AMSER Case of the Month
September 2025

47-year-old female with nausea and abdominal pain

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Patient Presentation

- 47-year-old female presenting with abdominal pain and nausea on 3/2/2025

- Patient has a history of Crohn Disease on azathioprine, seizure disorder, fibromyalgia, chronic pain with opioid dependence, biliary colic s/p cholecystectomy in 2019

- Fell down a flight of stairs 1-2 months prior to this admission

- Recently admitted 2/17-2/21 at an outside hospital with concerns of acute pancreatitis on CT

- 2/17/25 CT: showing peri-pancreatic fluid/edema suggestive of acute pancreatitis and multiple hypodense collections in the tail of the pancreas concerning for small pseudocysts

- 3/2/25 CT: progressive pancreatitis compared to 2/17 CT—walled-off pancreatic necrosis vs pseudocyst

- 3/6/25 CT: no clear evidence of infection in fluid collection and no adequate window for drainage

- 3/14/25 MRCP: incidental high signal intensity in T1 with no enhancement in post-contrast image, consistent with a pseudoaneurysm
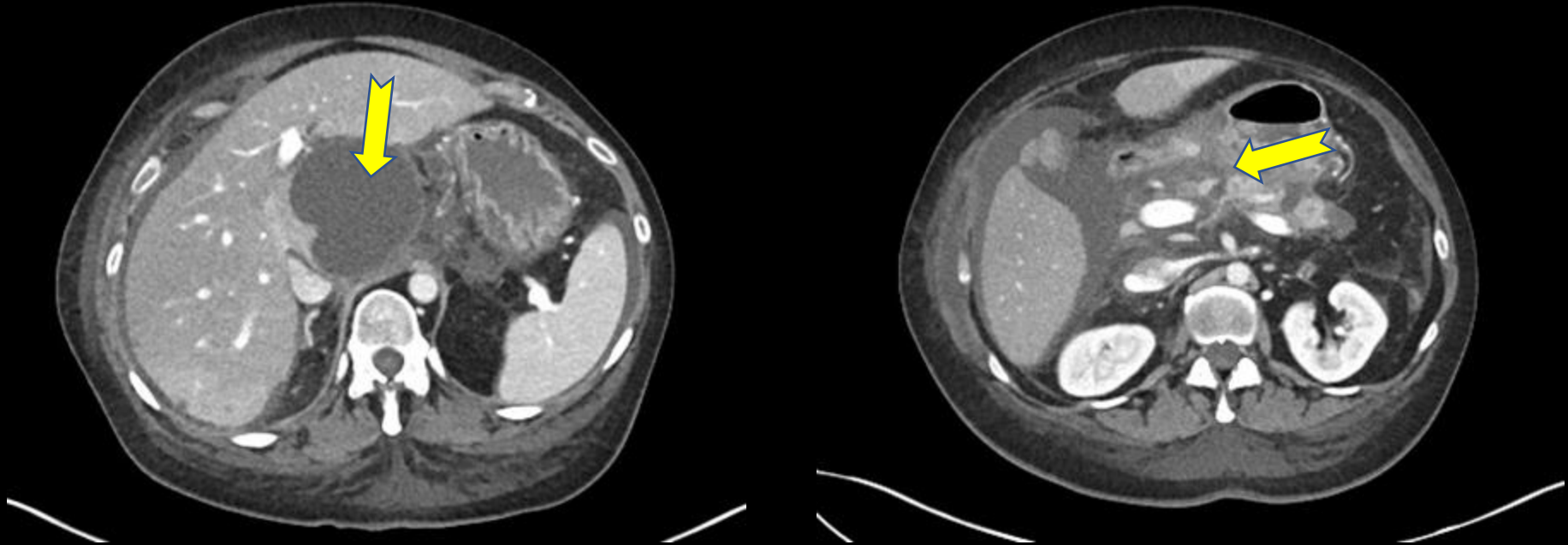
Patient Presentation
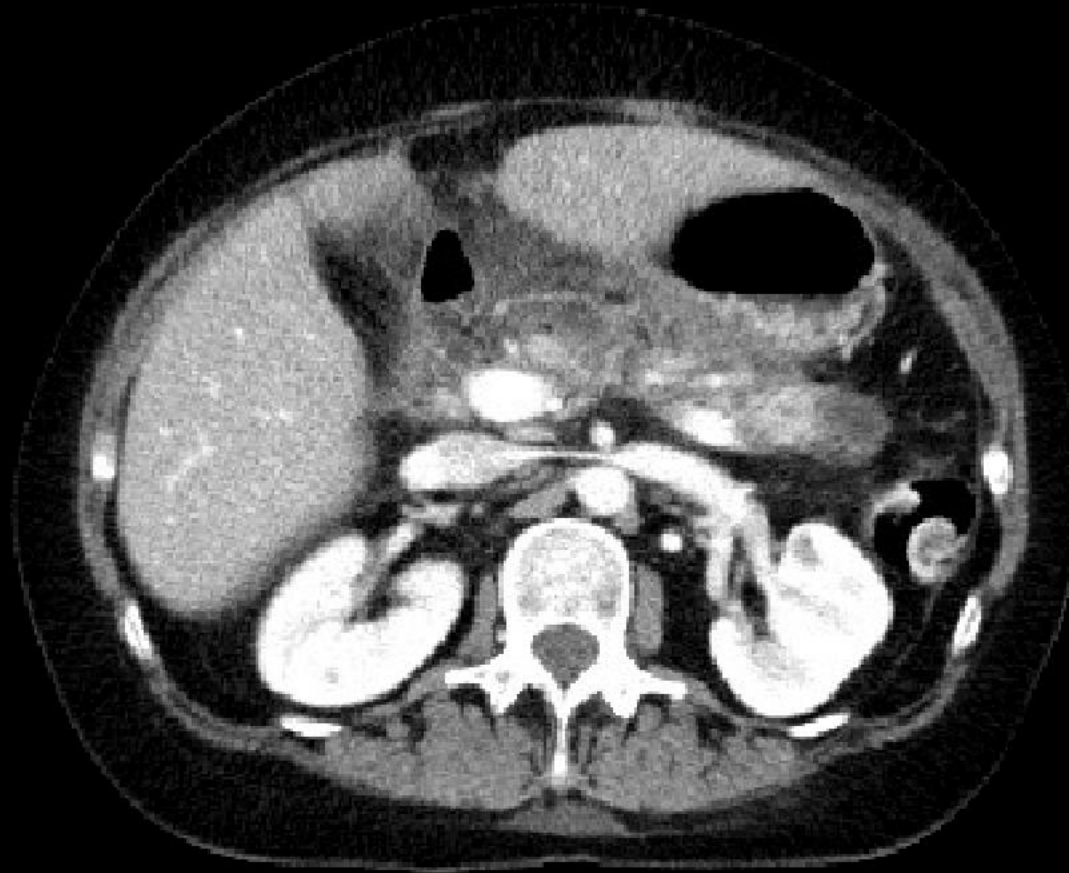
- CT 2/17/25: peri-pancreatic fluid/edema and hypodense collections in the tail of the pancreas

