

Case report: Splenic artery pseudoaneurysm

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Introduction

Pseudoaneurysm is an uncommon but known complication of pancreatitis¹. It is a rare but life-threatening complication. Prompt diagnosis and timely management of such cases is very important.

Case report

Our patient is a 26yr old man with a background of alcohol dependence and acute necrotic pancreatitis. He had had four admissions for haematemesis, melaena and anaemia with normal upper GI endoscopy. CT done three months earlier showed a pancreatic pseudocyst in the body of pancreas. He now presented via his GP with anaemia and a history of recent episodes of haematemesis and melaena. On investigations, Hb was 5.8g/dl (normal range 13.0-18.0) with MCV 86.6fl (normal range 77-101) and amylase 107U/L (normal range 13-53). He was transfused 3 units of blood. Oesophago-gastro-duodenoscopy [OGD] was done next day which showed bleeding into the duodenum from the ampullary orifice but no other source of bleeding. He underwent digital subtraction angiography which showed no active extravasation of contrast but did show a small pseudoaneurysm arising from the undersurface of proximal to mid splenic artery from where blood was trickling slowly - rather than an acute rupture - leading to intermittent haematemesis, melaena and anaemia. This was at the site of contact of the splenic artery with the pancreatic pseudo cyst seen on CT. Embolization of splenic artery was carried out using coils. The patient had no further episodes of bleeding and Hb remained stable post embolization.

Discussion

Pseudoaneurysm is not a true aneurysm, but occurs due to disruption of one or more layers

of the arterial wall. The leaking blood is either contained in a perfused sac lined by surrounding tissues or is contained within the remaining intact layers of the media or adventitia². Although pseudoaneurysms and aneurysms of splanchnic arteries have traditionally been considered uncommon clinical entities, the prevalence discovered during an autopsy study was surprisingly high - 10.4%³. The visceral arteries which most commonly develop pseudoaneurysm are the splenic artery, hepatic arteries, gastric and gastroepiploic arteries, gastro-duodenal artery and branches of the mesenteric arteries⁴. The most common artery involved is the splenic artery. These pseudoaneurysms are frequently accompanied by life-threatening complications, mainly rupture and bleeding.

Pancreatitis with secondary pseudocyst formation is the most common cause of pancreatic pseudoaneurysms. Other causes include trauma (accidental and iatrogenic), infection, and vasculitis⁵.

Basic pathophysiology in cases of pancreatitis involves pancreatic enzymes causing a necrotizing arteritis with destruction of vessel wall architecture and fragmentation of elastic tissues, leading to aneurysm or pseudoaneurysm⁶. In addition to direct damage of vascular structures by the spread of pancreatic enzymes from severe inflammation, Flati et al.⁷ described another mechanism by which pancreatitis related pseudoaneurysms can form. A longstanding pseudocyst may induce a pseudoaneurysm, caused by vascular erosion from enzymes within the pseudocyst, direct compression, or ischemia⁷.

In this case, the splenic artery pseudoaneurysm was found to be leaking into the pancreatic duct, reaching the ampulla of Vater causing intermittent haematemesis, melaena and anaemia. Leaking pseudoaneurysm must be suspected in

patients with necrotic pancreatitis presenting with anemia and requiring frequent blood transfusion despite absence of signs and symptoms of acute abdomen as in this case. Better outcomes require accurate and timely diagnosis and intervention

to prevent future complications such as rupture, as all these branches are easily accessible endovascularly and amenable to endovascular treatment/ embolization.

References

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