Small Bowel Varices Without Esophago-gastric Varices: A Cause of Massive Gastrointestinal Hemorrhage

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The following case demonstrates small bowel varices without esophago-gastric varices as an unusual cause of gastrointestinal bleeding in a patient with chronic liver disease.

The patient is a 47 year-old man who presented to the hospital with several days of back pain and weakness. The work-up of his symptoms revealed a L3-L4 phlegmon on MRI of the lumbar spine. A biopsy of this lesion yielded focal nonviable bone.

The day after his biopsy, the patient was noted to have two episodes of melena followed by bright blood mixed with stool. The patient complained of some light-headedness.

His medical history included cirrhosis from alcohol, hepatitis C and hypertension. He drank six to ten cans of beers a day and smoked half a pack of cigarettes a day. He quit intravenous heroin ten years prior to admission. The patient noted no allergies and was maintained on lactulose, furosemide, and spironolactone at home. Vancomycin was started in the hospital.

On examination, the patient's temperature was 97.2°F orally, pulse was 106 beats per minute, respirations were 16 breaths per minute, and blood pressure was 140/78 mmHg. The patient appeared comfortable. He had pale conjunctivae and scleral icterus, heart was tachycardic, lungs were clear, abdomen was mildly distended and non-tender with normal bowel sounds. There was no abdominal ascites and there was trace pitting edema. The rectal exam revealed bright red blood. The patient was promptly transferred to the intensive care unit.

Laboratory values revealed that the hemoglobin decreased from 8.8g/dL to 4.4g/dL. The patient's platelets were 93,000/mm³. The chemistry panel was normal and the liver function tests showed protein 2.9g/dL, albumin 2.0g/dL, total bilirubin 2.7mg/dL, direct bilirubin 1.4mg/dL, aspartate aminotransferase 89U/liter, alanine aminotransferase 38U/liter, and alkaline phosphatase 34U/liter. The prothrombin time was 20.1 seconds, partial thromboplastin time was 38 seconds, and the international normalization ratio was 1.56.

A prompt bedside nasogastric tube lavage revealed bilious aspirate. The patient was transfused with four units of packed red blood cells (PRBCs) and eight units of fresh frozen plasma without a change in his hemoglobin. Bedside upper endoscopy revealed no esophageal varices

Figure 1

or other sources of bleeding. He was transfused with an additional four units of PRBCs with an increase in hemoglobin to 7.6g/dL. Although hemodynamically stable, he continued have bright red blood per rectum and a decision was made to proceed with an angiogram.

The angiogram revealed no site of arterial extravasation during superior mesenteric and celiac arteriography. Several clusters of varices within the small bowel were deemed to be the bleeding sites. (Figure 1)

Emergent transjugular intrahepatic portosystemic shunt (TIPS) was placed to decompress the small bowel varices. This produced a reduction in the mean portosystemic gradient from 33 to 9mmHg. The patient received an additional seven units of PRBCs during the procedure.

Over the next two days, the patient continued to have melena and required an additional six units of PRBCs. Patient's bleeding subsequently ceased and he remained stable for seven days after the TIPS procedure. Unfortunately, on the eighth day after the TIPS procedure, he developed *Staphylococcus aureus* sepsis leading to hemodynamic compromise and death.

This case demonstrates that in patients with cirrhosis and gastrointestinal hemorrhage, non-traditional bleeding sources, such as small bowel varices, should be considered in the absence of esophago-gastric varices.