

A pleural effusion caused by pancreatic pseudocyst rupture

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Background

Pancreatic-pleural fistula (PPF) is a rare complication of acute and chronic pancreatitis, that leads to pleural effusions, often caused by fertilization of pancreatic secretions to the thorax derived from the rupture or leakage of a pseudocyst¹.

Case history

We describe the case of a 42-year-old African male with alcohol abuse, that presented to our ED for dyspnea. The chest CT revealed a bilateral pleural effusion, greater on the right for which a pleural drainage was positioned. Laboratory tests revealed slow increase of NSE and CA125 and elevated amylase levels in the pleural fluid. During the stay he experienced an increase of pancreatic enzymes without abdominal symptoms. Contrast-enhanced abdomen CT scan and MRI cholangiopancreatography detected a pancreatic tail pseudo cyst with PPF and a picture of chronic pancreatitis (Fig. 1). The patient felt better after fluid removal and medical management (octreotide) and was transferred to a specialist center for possible endoscopic and/or surgical intervention.

Discussion

PPF is diagnosed in only 0.4% of patients diagnosed with pancreatitis, but in patients with pancreatic pseudocyst, it is seen in 4.5% of cases. Chronic pancreatitis secondary to alcohol abuse is the most common cause of PPF in adults, whereas in children it is mostly secondary to biliary duct obstruction. PPF is causing by the release of pancreatic enzymes from a damaged pancreatic duct or ruptured pancreatic pseudocyst lead to leakage of secretions through a fistulous tract into the thorax.

Diagnosis is delayed due to the absence of abdominal symptoms, as patients usually complain of pulmonary symptoms secondary to pleural effusions. There are no clear established guidelines on treatment of PPF based on randomized control trials. Surgery is indicated when conservative and endoscopic treatment fails². PPF is rare but it must be considered in the setting of recurrent pleural effusions and coexisting pancreatitis. Its early diagnosis and management can lead to prevention of long-term morbidity and mortality.

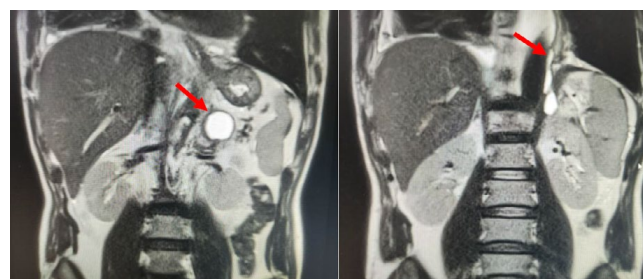


Figure 1. T2 weighted MRI-cholangiopancreatography documented the pancreatic tail pseudocyst and a thin communication channel between this lesion and the subphrenic endopleural fluid level compatible with PPF (red arrows).

References

1. Rockey DC, Cello JP (1990) Pancreatic pleural fistula report of 7 patients and review of the literature. *Medicine* 69: 332-344.
2. Wronski M, Slodkowski M, Cebulski W (2011) Optimizing management of pancreatic pleural fistulas. *World J Gastroenterol* 17: 4696-703.