Case Report

Mediastinal pancreatic pseudocyst causing displacement of aorta: An unusual presentation

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Abstract

Pseudocysts are surrounded by a wall composed of collagen and granulation tissue as a sequel of acute pancreatitis. The prevalence of pancreatic pseudocysts in acute pancreatitis has been reported to range from 6% to 18.5%. Pancreatic pseudocysts most commonly arise in patients with alcoholic pancreatitis (from 70% to 78%). The most common location for the disease is the lesser sac but at times the cyst may track along the plane of least resistance to extending into the mediasternum which may or may not be symptomatic. Occurrence of mediastinal pseudocysts is extremely rare with around 50 cases reported in the world literature until date. The incidence of pseudocyst displacing the aorta is even rarer. Owing to its clinical curiosity and rarity we present an unusual case of mediastinal pseudopancreatic cyst.

Key words: Acute pancreatitis, mediasternum, pseudocyst pancreas

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INTRODUCTION

The maiden description of pseudopancreatic cyst is cited in 1761 by Cannon *et al*.[1] Pseudocysts are surrounded by a wall composed of collagen and granulation tissue as a sequel of acute pancreatitis. The prevalence of pancreatic pseudocysts in acute pancreatitis has been reported to range from 6% to 18.5%.[2] Pancreatic pseudocysts most commonly arise in patients with alcoholic pancreatitis (from 70% to 78%).[3] The incidence of the pseudocyst is low ranging from 1.6% to 4.5% or 0.5–1/100,000 adults/year.[4] The most common location for the disease is the lesser sac but at times the cyst may track along the plane of least resistance to extend into the mediasternum which may or may not be symptomatic.[5] Occurrence of mediastinal pseudocysts is extremely rare with around 50 cases reported in the world literature until date.[6] The incidence of pseudocyst displacing the aorta is even rarer.[7] Owing to its clinical curiosity and rarity we present an unusual case of pseudopancreatic cyst extending into the mediastinum and displacing the aorta towards the right.

CASE REPORT

A 55-year-old male presented with pain in the epigastrium radiating to the back with recurrent episodes of bilious vomiting for the past 5 days. He was a chronic alcoholic and gave a history of the previous admission to the hospital 2 years back for the similar episode, but no records were available with the patients.

On examination

He was afebrile without any icterus, tenderness in the epigastrium, no hepatomegaly or mass palpable per abdomen.

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Blood examination

Liver function tests, serum amylase, lipase, renal function tests, and routine blood counts were within normal limits.

Ultrasound abdomen

Suggestive of cystic lesion of size 12.6 cm × 7.8 cm in relation to the distal body of pancreas bulging into the lesser sac and gastrohepatic region with internal echoes. Gall bladder was distended and normal, common bile duct was normal [Figure 1].

Contrast-enhanced computed tomography abdomen

Showed a well-defined hypoechoic lesion arising from the pancreas into the lesser sac and extending into the mediastinum along the hiatus opening and displacing the aorta toward right side [Figures 2 and 3].

Operative findings

On exploration a large cystic lesion of about a size 15 cm × 10 cm approx. was identified in the lesser sac taking origin from the body of the pancreas. The cystic lesion was seen extending upwards and the upper border of the cyst was not visualized. Mediastinum was not opened. Anterior stomach wall opened, and cyst location confirmed over the posterior stomach wall by needle aspiration. The posterior stomach and cyst wall was opened to remove all fluid and debris and stomach wall was sutured to the cyst wall. Hemostasis achieved, and closure was done [Figures 4-6].

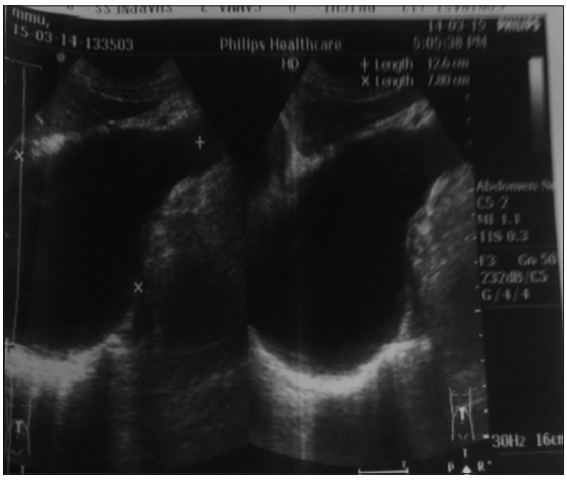

Figure 1: Ultrasound showing the cystic lesion in relation to distal body of pancreas

Postoperative period was uneventful, allowed orally on the 5th day and sutures were removed on the 12th postoperative day. The patient was discharged with oral medications and advice to quit alcohol. During follow-up, patient was found to be in normal condition.

DISCUSSION

The most common site of pseudocyst pancreas is the lesser sac.[8] The incidence of mediastinal pseudocysts is very low with around 50 cases reported in the world literature till date.[6] These pseudocysts are postulated to be caused by rupture of the pancreatic duct posteriorly into the retroperitoneal space with tracking up of pancreatic enzyme-rich fluids into the mediastinum through the diaphragm. In the majority of cases, the fluid enters the mediastinum through the esophageal or aortic hiatus. Other less frequent sites of entry into the mediastinum are the foramen of Morgagni, the inferior vena cava hiatus and direct penetration of the diaphragm.[9] We are reporting a rare presentation of mediastinal pseudocyst that is seen displacing the thoracic aorta toward right side of midline, such a displacement of aorta is reported only once in the literature so far adding to its curiosity.[10] The clinical presentation of mediastinal pseudocyst depends upon compression or invasion of the mediastinal structures leading to dysphagia, odynophagia, dyspnea, pseudoachalasia, back pain, weight loss, chest pain, congestive cardiac failure, and gastro-esophageal reflux. In our case, the patient did not complain of any such problem but gave a history of a sense of heaviness and pain in the upper abdomen. Regarding investigations, sonography is not sensitive in identifying this rare condition due to difficulty in scanning beneath the sternum.[6] Contrast-enhanced computed tomography (CECT) lower chest and abdomen

