Splenic Artery Pseudoaneurysm as a Cause of Massive GI Bleeding

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Introduction

- Splenic Artery Pseudoaneurysm (SAP) is a rare cause of gastrointestinal bleeding with fewer than 200 cases reported in the literature.[1]
- Common etiologies include acute and chronic pancreatitis, abdominal trauma, post-surgical complication and peptic ulcer disease.[1]

Case Description

- 68-year-old man presented with 3 days of melena, dizziness and near syncope without abdominal pain, nausea, hematochezia, history of NSAID or alcohol use. Exam was significant for tachycardia, pallor and soft non-distended abdomen.
- Social history notable for living in Zambia for several years prior to moving back to the US 3 years ago.
- Medical history included at least one prior episode of acute pancreatitis.

- Initial lab work-up was notable for hemoglobin of 7, hematocrit of 21 and a positive stool Guaiac test.
- EGD showed LA grade B esophagitis but did not explain the patient's degree of anemia.
- On day 2 of admission, worsening hemodynamic instability and bright red blood per rectum noted.
- CT revealing massive (5.7cm x 5.6cm) pseudoaneurysm of the splenic artery with peripheral thrombus formation and concern for fistulization to the stomach.
- Underwent proximal/mid-splenic artery coil embolization with subsequent resolution of symptoms.
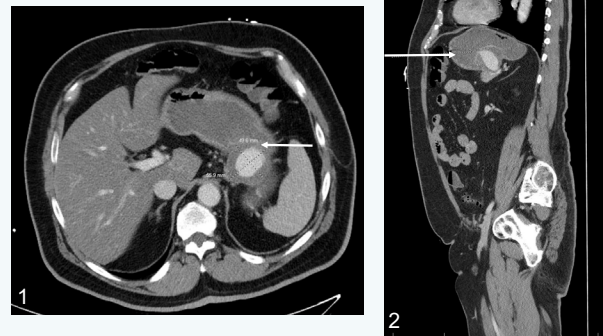- Referred for outpatient EGD and splenectomy on discharge.

Figure 1 and 2: CT of abdomen obtained on day 2 of admission (axial and sagittal views). 5.7 cm x 5.6 cm pseudoaneurysm of the splenic artery with possible fistulization into the stomach
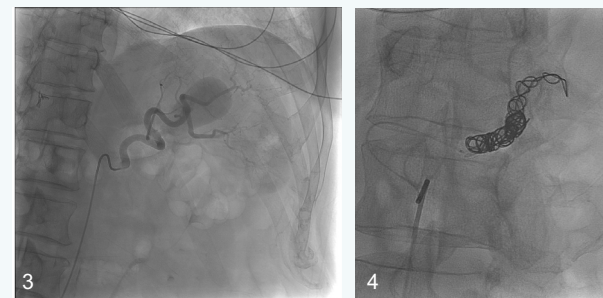

Figure 3: Angiography prior to coiling. Contrast dye injected reveals splenic arterial vasculature and pseudoaneurysm

Figure 4 : Angiography after transcatheter coiling demonstrating coil in the proximal/mid-splenic artery
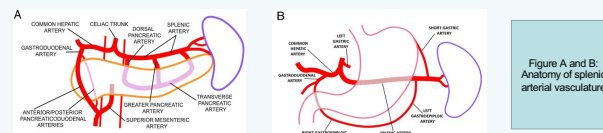

Figure A and B: Anatomy of splenic arterial vasculature

Discussion

- While SAP remains an uncommon cause of gastrointestinal bleeding, it is frequently associated with hemodynamic instability[2] and should remain on the differential in patients with a history of acute or chronic pancreatitis.
- Presentation can vary from asymptomatic to complete hemodynamic collapse in some patients, secondary to bleeding into the retroperitoneum or the GI tract.
- The risk of rupture is as high as 37% with a mortality rate approaching 90% when untreated, irrespective of size.[3]
- In the case of pancreatitis, pancreatic enzymes are thought to cause a necrotizing arteritis with destruction of vessel wall architecture and fragmentation of elastic tissues.[4]
- CT Abdomen with IV contrast or CT angiography remains the preferred imaging modality for diagnosis.
- If clinical suspicion is high, abdominal angiography can be performed with possible subsequent transcatheter embolization for definitive management. If a patient is unstable or fails angioembolization, open surgical ligation of SAP should be performed.[5]
- Follow up after embolization of the splenic artery may include outpatient splenectomy as well as re-vaccination.[1]

Selected References

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