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Splenic Artery Pseudoaneurysm as a Rare Cause of UGIB

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BACKGROUND

- Upper Gastrointestinal bleeding (UGIB) is one of the most common causes of hospital admission in the United States.
- Common etiologies of UGIB include peptic ulcer disease, varices, erosive esophagitis, and less commonly malignancies.
- Splenic artery pseudoaneurysm (PSA) is an extremely rare cause of UGIB.
- Splenic artery PSA has been associated with chronic pancreatitis. It is typically asymptomatic or can present with left upper quadrant or epigastric abdominal pain.

HOSPITAL COURSE

- 57M with hypertension and alcohol use disorder complicated by an episode of alcohol induced pancreatitis in 2019 presented to the emergency room complaining of three days hematemesis, melanic stools, and left upper abdominal pain.
- He reports a long-standing history of alcohol use, consuming about 1 liter of vodka per day for eight years.
- Initial Vitals: Temp. 36.8, HR 118, BP 99/57, RR 28, SpO2 100% on RA
- Physical Exam: anxious, moderate distress, lethargic, tachypneic, tachycardic, dried blood around the mouth, non-icteric sclera, LUQ and epigastric tenderness, CIWA 10, Glasgow-Blatchford Score 16.
- Labs: WBC 10.6, Hgb 4.2, BUN/Cr 46/2.65, Lactic Acid 13, Stool occult +
- Initial management: 1L NS, 3 units pRBC, PPI, Octreotide, Intubation for airway protection, MICU admission.
- CT A/P C- (HD #1): blood in the antrum, 2.0 x 1.6 cm outpouching from the greater curvature of the stomach which was postulated to be a gastric diverticulum (Figure 1)
- EGD (HD #2): fresh blood in antrum and duodenum, no active bleeding, large adherent clot in the fundus.
- The patient continued to have melanic stools and required additional pRBC transfusions to compensate for a steadily declining Hgb (Chart).
- CT Angiogram of the Abdomen and Pelvis (HD #3): 1.5cm actively bleeding splenic artery PSA arising from the first divisional branch of the splenic artery communicating with the fundus of the stomach (Figures 2 and 3).
- Successful VIR Coil Embolization of the Splenic Artery PSA (HD #3). (Figures 4 and 5).
- After VIR embolization the patient's Hgb remained stable, he did not require any further pRBC transfusions. He was extubated, transferred from ICU to floors, and ultimately discharged home safely.

