

An Unusual Location of Pseudoaneurysm in the Setting of Acute Severe Pancreatitis

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Introduction

Acute pancreatitis (AP) is one of the most common gastroenterological causes of hospital admissions. The mortality rate of AP is around 10% despite medical advancements. Around 4-17% of cases of acute pancreatitis are complicated by the formation of pseudoaneurysms. The most commonly involved arteries are splenic artery (60-65%), gastroduodenal (20-25%), pancreaticoduodenal (10-15%), hepatic (5-10%) and left gastric arteries (2-5%). We present a case of superior mesenteric artery (SMA) pseudoaneurysm secondary to acute severe pancreatitis.

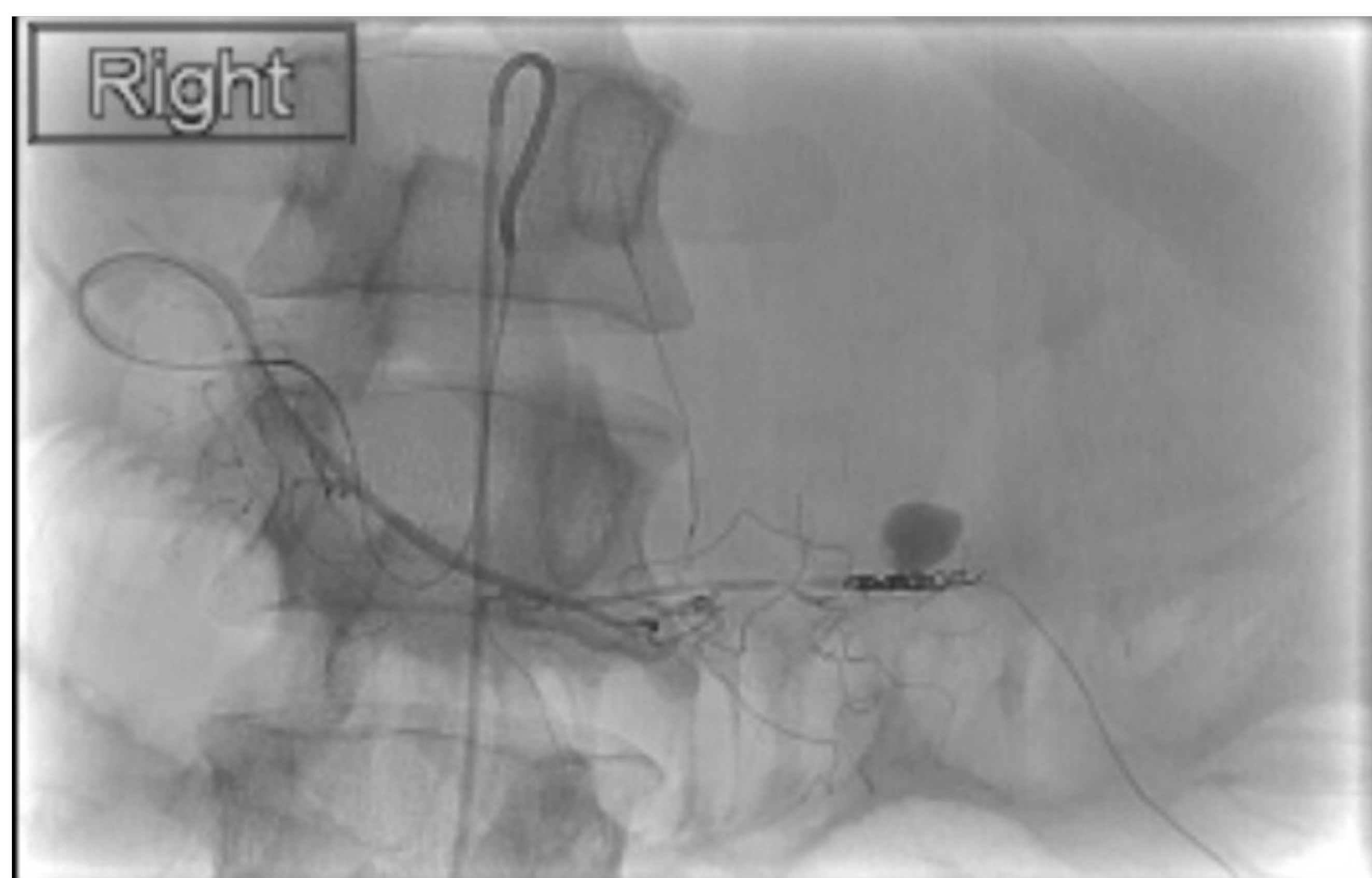


Figure 1: IR coil embolization of the middle colic branch of the SMA

Case Description

- A 33-year-old male patient with a past medical history of alcohol abuse presented to the hospital for abdominal pain after an alcohol binge.
- He was found to have significant acute kidney injury, metabolic acidosis, and leukocytosis to 24 K/uL.
- CT showed acute pancreatitis and a large peripancreatic collection consistent with hemorrhage with posterolateral extension into the left iliopsoas space.
- He was found to have staphylococcus aureus bacteremia thus he was initially treated with fluid resuscitation and cefazolin.
- Several days into the admission he had an episode of hemodynamic instability with a CT showing a 7 mm pseudoaneurysm seen within the collection with active contrast extravasation.
- His hemoglobin dropped 2g during this episode requiring pRBC transfusion.
- He underwent IR coil embolization of the middle colic branch of the SMA.
- During a subsequent admission, he had worsening abdominal pain and distension with radiographic evidence of enlarging collections so a drain was placed into the peripancreatic collection by IR with improvement in symptoms.

Discussion

- Pseudoaneurysm formation is an uncommon but life-threatening complication of pancreatitis.
- Pancreatic enzymes released in the setting of pancreatic inflammation leak into vessel walls causing destruction.
- The majority develop in the splenic artery given the proximity to the pancreas.
- Those in the SMA account for just 5% of cases.
- CT angiography is the best diagnostic modality for assessing pseudoaneurysm arterial bleeding.
- Treatment in the past was primarily surgical but with endovascular advancements, embolization with coils or glue is now first line.
- However, many patients may still require surgery if embolization fails or if hemodynamically unstable.
- Despite the rarity of pseudoaneurysm formation, it is important to have knowledge of the appropriate diagnostic workup and treatment given the potentially high mortality rate.