

Haemosuccus pancreaticus, an uncommon cause of upper gastro intestinal bleeding: Case report and review of the literature

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Abstract

Haemosuccus Pancreaticus is defined as upper gastro intestinal (GI) bleeding from the ampulla of vater via the pancreatic duct. It is most commonly associated with pancreatic inflammation, erosion of the pancreas by aneurysm or pseudo-aneurysm of the splenic artery.

We report a 69 year old man with previous history of acute pancreatitis who was admitted with recurrent haematemesis. Initial upper GI endoscopy was normal, while admitted, he collapse with abdominal pain and hypotension. He was resuscitated with blood and intravenous fluid. Repeat upper GI endoscopy showed fresh blood in the duodenum, but no active bleeding site was demonstrated. An urgent coeliac axis CT angiogram was done which showed an splenic artery pseudo-aneurysm, which was successfully embolized. Patient is well 9 months after the procedure. This case highlights the importance of considering coeliac axis CT angiogram as part of investigation for obscure GI bleeding.

Keywords: Haemosuccus Pancreaticus, Splenic artery pseudoaneurysm, GI bleeding.

Introduction

Haemosuccus Pancreaticus (HP) is upper gastro-intestinal bleeding from the ampulla of vater via the pancreatic duct. It occurs after the opening of pseudoaneurysm or aneurysm of splenic or gastroduodenal artery into the pancreatic duct, thus allowing blood to enter into the duct and empty from the papilla into the duodenum.¹ It is more common in men (male to female ratio 7:1) and mostly occurs as a complication of acute or chronic pancreatitis and pancreatic cancer.^{1,2}

Literature shows only 100 cases reported so far.² Its diagnosis poses special challenge to gastroenterologists as most cases are asymptomatic, bleeds intermittently and conventional investigational methods like endoscopy, colonoscopy and abdominal ultrasound are usually not helpful.

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Case Report

A 69 year old alcoholic male, with a past history of pancreatitis was admitted twice over a span of three weeks. On his first admission he presented with coffee-ground vomiting and denied any use of aspirin or non steroidal anti inflammatory drugs (NSAIDs). On admission he was haemodynamically stable with haemoglobin of 12.7g/dl. His ultrasound abdomen showed hepatomegaly with fatty infiltration in the liver. An urgent upper GI endoscopy was done which was normal and no signs of bleeding were visible. He was discharged after 2 days.

He was admitted again a week later with melena. On admission his haemoglobin had dropped to 10.4 g/dl. While admitted, he developed abdominal pain, hypotension followed by haematemesis. He was transferred to the high dependency unit and resuscitated with blood and intravenous fluid. After resuscitation, upper GI endoscopy was done again which revealed fresh blood in the duodenum but no bleeding site could be identified.

An urgent Computerized Tomographic angiogram through coeliac axis was done which demonstrated a 17

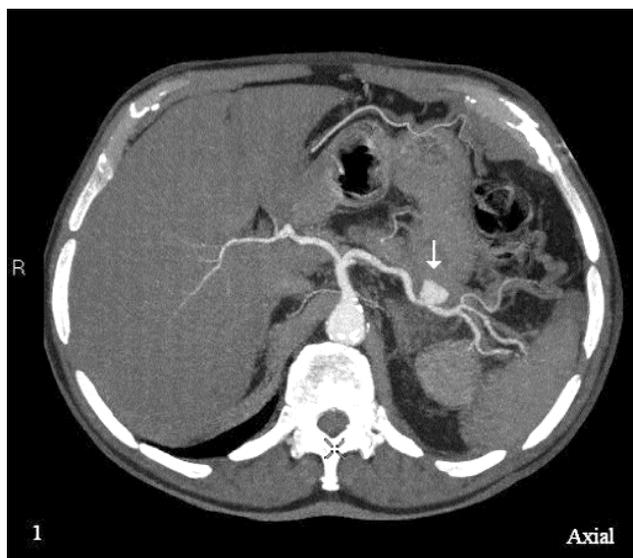


Figure-1: Computerized tomographic angiogram through coeliac axis.