Patient Presentation
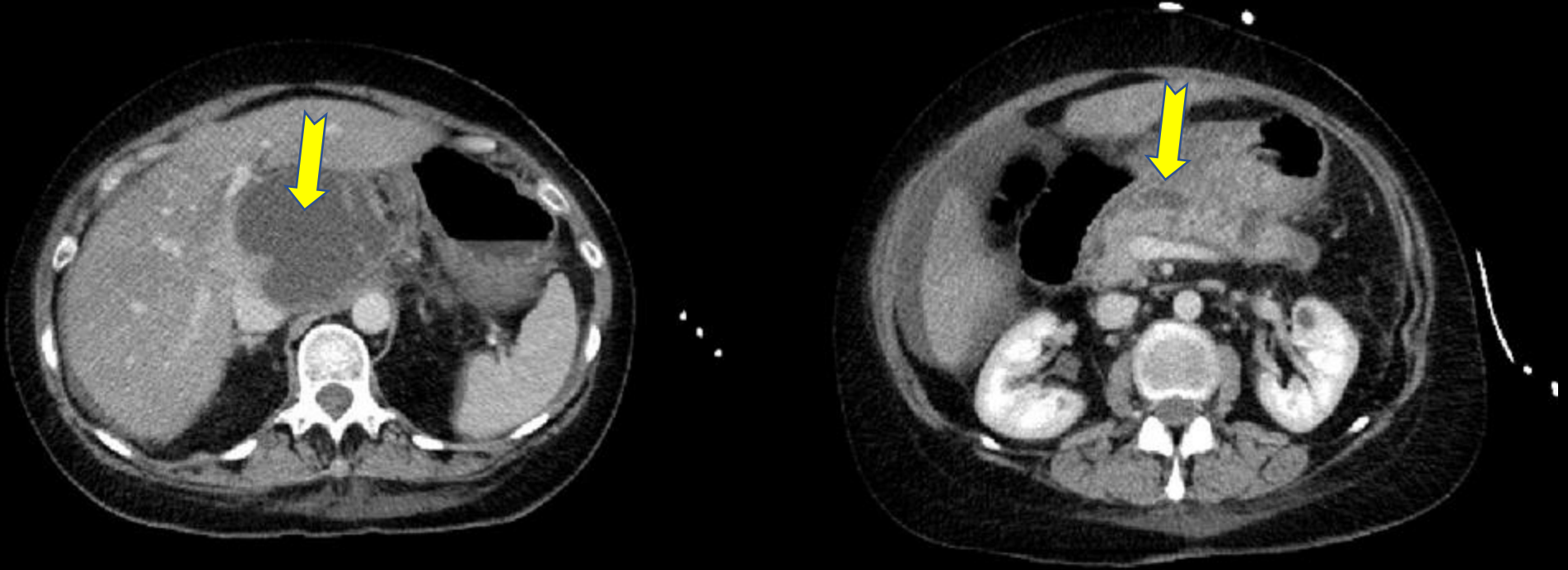
- CT 3/2/25: showing progressive pancreatitis compared to prior study
- Radiographic evidence of walled off pancreatic necrosis vs pseudocyst
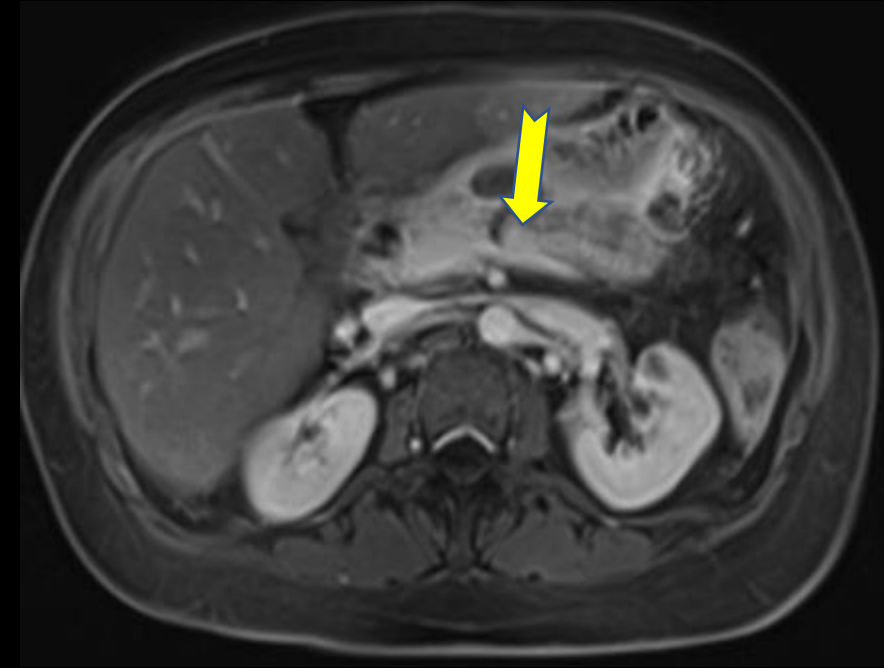
Patient Presentation

