

Case Report

Pseudopancreatic Cyst: A Rare Presentation

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Abstract: 32 yr old male patient presented with massive left sided pleural effusion as a complication of asymptomatic pancreatic pseudocyst. Pancreatic pseudocyst is well-recognized complication of non-traumatic pancreatitis. Massive pancreatic pleural effusion in pancreatitis and pancreatic pseudocyst is uncommon and therefore it should be considered in the differential diagnosis of pleural effusion to avoid undue delay in diagnosis, repeated thoracentesis, pleural biopsies, other specific tests and wrong empirical antituberculosis treatment. Massive pancreatic pleural effusion is recurrent and is characterized by high level of amylase in pleural fluid. Therefore we conclude that amylase activity in pleural fluid should be measured during evaluation of left sided exudative pleural effusion with or without history of acute/ chronic pain abdomen and alcohol intake.

Keywords: Pancreatico-pleural fistula, Thoracentesis, Pancreatic Pseudocyst, Massive pleural effusion

INTRODUCTION

The diagnosis is usually apparent after a thorough history and physical examination and a workup, including thoracentesis and other selected diagnostic tests, in about half of all cases of pleural effusion [1]. The remaining are more difficult to diagnose. An unusual cause of pleural effusion is an intra abdominal process. Pleural effusion is an uncommon complication of pancreatitis, often left sided, associated with acute pancreatitis [2].

Pancreatico-pleural fistula (PPF) was first described by Tombroff in 1973 [3]. Massive pancreatic pleural effusions are uncommon and often go unrecognized in absence of overt features of pancreatitis. Two mechanisms involved in PPF are thought to be: (a) mostly through a pseudocyst in nearly 77% cases [4] or (b) directly via the main pancreatic duct with the pleural cavity [11].

The effusion frequently occurs without clinical evidence of pancreatitis but may be associated with a pseudocyst of pancreas [12].

We report a rare case of a massive left sided pleural effusion in whom there was no clinical evidence of pancreatic disease.

CASE REPORT

A 32 year old male presented with left sided chest pain, progressive shortness of breath since 15 days.

Patient gave history of associated cough along with scanty mucoid expectoration. He denied history of abdominal discomfort, vomiting, weight loss or trauma to the chest. Patient was known case of diabetes and was on oral hypoglycemic drugs since four years. Patient also gave history of chronic alcohol consumption.

On physical examination, patient had average built and was in respiratory distress with respiratory rate 33/min, pulse 110/min, BP 110/70 mmHg. Examination of respiratory system revealed dull percussion note over left hemithorax, mediastinal shift to right and diminished breath sounds all over left hemithorax. Chest X-ray confirmed massive left sided pleural effusion (Fig 1). Intercostal chest tube drainage was performed and 2.9 litres of straw coloured pleural fluid was drained (Fig. 2).

The routine investigations showed Hb of 10.1 gm% with TLC of 9200/mm³. Urine examination, Liver function test, renal function test and serum electrolytes were normal. Pleural fluid was straw coloured with protein level of 4.0 gm%, LDH-7000 U/l and ADA level 20U/l. No organisms were detected on Gram stain and AFB stain and culture was sterile. Pleural fluid cytology was negative for both malignant cells and tuberculosis (76% polymorphs, 24% lymphocytes) and biopsy revealed normal pleura. USG chest was done to estimate the amount of pleural fluid before doing closed tube thoracostomy. Simultaneous study of abdominal

structures incidentally revealed large cystic lesion 10.5 x 5.5 cm in relation to body and tail pancreas suggestive of pancreatic pseudocyst (Fig. 3). Computed tomography scan of thorax and abdomen was performed which revealed gross left pleural effusion with underlying lung collapse causing shift of heart and mediastinum to right side and large thick walled pseudopancreatic cyst in lesser sac involving body and tail of pancreas (Fig. 4, 5). To rule out possibility of pleural fluid collection secondary to pancreatic pseudocyst, pleural fluid amylase level was done which was high and confirmed the diagnosis of massive left sided pleural effusion as complication of asymptomatic pancreatic pseudocyst.