IMAGES

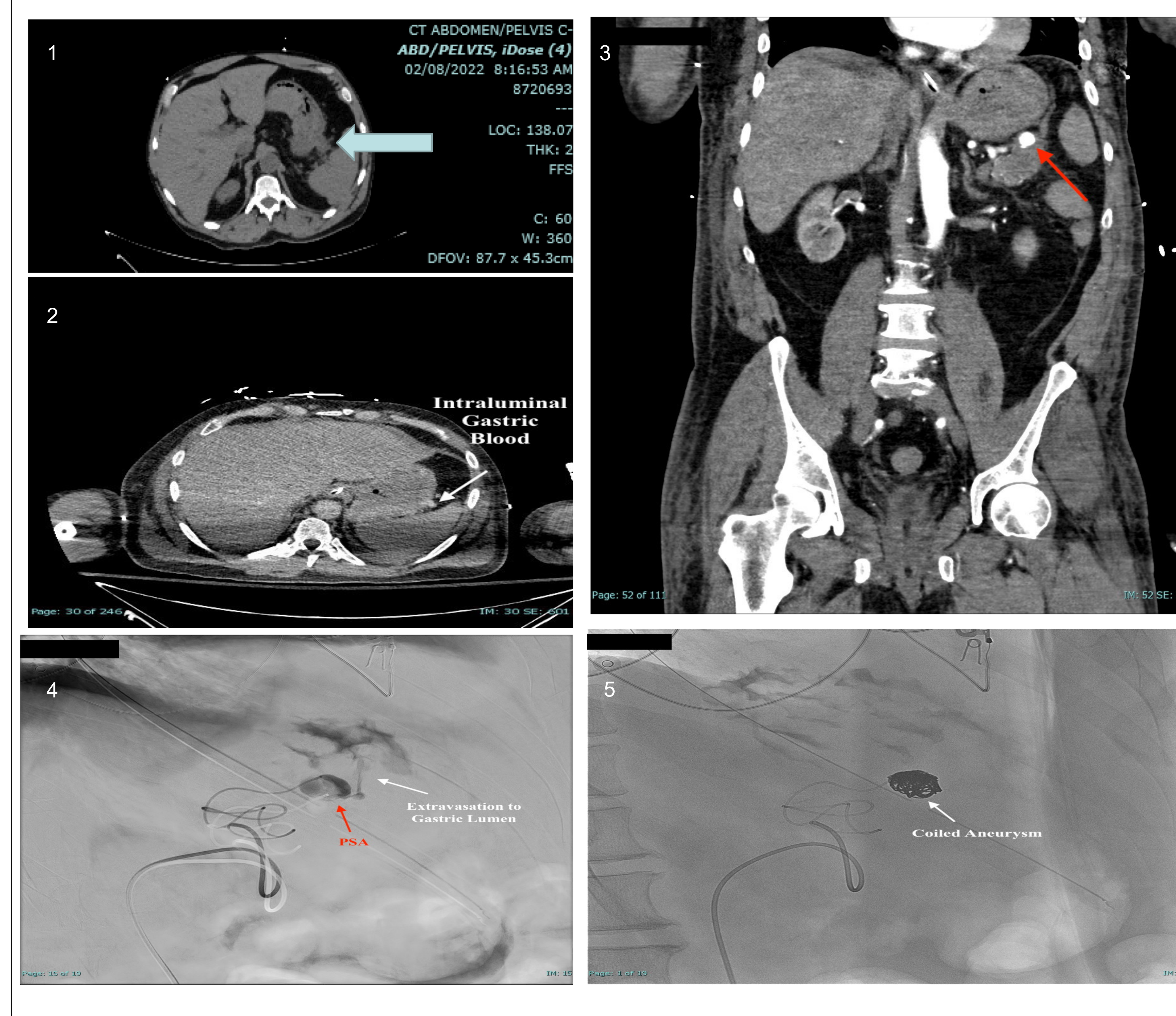


Figure 1: CT A/P C- demonstrating a 2.0 x 1.6 cm outpouching from the greater curvature of the stomach (blue arrow). Also depicted, mildly hyperdense material within the gastric antrum, which likely represents intraluminal blood, in the setting of gastro-intestinal bleeding.

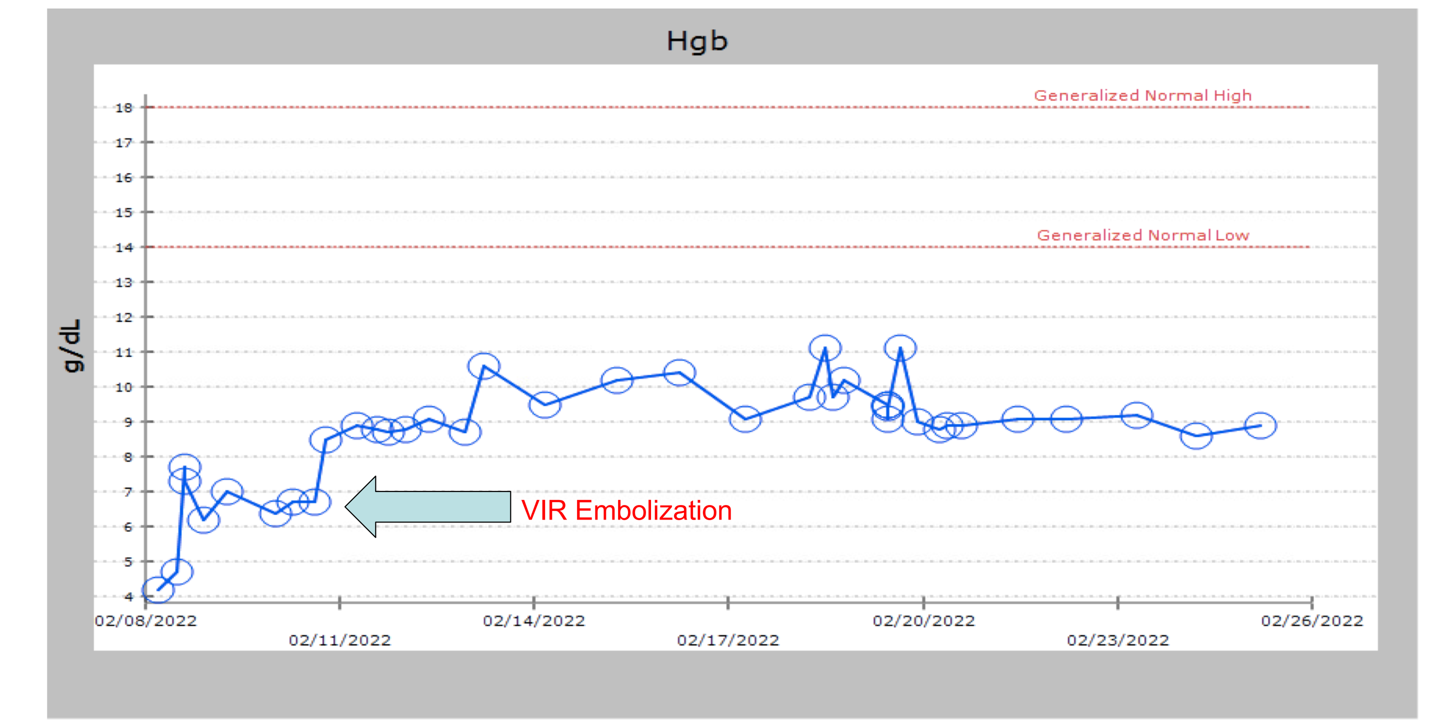
Figures 2 & 3: CT Angiography A/P depicting an **actively bleeding pseudoaneurysm** (red arrow) arising from a first divisional branch of the splenic artery which communicates with the fundus of the stomach, intraluminal gastric blood is seen (white arrow),

Figure 4: VIR-guided angiography showing a 16mm splenic artery pseudoaneurysm (red arrow) arising from the distal main splenic artery, with extravasation of contrast into the gastric lumen (white arrow).

Figure 5: Post-embolization angiography demonstrating complete occlusion of the splenic artery pseudoaneurysm using coil embolization (arrow).

Images Courtesy of Dr. Patrick Chiarolanzio, Diagnostic Radiology Dept. at Westchester Medical Center

Hemoglobin Tend



DISCUSSION

- This case demonstrates PSA as a rare cause of UGIB.
- Lesions are most commonly caused by chronic pancreatitis, pancreaticobiliary surgery, and trauma.
- This patient's PSA was likely secondary to his prior episode of alcoholic pancreatitis.
- Prompt diagnosis of PSA is essential given the high mortality rate associated with rupture.
- Clinicians should maintain a high index of suspicion for gastrointestinal PSA in patients with a history of pancreatitis who present with UGIB for whom no obvious source of bleeding can be identified on endoscopy.

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