



A Case of Massive Pleural Effusion Due to Pancreaticopleural Fistula

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ABSTRACT

Pleural effusion secondary to pancreaticopleural fistula is a rare complication of acute and chronic pancreatitis. The classical finding pointing to diagnosis of Pancreaticopleural fistula is high amylase in pleural fluid, and early intervention can prevent recurrent effusions.

Keywords: pleural effusion, pancreaticopleural fistula

INTRODUCTION

Pancreaticopleural fistula is characterised by leakage of pancreatic fluid into pleural space due to defect in pancreatic duct. Disruption of pancreatic duct can occur following acute or chronic pancreatitis, pancreatic resection or trauma. Leakage of pancreatic secretions can cause significant morbidity due to malnutrition, skin excoriation, infection..successful management of pancreaticopleural fistula requires multidisciplinary approach. Conservative treatment with octreotide to inhibit pancreatic secretion and endoscopic stenting may achieve closure of fistula in 31 to 45% cases, surgery can lead to healing in up to 80 to 90% cases.

CASE REPORT

45 Y Mr. Ponnusamy electrician by occupation, chronic smoker and alcoholic presented with complaints of chest pain- 45 days duration, insidious onset and progressive in nature, non anginal, aggravated on coughing and deep inspiration, not relieved with analgesics. No history of dyspnoea/ orthopnoea/ pedal oedema/ cough with expectoration/ hemoptysis. His past history was not significant, no contact with PTB patient. On examination he was comfortable at rest, no pallor, no icterus, no cyanosis, grade II pandigital clubbing +, no pedal oedema, no generalised lymphadenopathy, dilated veins present over chest wall.

Vitals normal, respiratory rate- 20/min. Respiratory system examination- fullness present in left hemithorax and chest wall movements diminished on left side. Mediastinal shift to right with trachea to right and apical impulse in left 5th intercostal space 3cm medial to midclavicular line present. Vocal fremitus diminished on entire left hemithorax. Stony dull note on percussion. Breath sounds absent on left side, normal resonant note was present on right chest. Other system examination was normal.

INVESTIGATIONS

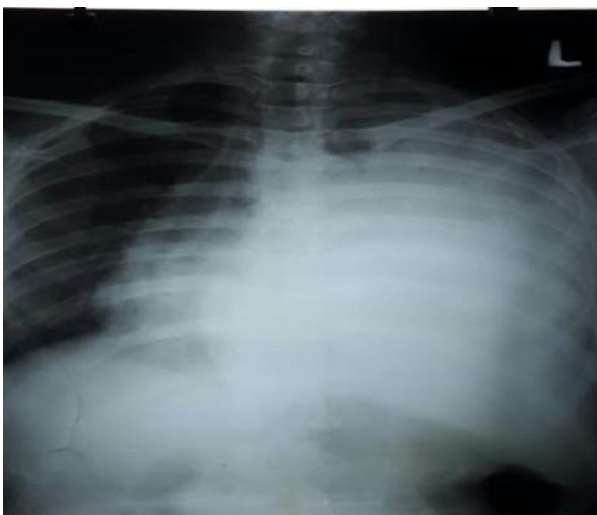
Complete hemogram- normal

Renal and liver function test- normal

VCTC- non reactive

Sputum AFB- negative

Mantoux test- negative





Pleural Fluid Analysis

Cell count- 58 cells/hpf (3 polymorphs, 55 lymphocytes)

Protein - 3.1 g



Sugar - 120mg% Pleural fluid ADA - 24.4u/l

Pleural fluid amylase - 3498u/l

Cytology for malignant cells - negative

Serum amylase - 1607 iu/l ; serum lipase - 886 iu/l ;
Corrected calcium- 10.5 mg%

CHEST X RAY PA - left massive pleural effusion

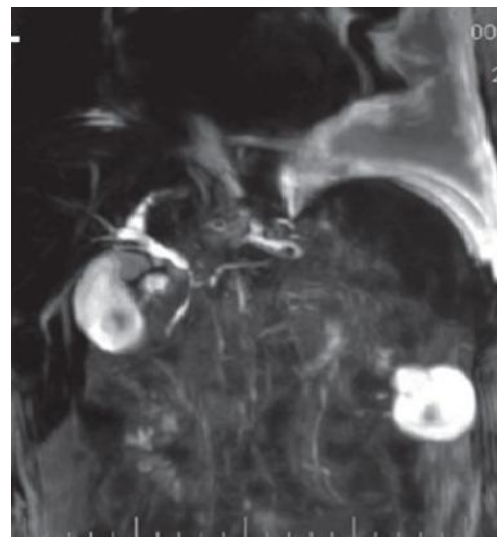
USG ABDOMEN AND PELVIS - 7mm calculus in head of pancreas s/o chronic calcific pancreatitis

MRCP ABDOMEN - Pancreaticopleural fistula

DIAGNOSIS - left massive pleural effusion secondary to pancreaticopleural fistula of chronic calcific pancreatitis

TREATMENT

1. Intercostal tube drainage



2. prophylactic antibiotics and somatostatin analogue (inj. Octreotide) to suppress exocrine pancreatic secretions

DISCUSSION

Pleural effusion due to pancreaticopleural fistula is very rare complication, it accounts for less than 1% cases. It is seen in 3 to 7% of patients with pancreatitis. Combined frequency of internal pancreatic fistula (pancreatic ascites and pancreaticopleural fistula) is seen between 0.4 and 7% of chronic pancreatitis and 6 and 14% of patients with pseudocyst. pancreaticopleural fistula is uncommon than pancreatic ascites. It presents with large recurrent pleural effusion, left sided is common and are reported to account for 76% of cases. It is commonly seen in middle aged alcoholics who present with dyspnoea and left sided pleural effusion.

Massive pleural effusion secondary to PPF is usually a consequence of incompletely formed or ruptured pseudocyst or direct leak from pancreatic duct. The fistulous tract passes either through aortic or oesophageal diaphragmatic orifice or directly transdiaphragmatically.

Pleural effusion associated with PPF must be distinguished from small, reactive and self limiting pleural effusion occurring in 3 to 17% of patients with acute pancreatitis. Exudative pleural fluid with high amylase is diagnostic and confirmed by MRCP.

Aim of medical management is to reduce stimulation to pancreatic exocrine secretions using somatostatin analogues like octreotide. Thoracentesis encourages serosal surface apposition and provides symptomatic relief. Dose of octreotide is 50ug subcutaneously TDS up to maximum of 250ug TDS. It reduces fistula output and decreases time to fistula closure. When medical management fails surgery/ ERCP stenting can be done.

CONCLUSION

Pancreaticopleural fistula which is a rare complication of pancreatitis can be diagnosed only with high degree of clinical suspicion in patients with large recurrent pleural effusion. Predominant symptoms are related to chest with coexisting history of alcoholism. Early pleural fluid amylase will avoid delay in diagnosis.

LIST OF ABBREVIATION

PPF- Pancreaticopleural fistula

REFERENCES

1. A. R. Dhebri and N. Ferran, "Nonsurgical management of pancreaticopleural fistula," *Journal of the Pancreas*, vol. 6, no. 2, pp. 152–161, 2005
2. D. C. Rockey and J. P. Cello, "Pancreaticopleural fistula: report of 7 patients and review of the literature," *Medicine*, vol. 69, no. 6, pp. 332–344, 1990