He was managed with antibiotics and subsequently referred to surgical unit for management of pseudopancreatic cyst.



Fig. 3: Large cystic lesion 102mm X 56mm is seen in the anterior to the head and body region of pancreas suggestive of pseudocyst.



Fig. 1: Chest X-ray showing massive left sided pleural effusion

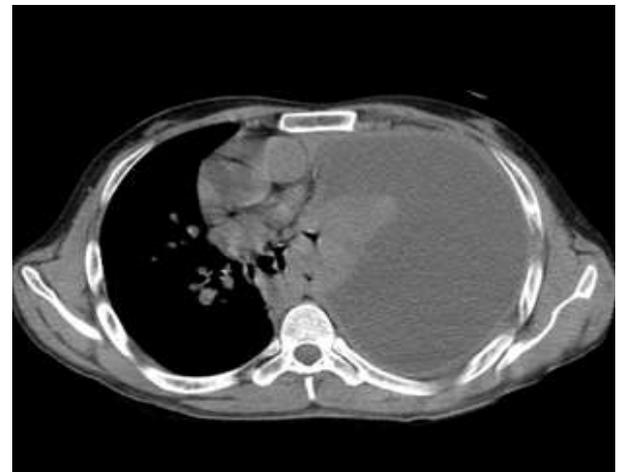


Fig. 4: HRCT thorax showing left side massive pleural effusion with collapsed lung



Fig. 2: Post ICD Chest X-ray



Fig. 5: Axial NECT scan showing Pseudopancreatic cyst

DISCUSSION

Despite intensive efforts as many as 15-20% cases of all pleural effusions remain undiagnosed [5]. Generally pancreatic disease is generally not considered

in patients presenting solely with massive pleural effusion [3]. Pancreatic pleural effusion occurs due to disruption of pancreatic ductal posteriorly. Fluid drains through reteroperitonium to the pleural space. Disruption of the dorsal pancreatic ductal system is indicated by enzyme-rich pleural effusions [6]. Amylase levels are usually more than 1000 IU/l with reported values as high as 475,000 Somogyi units/dl [2, 7]. Pancreatic pseudocyst is well-recognized complication of non-traumatic pancreatitis. Complications of pseudocyst include bleeding, extension, fistulisation and infection [8].

The present report is a rare case with occurrence of massive left sided pleural effusion secondary to asymptomatic pseudocyst in the absence of any features/ background of pancreatitis.

The key to the diagnosis is dramatically elevated pleural fluid amylase [11, 13]. Pancreatic masses, calcifications or pseudocysts can be detected by CT. ERCP is a sensitive diagnostic and therapeutic tool for detecting pancreatic duct dilatation and stent placements. MRCP is a preferred alternative diagnostic tool [11].

Therapy is somewhat controversial because of 48% effectiveness. Initially, conservative management should be attempted [9]. Conservative treatment consists of total parenteral nutrition, somatostatin, thoracocentesis or chest tube drainage in water seal [14]. Initially, non-operative treatment is indicated in patients with pancreatic pleural effusion: The therapeutic rationale is to decrease pancreatic exocrine secretion and to encourage the pancreatic ductal disruption to seal [15]. Resolution of recurrent pleural effusion by drainage of a pancreatic pseudocyst through a percutaneous catheter is also described [10]. Complete drainage by introducing intercostal tube is necessary, to avoid complications like pneumothorax, empyema and bronchopleural fistula.

Endoscopic treatment includes placing implants inside the Wirsung's duct and sphincterotomy. Surgical treatment includes drainage with the preparation of pancreatic anastomosis with an intestinal segment and / or distal pancreatectomy alone [11].

CONCLUSION

We conclude that while managing left sided exudative pleural effusion with or without history of acute/ chronic pain abdomen and alcohol intake, amylase activity in pleural fluid should be measured and pancreatic etiology should be included in the differential diagnosis of pleural effusion to avoid undue delay in diagnosis, repeated thoracocentesis, pleural biopsies, other specific tests and wrong empirical antituberculosis treatment specially in countries like ours.

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