- CT 3/6/25: no radiographic evidence of infection in fluid collection

Patient Presentation

Arterial

10 minutes

- MRCP 3/14/25: Axial fat-saturated T1-weighted contrast-enhanced MRI image of the abdomen in the arterial phase shows a small, enhancing, focal outpouching in the region of the SMA. This retains contrast on the 10-minute delayed image, reflecting a pseudoaneurysm.

Pertinent Labs

- Lipase 172
- Lactate 3.3
- WBC 20.2

Select the applicable ACR Appropriateness Criteria

Variant 6: Acute pancreatitis. Known pancreatic or peripancreatic fluid collections with continued abdominal pain, early satiety, nausea, vomiting, or signs of infection. Greater than 4 weeks after symptom onset.

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
MRI abdomen without and with IV contrast with MRCP	Usually Appropriate	O
MRI abdomen without IV contrast with MRCP	May Be Appropriate	O
CT abdomen and pelvis without IV contrast	May Be Appropriate	☢☢☢
US abdomen	May Be Appropriate	O
US duplex Doppler abdomen	May Be Appropriate	O
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	☢☢☢☢
US abdomen with IV contrast	Usually Not Appropriate	O

This imaging modality was ordered by the IR physician

- Normally not an appropriate procedure. However, the MRI raised suspicion for a pseudoaneurysm, so a CTA with and without contrast was appropriate to make the diagnosis and guide IR treatment

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Findings: (unlabeled)

Findings (labeled)

