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Pancreaticopleural Fistula Presenting as Left Massive Pleural Effusion – A Rare Complication

Authors
Puspita Singh[1], Rekha Manjhi[2], Aurobindo Behera[3], Gourahari Pradhan[4]
[1]Post Graduate trainee, Department of Pulmonary Medicine, VIMSAR, Burla, Odisha, India
[2]Associate Professor and HOD Department of Pulmonary Medicine, VIMSAR, Burla, Odisha, India
[3]Assistant Professor, Department of Pulmonary Medicine, VIMSAR, Burla, Odisha, India
[4]Assistant Professor, Department of Pulmonary Medicine, VIMSAR, Burla, Odisha, India

Abstract
Pancreatic pleural fistula (PPF) is a rare complication of chronic pancreatitis. Patients present with pulmonary symptoms more than abdominal symptoms leading to delayed in diagnosis. We report a case of recurrent massive U/L PLEF of pancreatic origin. Clinical finding in addition to amylase rich pleural fluid and demonstration of fistulous tract on imaging helps to identifying the cause.
Keywords: *Pancreatic pleural fistula (PPF), Pleural effusion, pancreatic pseudo cyst, MRI with MRCP*.

Introduction

Unilateral massive PLEF is usually malignant origin. We report a case of recurrent massive U/L Pleural effusion of pancreatic origin. Pancreaticopleural fistula (PPF) is a rare complication of chronic pancreatitis. This rare entity may be seen in patients with acute and chronic pancreatitis or may follow traumatic and surgical disruption of the pancreatic duct[1]. Pleural effusion associated with pancreaticopleural fistula should be distinguished from the small reactive, self-limiting left-sided effusion that commonly occurs in 3 to 17% of patients with acute pancreatitis[2]. Patients present with pulmonary symptoms more than abdominal symptoms leading to delayed in diagnosis. Clinical finding in addition to amylase rich pleural fluid and demonstration of fistulous tract on imaging helps to identifying the cause. Early diagnosis and systemic approach can prevent morbidity and mortality.

Case History

A 27yr old male presented with chest pain, abdominal pain and breathlessness for 1 month. Abdominal pain in the epigastric area, radiating to back. Above complain not associated with fever/ cough/breathlessness/hemoptysis/loss of appetite. There was no significant past history. Patient was addicted to alcohol. On examination Vitals stable. On examination of respiratory system – stony dullness over left side of hemithorax on percussion and decrease breath sound over left hemi thorax on auscultation. Examination of all other system was normal.

Investigation

Blood hemogram, renal function test, liver function test, Serum Electrolytes are within normal limit. Serum amylase -919 IU/L, Serum lipase -556 IU/L, Trop –I(Q)- <0.1ng/ml. CXR shows massive left pleural effusion (Figure 1)

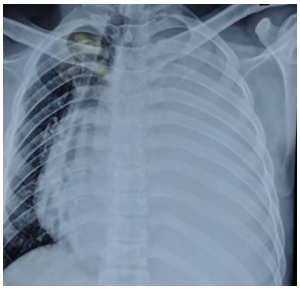

Figure -1 homogenous opacity on left side hemithorax obliterating costophrenic and cardio phrenic angle left side with trachea shifted to right side s/o left massive pleural effusion

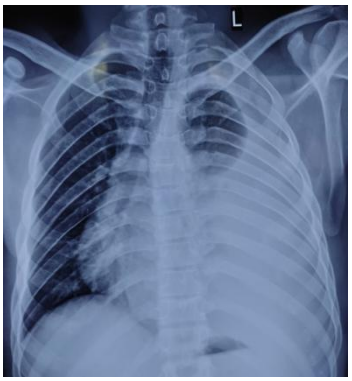

Figure – 2 Repeat Chest Xray (after 6 days) after thoracocentesis

USG thorax shows gross anechoic collection in left pleural space. On Thoracocentesis 2000ml of Brownish colored fluid aspirated. Pleural fluid Analysis shows exudative effusion. Biochemical – ADA 34U/L, LDH -1077IU/L, Sugar -55mg/dl, Protein -5.6gm/dl, albumin -3gm/dl, pleural fluid amylase -1083U/L, Pleural fluid Lipase -2196U/L, Cytology – Lymphocyte 75%, Neutrophil 25% and no malignant cell, Gram stain and culture – sterile, CBNAAT –MTB not detected. Repeat CXR suggest reaccumulation of pleural fluid.MRI of upper Abdomen with MRCP (Magnetic Resonance Cholangio Pancreatography) shows, 29 X18 mm cystic lesion superior to the distal body and tail of the pancreas. s/o Pancreatic pseudocyst. Superiorly the fluid collection tracking in para esophageal region in posterior mediastinum surrounding distal esophagus. Left pleural effusion with collapse of left lower lobe. Main pancreatic duct is not dilated. s/o pancreaticopleural fistula (Figure -3)

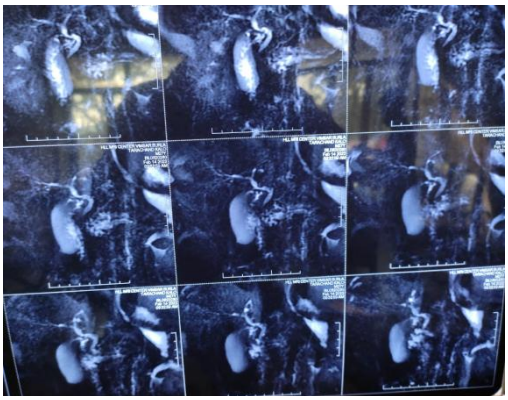

Figure-3 MRI of upper abdomen with MRCP showing fistulous tract

Management

Patient was treated conservatively with antibiotics, analgesics, oral digestive enzyme supplements. Intermittent thoracocentesis was done (approx.4500ml). As there is recurrent accumulation of pleural fluid, Intercoastal drainage tube was given. Patient was diagnosed as unilateral massive recurrent pleural effusion of pancreatic origin of pancreaticopleural fistula (PPF) and referred to higher center for further invasive management.

Discussion

Pancreatico pleural fistula (PPF) is a rare complication of acute or chronicpancreatitis (<1%.)[3]

Etiology -

- 99% due to alcohol related chronic pancreatitis.
- Trauma
- Congenital pancreatic duct abnormality
- Underlying disease process like pancreatic cancer

Presentation – pulmonary symptoms (75%) >abdominal symptoms (25%)

Pleural effusion -left side (70%), rightside (20%), bilateral (10%)

Work -up -

- Amylase rich Pleural fluid is diagnostic.
- CT, MRI with MRCP, Fistulogram
- MRCP is the imaging modality of choice because it helps to diagnose the presence and site of fistula and to guide further management. Unlike ERCP, it is non-invasive and helps in visualisation of the pancreatic duct beyond strictures. Like CT, it can also show changes in pancreatic parenchyma [4]

Management options are Conservative, Endoscopic and surgical

Conclusion

PPF is a rare complication of Chronic pancreatitis. High degree of Clinical suspicion with Amylase rich pleural fluid with Imaging modalities like CT& MRCP aids the diagnosis of PPF. Management is multidisciplinary approach.

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