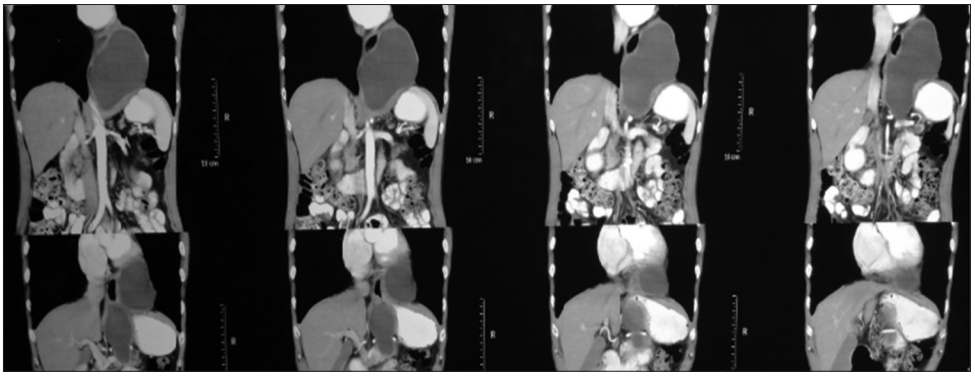

Figure 2: Image showing cystic lesion taking origin from the pancreas and extending into the lesser sac and into the mediasternum upwards

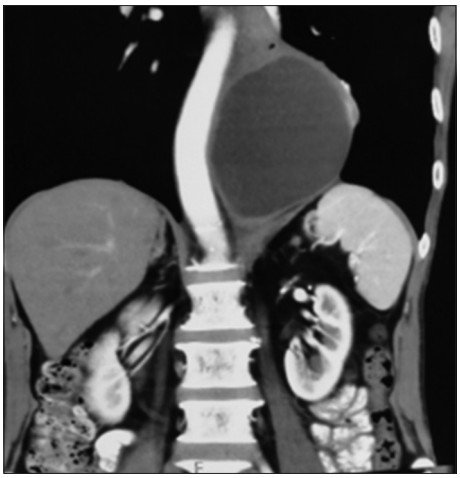

Figure 3: Image showing cystic lesion displacing the lower thoracic aorta towards right side

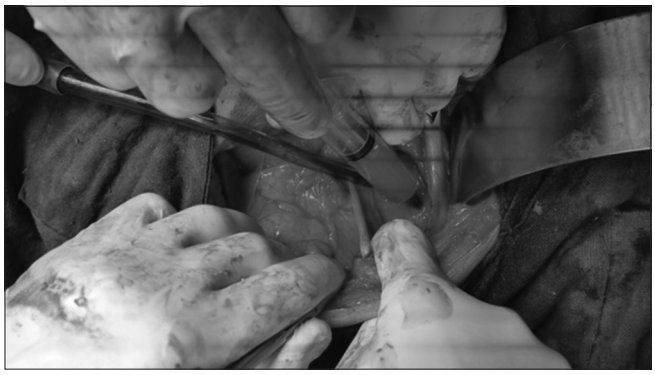

Figure 5: Image showing needle aspiration for confirmation of cyst location along the posterior wall of stomach

has a very high sensitivity in providing the location and anatomical relation of the pseudocyst to the surrounding structures. In our case, similar investigational scenario was seen as sonography failed to pick the mediastinal extension that was clearly depicted in CECT scan. Other investigations that were not done in our case but are useful are magnetic resonance cholangiopancreaticography and endoscopic ultrasound. Spontaneous regression of a mediastinal pseudocyst is rare. Drainage may be in the form of laparotomy with cystogastrostomy, cystojejunostomy, pancreaticojejunostomy or transdiaphragmatic cystojejunostomy with loop Roux-en-Y, radiologically guided external drainage or endoscopically guided internal drainage.[11] In our case, we had performed cystogastrostomy.

A mediastinal pancreatic pseudocyst is a rare presentation which should be suspected in a patient presenting with atypical chest pain, dyspnea, or dysphagia. The displacement of the aorta by the pseudocyst has only been reported once in the literature and has to be considered while dealing with mediastinal pseudocyst.

Figure 4: Image showing opened anterior abdominal wall of stomach

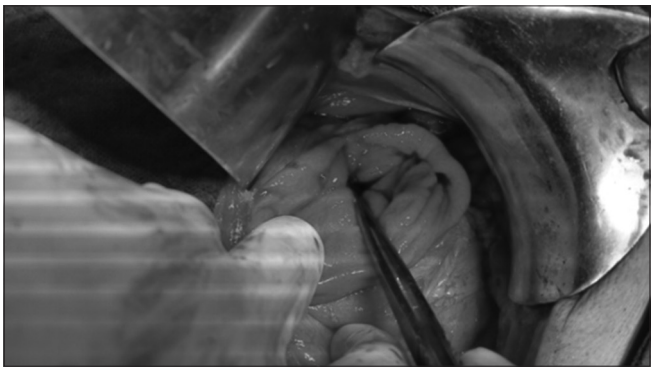

Figure 6: Image showing cyst sutured with posterior stomach wall

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