## Case Report

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# Ruptured mediastinal pseudocyst- a case report

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#### **ABSTRACT**

Pseudocysts are one of the common complications of chronic pancreatitis. Usually they present with chronic abdominal pain and obstructive symptoms. The symptomatology mainly correlates with the location of the pseudocysts. Thoracopantreatic pseudocysts are rarely encountered in surgical practice. They can present in the acute setting with hemoptysis or rupture. They can also have an indolent course with dysphagia and other mass effects. We report a rare case of mediastinal pseudocyst with rupture into the bronchus causing massive haemoptysis.

**Keywords:** Mediastinal pseudocyst, Rupture, Tracheo-bronchial communication

## INTRODUCTION

Pseudocysts are one of the complications of chronic pancreatitis. The pancreatic inflammation spreading and damaging structures anterior to pancreas will lead on to pancreatic ascitis. Posterior spread of the inflammatory process will cause thoracopancreatic pseudocysts, which can be either mediastinal pseudocysts, pancreaticopleural fistula, pancreatico-bronchial fistula, or pancreatico-pericardial fistula. Rarely these pseudocysts can rupture causing acute symptoms, in the absence of abdominal complaints. We present a case of mediastinal pseudocyst with rupture into tracheobronchial tree. The patient presented with aspiration and succumbed to the disease.<sup>1</sup>

#### **CASE REPORT**

A 45 years old man presented to emergency department with history of acute onset cough with expectoration of large volume clear fluid followed by hemoptysis. He complained of dysphagia for past 6 months and had lost 10 kg of weight in 6 months. He is a chronic alcoholic

with previous history of recurrent pancreatitis episodes. On examination, he was dehydrated with pulse rate of 110 per minute and Blood pressure of 90/60 mm Hg. SpO2 was 100%. Examination of the chest revealed reduced air entry into left side basal area. Renal function tests, electrolytes were normal. Serum amylase level was within normal limits. Chest X ray revealed air fluid level in the left lung basal zone.

After the hemodynamic status improved, CT of the chest and abdomen was done. It showed a large thoracopancreatic pseudocyst measuring 20 cm in largest dimension with a clear communication into the bronchus in left lower lobe of the lung (Figures 1, 2 and 3). The pseudocyst was compressing the esophagus and lying anterior to vertebra and great vessels. No other pseudocysts were identified. Pancreas was atrophic with extensive calcifications. Right lung was normal. In the emergency room, the patient had a bout of cough with hemoptysis and aspiration. The spo2 dropped to 85%. He was immediately intubated and resuscitated but the patient succumbed to the massive hemoptysis and aspiration.

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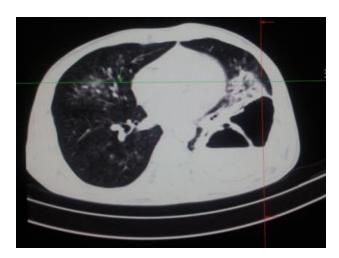


Figure 1: CT thorax of the left posterior mediastinal pseudocyst with air fluid level.

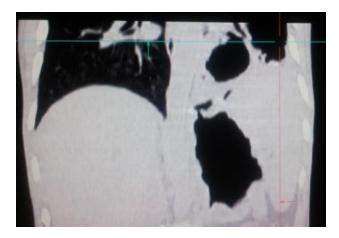


Figure 2: Coronal section of the pseudocyst extending into left thorax and communication into a lower lobe bronchus.



Figure 3: Sagital section of the large pseudocyst pushing the stomach anteriorly and extending into retrocardiac region.

#### **DISCUSSION**

Mediastinal pseudocyst is a rare complication of chronic pancreatitis. It occurs when the inflammation spreads posterior to pancreas into the thoracic cavity. The route of spread into the thorax is through esophageal hiatus or aortic hiatus and rarely through the foramen of morgagni.<sup>2</sup> Such patients may not have any abdominal symptoms since the pseudocyst is effectively decompressed into the thorax. These cases may present with nonspecific symptoms like dysphagia, dyspnea, chest pain.<sup>3</sup>

Rupture of mediastinal pseudocyst usually occurs into pleural cavity and can present as massive effusion or empyema.<sup>4</sup> Rupture into the trachea bronchial tree is rarely reported. In such instances, the decompression of the pseudocyst into bronchus causes bouts of cough with large volume expectoration of clear fluid. The pancreatic enzymes can injure pulmonary vasculature causing hemoptysis.

The main investigation to diagnose pseudocyst is contrast CT of abdomen and chest. Pancreas may show focal calcifications with dilated main pancreatic duct. MRI can be used to characterize the pancreatic duct further, and to demonstrate communication of the cyst with main pancreatic duct.<sup>1</sup>

Spontaneous remission of mediastinal pseudocysts is very rare. The ideal management of mediastinal pseudocysts depends on the general condition of the patient. If there is no cardiorespiratory compromise, octreotide followed by minimally invasive modalities like Endoscopic trans gastric drainage using EUS (endo ultrasound) with doppler can be tried. ERCP with transpupillary stent placement is successful only when the mediastinal pseudocyst communicates with the pancreatic duct. Open surgery is the option in cases where there is hemodynamic compromise due to rupture, or when there is pancreatic necrosis, abscess, hemorrhage. Surgical procedures like cystogastrostomy or cystojejunostomy, pancreaticoduodenectomy and pancreatojejunostomy can be done.<sup>5</sup>

## **CONCLUSION**

Mediastinal pseudocysts can present with myriad of symptoms like dyspnea, dysphagia, hemoptysis, rupture. The management options differ based on the presentation. A high index of suspicion is needed to diagnose this condition especially when a thin walled low attenuation cyst occupies the posterior mediastinum. Early diagnosis and treatment offers better outcome in this potentially dangerous condition.

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