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POST CYSTOGASTROSTOMY BLEEDING-COMMON COMPLICATION UNUSUAL CAUSE: A CASE REPORT

General Surgery

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ABSTRACT

Pseudoaneurysms of gastroduodenal artery are rare and mostly associated with pancreatitis. We report a case of a ruptured GDA aneurysm in a patient who underwent cystogastrostomy for pancreatic pseudocyst and this has rarely been reported in the literature. Our patient presented with hematemesis 2 week postoperatively. CT angiogram showed pseudoaneurysm of the GDA and which was embolised. Our case highlights that GDA aneurysm must be considered in the differential for a patient who presents with upper GI tract bleed after drainage of pancreatic pseudocyst and that it can be managed with angioembolization. A 30 year old male presented to our surgery department with a four-month history of pain & swelling over upper abdomen with associated vomiting. CT scan showed large thicked walled cystic lesion in lesser sac abutting the uncinate process with atrophy of body and tail of pancrease s/o chronic pancreatitis with pseudocyst formation. We performed cystogastrostomy for pancreatic pseudocyst. Two week later, he presented with the complains of hematemesis. Patient was resuscitated initially and then CT angiogram was planned that showed pseudoaneurysm of the GDA. The pseudoaneurysm was embolised and patient was sent home later on. Gastroduodenal artery aneurysm shoud be suspected in a patient with GI hemorrhage after surgery for Pancreatic pseudocyst. The investigation of choice is CT angiography and endovascular angioembolisation is the treatment modality of choice.

KEYWORDS

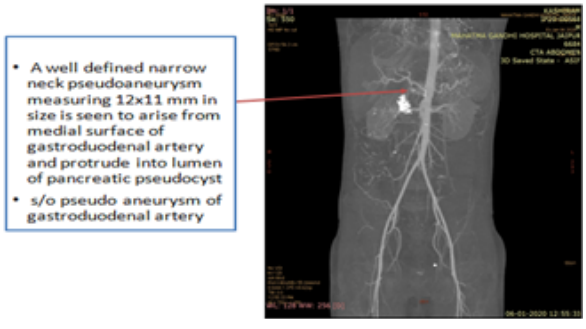
Pseudoaneurysm, pseudocyst

INTRODUCTION

Pancreatic pseudocyst is a localized fluid collection which contain rich in amylase and other pancreatic enzymes and is surrounded by a wall of fibrous tissue that is not lined by epithelium. Pseudocysts are formed after acute or chronic pancreatitis but more common after acute exacerbations of chronic pancreatitis than acute pancreatitis. GI tract bleeding is one of the main causes of admission to the emergency department. Multiple etiologies for GI tract bleeding, and one of them is GDA pseudoaneurysm. Gastroduodenal artery pseudoaneurysm are rare & account for 1.5% of all aneurysms of the visceral arteries. Angioembolization is treatment of choice. However, they can be managed by ligation of the vessel & excision of the sac or by stenting.

Case presentation

A 30 year old male presented to surgery department with a 4 month history of pain & swelling over upper abdomen with associated vomiting. Patient has no complaints of fever, jaundice or GI bleeding. Patient was taking alcohol since last 10 years. On examination , lump was palpable in epigastric region size approx 12cmx15cm. Swelling was globular in shape, smooth surface & well defined margin, cystic consistency. Laboratory test was normal. USG showed that a well defined cystic lesion with dense internal echoes and sludge is seen in epigastric region extending upto umbilicus region volume of cystic lesion is approx 900-1000cc. Abdominal computed tomography scan showed a large thick walled cystic lesion(approx 69x65x54mm) in lesser sac at the expected location of body and tail of pancreas. The lesion show lobulated outline and dependant hyperdense contents within. There is atrophy of body and tail of pancreas &foci of calcifications are seen in head and uncinate process of pancrease s/o chronic pancreatitis with pseudocyst formation. The patient then underwent surgery cystogastrostomy for pancreatic pseudocyst. Post operative period was uneventful. On pod-5 patient is being discharge. On post operative day 14 patient was admitted in emergency with chief complains of hematemesis.The patient was anemic,tachycardic with pulse of 110/min and mildly hypotensive with B.P. of 90/60mm Hg.lab workup showed hemoglobin of 5.9 g/dl. He was resuscitated primarily with i/v fluids and blood transfusions. Evaculated by upper GI endoscopy s/o grossly normal study- normal anastomotic site post cystogastrostomy .Further evaluated by CT angiography showed a well defined narrow neck pseudoaneurysm measuring 12x11mm in size is seen to arise from medial surface of gastroduodenal artery and protrude into lumen of pancreatic pseudocyst (Picture-1)