Pseudoaneurysm tributary, arterial phase

Branch from SMA, arterial phase

Pseudoaneurysm, venous phase

Case Intervention

- After visualization of the pseudoaneurysm on CT angiography, the patient was taken to the Vascular and Interventional Radiology suite for embolization

- The right common femoral artery was accessed, followed by selective catheterization of the superior mesenteric artery

- Angiogram of the superior mesenteric artery was performed which demonstrated a large pseudoaneurysm from a proximal branch

- Embolization was performed with coiling of the proximal and tortuous branch of the superior mesenteric artery

Findings (labeled)

Pseudoaneurysm visualized under fluoroscopy
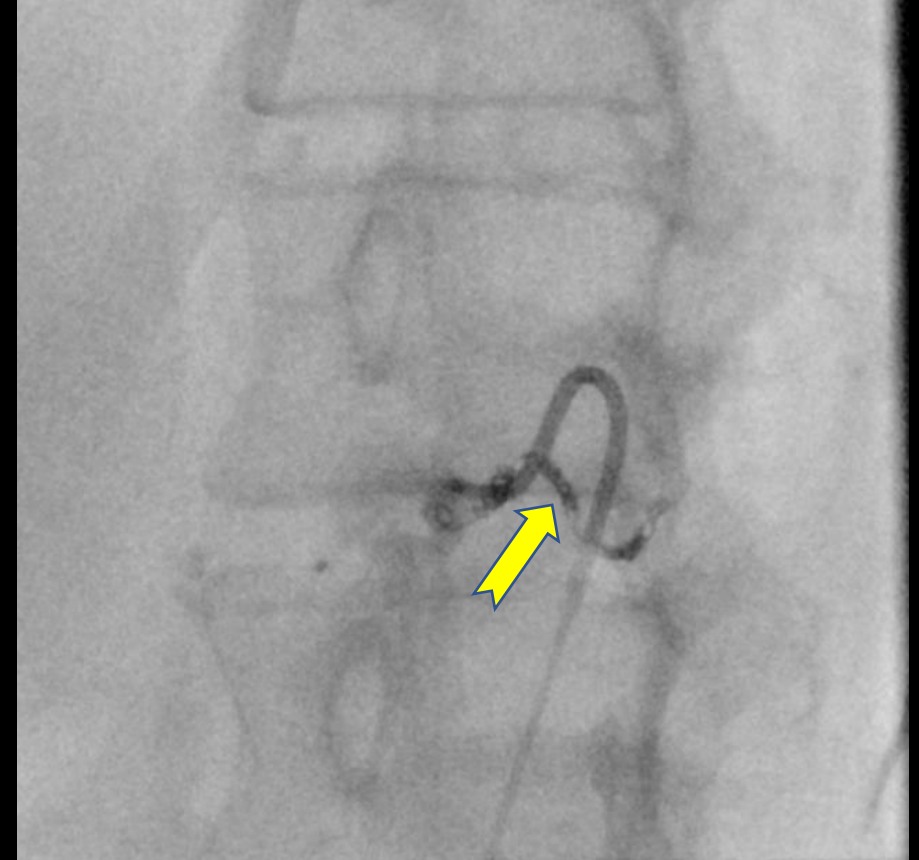
Embolization coils after IR treatment

Final Dx:

Pseudoaneurysm of a branch of the superior mesenteric artery

Case Discussion

- Visceral artery pseudoaneurysms are rare complications of pancreatitis. The incidence in patients with necrotizing pancreatitis ranges from 4.3% to 6.4%.[4,5]

- Patients may present with hemorrhage or abdominal pain or may be asymptomatic.[2]

- Pathophysiology involves autodigestion of the vessel wall from pancreatic fluid and/or erosion of the vessel into a pseudocyst.[3]

- Rupture can cause hemorrhage into retroperitoneum, peritoneal cavity, or the ampulla of Vater.[1,2]

- Transarterial catheter embolization is the preferred standard treatment, with a 70-90% success rate.[1]

- This case highlighted a rare but life-threatening complication of pancreatitis.

- Diagnosis via MRCP is unusual and timely management is critical to avoid lethal hemorrhage.

Learning Points

- Timely management of visceral artery pseudoaneurysms is critical to avoid life-threatening complications.

References:

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2. Gurala D, Polavarapu AD, Idiculla PS, Daoud M, Gumaste V. Pancreatic Pseudoaneurysm from a Gastroduodenal Artery. Case Rep Gastroenterol. 2019;13(3):450-455. Published 2019 Oct 30. doi:10.1159/000503895

3. Hoilat GJ, Mathew G, Ahmad H. Pancreatic Pseudoaneurysm. [Updated 2023 Jul 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK430937/

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