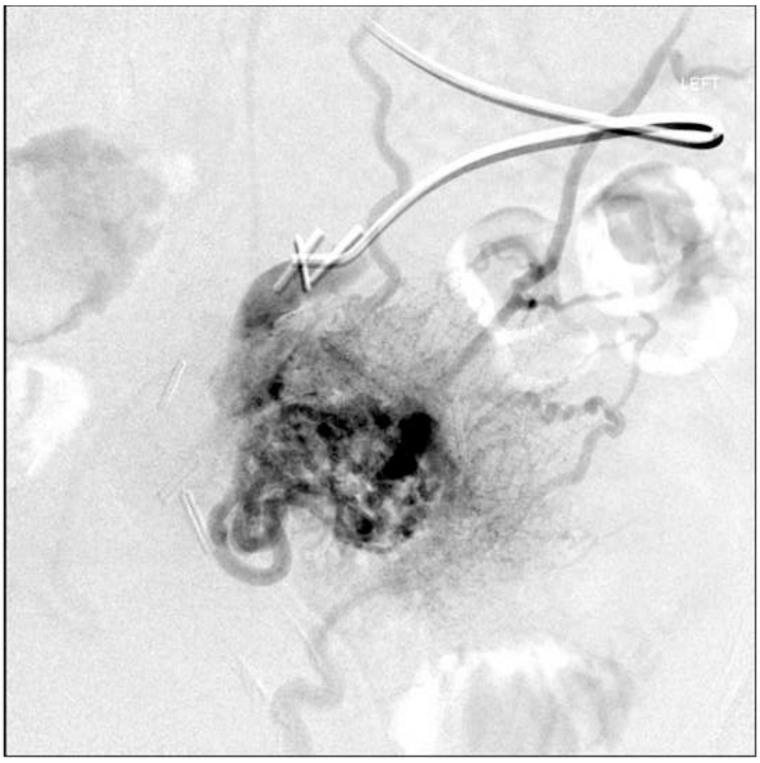

Figure B.

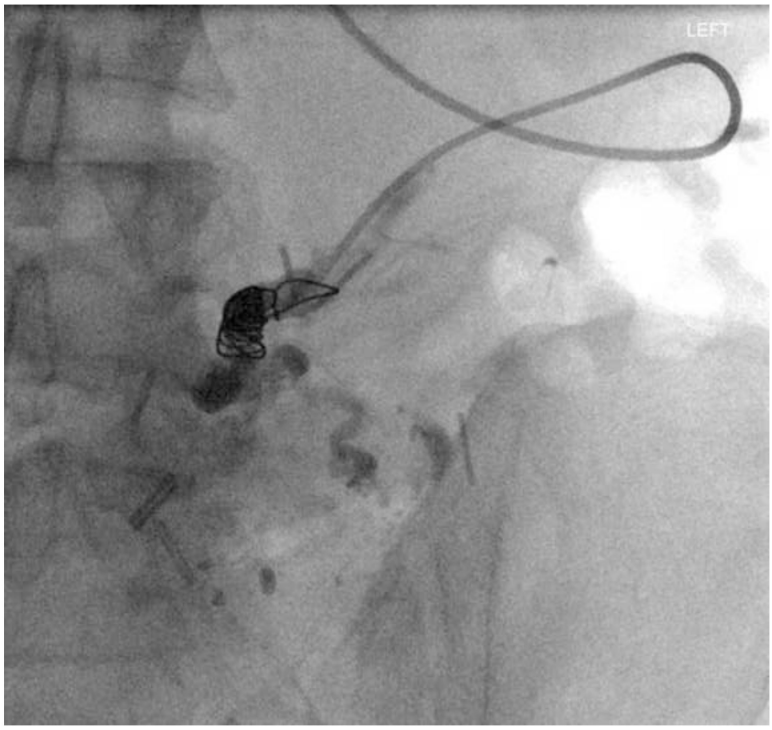

Figure C.

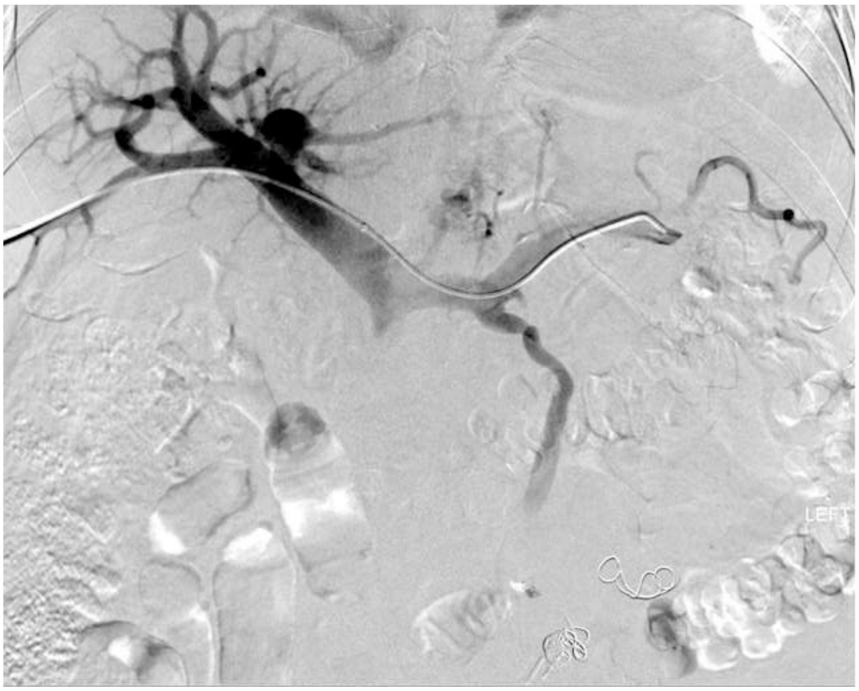

Figure D.