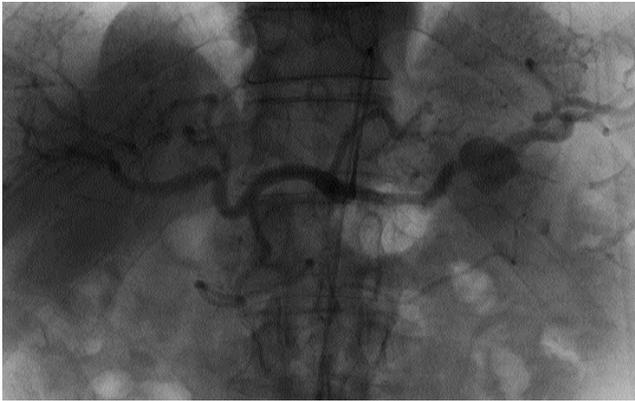


Figure-2: CT transcatheter mesenteric angiogram.

mm splenic artery pseudo-aneurysm abducting the pancreatic tail (Figure-1). CT transcatheter mesenteric angiogram failed to identify an active bleeder (Figure-2). In the absence of an alternative vascular abnormality, the splenic artery pseudo-aneurysm was embolized by inserting multiple embolization coils (Boston Scientific Complex Helical micro-coils). No further episodes of bleeding have occurred and the patient is doing well 9 months after the procedure.

Discussion

Patients with Haemosuccus Pancreaticus usually present with the triad of abdominal pain, mostly epigastric radiating to the back, GI bleeding and hyperamylasemia.³ In 60-65% cases, there is involvement of splenic artery, however other blood vessels in the proximity of the pancreas such as gastroduodenal artery, pancreaticoduodenal artery and left gastric artery can also cause spontaneous GI haemorrhage.⁴

Splenic artery pseudoaneurysm is less common than splenic artery aneurysm. In true aneurysm all three layers of the vessel wall i.e. intima, media and adventitia form the aneurysm while in pseudoaneurysm only intima and media are involved and therefore it has more chances of bleeding.⁵ The causes of splenic artery pseudoaneurysm include acute and chronic pancreatitis¹ and pancreatic tumours.²

The risk of rupture of splenic artery pseudoaneurysm is as high as 37% with mortality approaching 90% if untreated.⁶ It therefore requires both prompt diagnosis and treatment to save lives. Haemosuccus Pancreaticus should be suspected when no blood or obvious source of bleeding is found in the duodenum.³ Upper GI endoscopy can detect active bleeding via the papilla in 30% of patients² but a negative endoscopy does not exclude the

Haemosuccus Pancreaticus.

Selective angiography is the gold standard for the diagnosis of Haemosuccus Pancreaticus⁷ with a sensitivity of 96%. As a supplementary approach contrast enhanced CT abdomen can be used to visualize splenic artery pseudoaneurysm adjacent to pancreas or pancreatic duct, in addition, typical changes of chronic pancreatitis can also be seen with this method.⁸

Treatment of Haemosuccus Pancreaticus includes endovascular techniques and surgery. Endovascular techniques include inserting either coils, particles or gel foam to embolize the bleeding vessel to achieve haemostasis which have a success rate of around 75-85%.⁹ Rare re-canalization is reported after endovascular embolization, therefore CT at 6 months after intervention is advised.⁹

The surgical approach depends upon the location of the splenic artery aneurysm, the age of patient and operative risks. Aneurysms located in the proximal and middle third of the splenic artery can be treated with simple excision of the aneurysm, with splenic preservation. For aneurysms located in the distal third of the splenic artery, resection of the aneurysm with splenectomy is performed.¹⁰ Surgical intervention carries a mortality and morbidity risk of 1.3% and 9% respectively.⁹

In conclusion, HP is an uncommon cause of upper GI bleeding and should be suspected in patients with chronic pancreatitis with negative upper endoscopy who present with abdominal pain. Diagnosis is difficult but contrast enhanced CT with coeliac axis angiogram is useful. Treatment options include surgery or endovascular embolization of the splenic artery pseudoaneurysm, the chances of re-bleeding are very low after treatment.

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