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Case Report

A rare case of pseudoaneurysm of posterior inferior pancreaticoduodenal artery related with hemosuccus pancreaticus: a case report

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ABSTRACT

Hemosuccus pancreaticus is a rare cause of obscure and intermittent upper GI bleeding, often life threatening. Usually seen in a patient with chronic alcoholic pancreatitis complicated with pseudoaneurysm of splenic artery in most of the cases. In the given case reports it was pseudoaneurysm of the posterior branch of inferior pancreaticoduodenal artery (IPDA) which accounts for less than 0.07% of total 10% of pseudoaneurysm of visceral arteries caused by hemosuccus pancreaticus. These patients usually present with an obscure moderate upper GI bleed. Early clinical, endoscopic and radiological diagnosis helps to determine the appropriate method of management. Most of the cases require the endovascular interventions like glue embolisation or metal coiling or beads, very few cases end up with explorative laparotomy. Here we report a rare case presentation of upper GI bleed due to pseudoaneurysm of IPDA in hemosuccus pancreaticus, it's diagnosis and management.

Keywords: Pseudoaneurysm, Hemosuccus pancreaticus, Upper GI bleed, IPDA, Endovascular interventions

INTRODUCTION

Hemosuccus pancreaticus is one of the rare complications of chronic pancreatitis.[1] Most often seen in patients with chronic alcoholic pancreatitis complicated with pseudocyst of pancreas and recurrent episodes of pancreatitis leading to the pseudoaneurysms of the surrounding visceral arteries. Most common being the splenic artery and 10% of the cases being pancreaticoduodenal arteries more specifically less than 0.07% it is one of the branches of either IPDA or SPDA.[2] These patients present with obscure intermittent mild to moderate upper GI bleeding, often neglected due to the rarity of the presentation, but on the same time can be life threatening. Accurate clinical examination, history and early endoscopic with radiological diagnosis yields a proper idea of management for the control of the bleed, which in most cases will be an endovascular/ interventional radiology approach either by cyanoacrylate glue injection or coiling or direct visualisation of the bleed and endoscopic banding or suturing.

CASE REPORT

A 34-year-old presented to the emergency department with the complaints of hematemesis for a day with 3-4 episodes/day and severe upper abdominal pain and distension for 2 days. Patient was a known alcoholic with similar episodes of abdominal pain in the past, diagnosed and treated conservatively for acute pancreatitis.

On examination, he was severely pale with tachycardia, no evidence of icterus or pedal oedema. Per abdomen examination showed distended and tender epigastric region, no guarding or rigidity with sluggish bowel sounds. PR showed blood stain. On probing he gave a

history of 2 episodes of malena for a day. Provisional diagnosis of Upper GI bleed most probably due to Acute on chronic pancreatitis was made.

Complete hemogram showed 3gm% hemoglobin with normal leukocyte and platelet count. Elevated serum amylase and lipase, SGOT, SGPT and LDH with normal RFT, PT-INR, serum ALP and calcium levels. Patient was transferred to ISCU or hemodynamic stabilisation following a massive transfusion protocol with injection tranexamic acid given as a bolus dose.

USG showed evidence of edematous pancreas with a possible pseudocyst and normal PV doppler findings.

Emergency endoscopy was done to rule out variceal bleeding given the history of alcohol intake. Showed only type 3 lesion according to Forrest classification at D1.

CECT abdomen (Figure 1 A and 2) was taken after hemodynamic stabilisation with iv antacids and octreotide. The imaging showed: Acute pancreatitis with pseudocyst of 6×6×8 cm. Patient was then subjected for CT angiogram with DSA (Figure 1 B) that showed pseudoaneurysm of the posterior inferior pancreaticoduodenal artery of 4 (craniocaudal)×1.8 (transverse)×1.5 (antero posterior) cm diameter.

