

Case Report

Pancreatitis induced pseudoaneurysm of splenic artery: an unusual cause of gastrointestinal bleeding

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ABSTRACT

Acute or chronic pancreatitis can cause pseudoaneurysm of visceral arteries. The splenic artery is the most common to get affected. Here, we report a case of acute pancreatitis with pseudoaneurysm of the splenic artery. A 40 year old male, a chronic alcoholic with a known history of acute pancreatitis, presented with acute abdominal pain, haematemesis, and melena. Diagnosis of pseudoaneurysm of splenic artery was confirmed by computed tomography abdomen. The endovascular coil embolization was done successfully, following which the patient made an uneventful recovery.

Keywords: Pseudoaneurysm of splenic artery, Pancreatitis, Upper gastrointestinal bleeding

INTRODUCTION

Pancreatic pseudoaneurysm is one of the rare vascular complications associated with pancreatitis. It is due to the erosion of vessels occurring as a result of local inflammation. These pseudoaneurysms can rupture and result in bleeding.¹ Any visceral artery can get affected and develop pseudoaneurysm, but the splenic artery is the most common. Computed tomography abdomen is diagnostic.² With advances in the interventional radiology techniques, endovascular methods have replaced the traditional surgical procedures as the first line of treatment of pseudoaneurysms.³ We report a case of acute pancreatitis with pseudoaneurysm of the splenic artery managed with coil embolization of the splenic artery.

CASE REPORT

A 40 years male, who was a chronic alcoholic presented to us in an emergency with a history of recurrent pain abdomen from the last one year. He also had a history of hematemesis and melena from the last two days. He was

diagnosed have pancreatitis one year back and he has been experiencing recurrent episodes of acute pancreatitis since then. On examination, the abdomen was soft and there was mild tenderness at the epigastric region. There was no splenomegaly or palpable mass. Per rectal examination showed the presence of melena. Ultrasound abdomen was showing changes of pancreatitis with 10.9x8.8 cm heterogeneous collections in the distal body and tail of the pancreas. Upper gastrointestinal endoscopy was done showing few erosions in the fundus of the stomach without active bleeding. Contrast-enhanced computed tomography (CECT) abdomen was which was showing a large collection of 10x9cm with internal hemorrhagic changes without any visualization of the body and tail of the pancreas with focal infarct if the spleen. There was a pseudoaneurysm of splenic artery noted with focal saccular dilatation measuring 7x7 mm without any active extravasation with splenic vein thrombosis (Figure 1). We planned for transarterial coil embolization of the splenic artery (Figure 2). Post-procedure patient was stable and melena resolved in the next 5 days. CECT abdomen was repeated for

confirmation (Figure 3). The patient recovered well and was discharged with advice for regular follow-up.



Figure 1: CECT abdomen showing large collection (white arrow) with internal haemorrhagic changes noted in the area of body and tail of the pancreas with non-visualization of the pancreatic parenchyma with pseudoaneurysm of the splenic artery (yellow arrow).

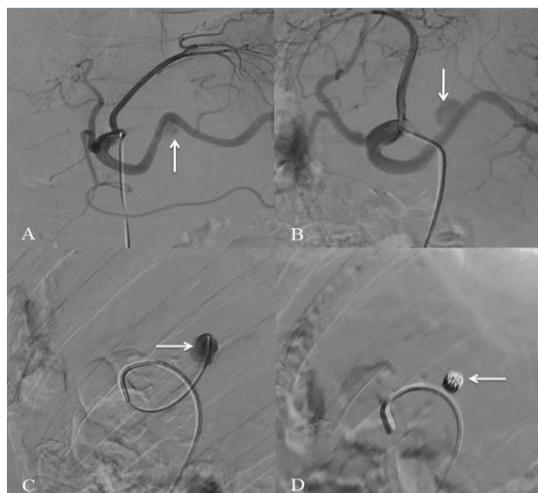


Figure 2: Angiographic image showing; A) pseudoaneurysm of splenic artery (arrow), B) saccular pseudoaneurysm of proximal splenic artery (arrow), C) catheter reached pseudoaneurysm of the splenic artery (arrow) and D) Coil embolization of the splenic artery (arrow).



Figure 3: Post-embolization-CECT showing embolized coils (arrow) in the splenic artery.

DISCUSSION

Splenic artery aneurysms are the most common visceral aneurysms, accounting for up to 60% of cases.⁴ It can be a true aneurysm or it can be a pseudoaneurysm, later being more common. The splenic artery is the third most common site for intra-abdominal aneurysm after aorta and iliac artery.⁵ Splenic artery aneurysm is more common in females as compared to males.

Pancreatic pseudoaneurysm is a rare vascular complication associated with pancreatitis and pancreatic surgeries. Although vessels like gastroduodenal, pancreaticoduodenal, hepatic, and left gastric arteries, can be affected, the splenic artery is most common due to its course and association with pancreas.² Local inflammation leads to erosion of the vessel wall which is around the pancreas. Usually, patients present with features of pancreatitis with pain abdomen and vomiting. Evidence of gastrointestinal bleed in the form of hematemesis or melena should raise the suspicion of the pseudoaneurysm. Rarely pseudoaneurysms can rupture and can cause torrential hemorrhage either intraperitoneal or may present as massive gastrointestinal bleed.¹ Rarely patients with splenic artery aneurysm can present with features of portal hypertension.⁶ Our patient was a known case of pancreatitis and presented with hematemesis and melena. However, the patient was stable. We suspected that our patient might be having pseudoaneurysm.

Upper gastrointestinal endoscopy has to be done to rule out other causes of upper gastrointestinal bleed. Contrast-enhanced computed tomography is the investigation of choice in patients who present with pancreatitis and upper gastrointestinal bleed. Pseudoaneurysms of splenic artery are usually single, smaller in size and most common site is distal splenic artery.⁷ However proximal part can also be affected. Large-sized aneurysms are rare. There are reports in the literature where multiple pseudoaneurysms of the splenic artery have been noted.⁷ CECT may also show features of portal hypertension if present. Doppler and endoscopic ultrasound can also help in diagnosis. Our patient had a large collection with internal hemorrhagic changes noted in the area of body and tail of the pancreas without any visualization of the body and tail of the pancreas along with pseudoaneurysm of splenic artery noted with focal saccular dilatation without any active extravasation with splenic vein thrombosis. Although there was evidence of focal splenic infarct, the patient was asymptomatic.

Treatment of patients with pancreatitis with pseudoaneurysm can be done by the endovascular approach or surgical approach. It also depends on the site of the aneurysm. Proximal splenic artery aneurysms are usually treated by the endovascular approach with embolization as there are collaterals from the distal part of the splenic artery to other organs. Pseudoaneurysm of the distal splenic artery is usually managed by surgical approach as endovascular approaches are difficult for the

distal splenic artery.⁶ Ligation of aneurysm along with splenectomy is usually a preferred option. We managed our patient with coil embolization as aneurysm was saccular and located in the proximal part of the splenic artery. Regular followup of the patients is needed as these pseudoaneurysms are known to recur.

CONCLUSION

Patient of acute pancreatitis with collection having a recent onset of upper abdominal pain, hematemesis, and melena suggestive of bleeding from pancreatitis induced pseudoaneurysm. Upper gastrointestinal endoscopy needed to rule out bleeding from the fundal varices as a manifestation of sinistral hypertension however, it may take a long time to develop. A pseudoaneurysm can be diagnosed with CECT and can be managed by transarterial coil embolization or by ligation of the aneurysm with or without splenectomy depending on the site of splenic artery involvement.

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