(Picture-1)

Patient was planned for CT guided angioembolization via the right femoral route under local anesthesia by the interventional radiologist. The celiac axis was engaged with 5F SIM2 catheter. The angiogram showed large aneurysm arising from gastroduodenal artery. The aneurysm was actively bleeding during angiography and accumulation of contrast was appreciated in the gut. The GDA aneurysm was embolised with coil & glue. Post procedure there was no blood flow seen in the aneurysm. Patient discharged with vitally stable and with HB of 9 gm/dl. Patient was regular follow up with no any fresh complain.

DISCUSSION

Visceral artery aneurysm may be classified into two types, true and pseudoaneurysms. True aneurysms involve all layers of the vessel wall & pseudoaneurysms are false aneurysms which result from injury to one or more vessel wall layers. Aneurysm rupture can cause serious morbidity & mortality(1). They have been reported in different visceral arteries, splenic artery being the most common(46%),followed by the renal artery(22%), the hepatic artery(16%),and the least commonly the pancreaticoduodenal artery(1%)(8). Pseudoaneurysms of the gastroduodenal artery are extremely rare(5). First reported by starlinger in 1930,since then there have been an increasing reports on GDA aneurysms due to better radiological technique. From1956-2015,90 cases of GDA aneurysms have been identified(9),(18). Pancreatitis and atherosclerosis are the common cause for aneurysms formation. The former one is commonly

associated with GDA pseudoaneurysms development. The pathophysiology of aneurysm is not fully understood(9), weakning of GDA wall by leakage of pancreatic proteolytic enzymes has been concerned in the pathophysiology of pseudoaneurysm formation(10) .Other etiology include alcohol abuse, cholecystectomy, marfan's syndrome , polyarteritis nodosa, fibromuscular dysplasia and liver cirrhosis(6),(9),(10),(11). In case of a pseudocyst, they develop due to erosion of the vessel wall as a result of marked inflammation of vessel wall or autodigestion of a pancreatic or peri-pancreatic artery by enzymes(12),(13). Patients may be completely asymptomatic and GDA aneurysms may be picked up incidentally by radiology for another cause. The most common clinical presentation(52%)is gastrointestinal hemorrhage due to aneurismal rupture (hematemesis, melena, shock) usually into the duodenum(1).The second most common presentation is abdominal pain(46%). 7.5% of GDA aneurysms remain clinically silent(9). Patients can also present with obstructive symptoms, compressive symptoms(nausea, vomiting),hemobilia and pulsatile abdominal mass. Our patient presented with hematemesis and GDA aneurysm. Mortality rate is quite high a about 40% secondary to rupture(14). Abdominal CT has Got sensitivity of 67% and the aneurysm was missed in our case. The gold standard diagnostic and therapeutic modality is visceral angiography. Angiography has 100% sensitivity for diagnosing GDA(15).

CONCLUSION

GDA aneurysms are rare. The primary take away lesson from this case is that GDA aneurysm should be suspected in the setting of GI haemorrhage following surgery for pancreatic pseudocyst drainage. The CT angiography is investigation of choice. Endovascular angioembolization is the treatment modality of choice.

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