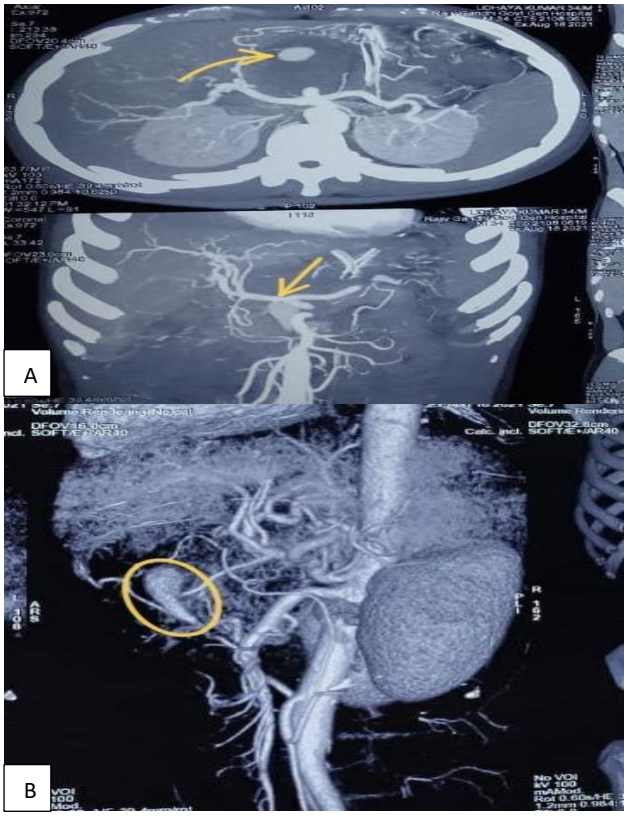

Figure 1 (A and B): CECT abdomen and CT angiogram showing the pseudocyst pancreas with the posterior IPDA (inferior pancreaticoduodenal artery) pseudoaneurysm, as indicated by the arrow and encircled.

Figure 2: CECT abdomen showing pseudocyst pancreas with peri pancreatic fat stranding.

After hemodynamic stabilisation, the patient was taken up for endovascular coiling by interventional radiology after 48 hrs. Post procedure was uneventful. Patient was kept on follow up for 4 weeks initially, showed near complete resolution of the pseudoaneurysm with partial recanalisation and then later planned to take up for the elective intervention for pseudocyst drainage.

DISCUSSION

Occhionorelli et al showed arterial pseudoaneurysms of the visceral arteries is one of the rarest presentations of the complications of the pancreatitis more often associated with chronic rather than acute pancreatitis.[3] They are usually present within the pseudocyst of pancreas causing hemosuccus pancreaticus, which is a rare cause of obscure upper GI bleeding of non-variceal origin.

In this case report, the patient presented with moderate upper GI bleed secondary to pseudoaneurysm caused by posterior inferior pancreaticoduodenal artery which comprises only 0.07% of all the cases of pseudoaneurysms in hemosuccus pancreaticus, most common being splenic artery. Even though its a rare presentation the principle of management remains vital and same as any arterial pseudoaneurysms, that is, clinical stabilization by accurate localization of the bleeder with emergency endoscopy within 15 hours of presentation followed by prompt hemodynamic stabilization and careful monitoring. Risk stratification of the probability of the rupture is determined by higher imaging modalities like CT angiogram and DSA of the affected artery i.e., more than 2 cm anteroposterior diameter of the pseudoaneurysm increases the rate of rupture to almost 70% to those less than 2 cm, as in this case with anteroposterior diameter of 1.5 cm.

Toyoki et al and Sachdev-Ost et al showed in their studies that endovascular interventions like coiling,metal

beads or cyanoacrylate glue injection have been found to be very effective in most of the stable cases.[4,5]

Anvar et al showed the early successful endovascular coiling of multiple visceral pseudoaneurysms in a hypertensive chronic pancreatitis patient after ruling out visceral arteriovenous malformations.[6] Hsu et al in their limited case series showed that the surgical intervention to be superior to the early endovascular interventions in regard to high recurrence rates in the latter.[7] Batagini et al in their case series gave the idea of the most common splenic artery aneurysms as the cause for hemosuccus pancreaticus with open surgical and endovascular intervention to be of similar technical and clinical success.[8]

Marone et al showed that in terms of long-term results (high survival rate and low recurrence rate) the durability of the open surgical interventions remains the gold standard.[9] Mitrovic et al showed the endoscopic coil embolisation of posterior IPDA by a technique called "sandwich technique".[10]

In our case report we present to you, the pseudoaneurysm of the posterior IPDA with the metallic coiling by interventional radiology team once the hemodynamic stabilisation was achieved within 72 hours.

CONCLUSION

Hemosuccus pancreaticus is rare, but still should be considered as one of the common causes of obscure upper GI bleed of non-variceal origin in the setting of chronic pancreatitis complications like pseudocyst pancreas with the surrounding visceral artery pseudoaneurysm. One should be aware of such presentations as they have a mortality of 90% if not diagnosed within a crucial time period. Most of the visceral artery pseudoaneurysm and aneurysm are successfully managed by endovascular procedures with low periprocedural morbidity; however, the urgent repair of these lesions is still associated with elevated mortality rates.

Aneurysm exclusion can be accomplished with coil embolization and the selective use of N-butyl-2-cyanoacrylate. Current catheter-based techniques extend our ability to exclude visceral artery aneurysms, but imaging artifacts hamper postoperative CT surveillance.

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