Pancreaticopleural Fistula: A Rare Presentation of Recurrent Bilateral Pleural Effusions in an Elderly Male

Rahul Thakkar, MD[1]; Erik Rahimi, MD[2]
[1]Texas A&M Health Science Center College of Medicine – Scott & White Internal Medicine Residency (Round Rock), [2]Department of Gastroenterology, Baylor Scott & White, TX

INTRODUCTION

- **Pancreaticopleural fistulas (PPFs)** are an exceptionally rare complication of pancreatitis, occurring in approximately 0.4% of patients.
- PPFs often present as recurrent, left-sided pleural effusions in middle-aged men with a chronic history of alcohol use and pancreatitis.
- Rarely, PPFs may occur in elderly patients and present at bilateral pleural effusions, as illustrated in this case.

CASE PRESENTATION

Our patient is a 68-year-old male with a recent episode of acute alcohol-induced pancreatitis complicated by pseudocysts who had since developed bilateral pleural effusions with progressively worsening dyspnea. His recent echocardiogram had resulted as normal, and he had been trialed on oral diuretics. He had also undergone a thoracentesis with ~1.6 L serosanguinous fluid removed, with only tentative improvement in his symptoms; fluid analysis had not shown a clear etiology. He presented to ED with persistent dyspnea and was admitted with recurrence of bilateral pleural effusions **(Fig 1)**. He received IV diuresis and a repeat thoracentesis was performed, this time significant for an amylase level above the assay limit (32,770 U/L). Gastroenterology was consulted for further evaluation and performed endoscopic retrograde cholangiopancreatography (ERCP) which showed pancreatic ductal disruption with contrast extravasation towards the pleural space, consistent with pancreaticopleural fistula, and a stent was placed **(Fig 2)**. Following his procedure, the patient had difficulty with extubation and continued to require high-flow oxygen therapy. CT imaging demonstrated recurrence of bilateral pleural effusions with evidence of a persistent fistula. Surgery was consulted and recommended bilateral chest tube placement along with continuing conservative management of his pancreatic leak (eg, octreotide infusion, TPN). Over time, the patient's symptoms resolved as chest tube output steadily decreased. In the following months, the patient was able to resume PO intake and remove his chest tubes without recurrence of large, symptomatic pleural effusions. A repeat ERCP, conducted several months after discharge, confirmed resolution of the pancreaticopleural fistula.

DIAGNOSTIC STUDIES

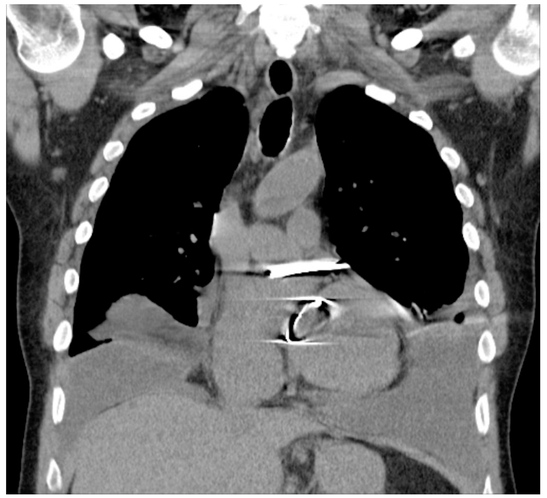

Fig. 1 – Computed tomography (CT) of chest with contrast illustrating large bilateral pleural effusions.

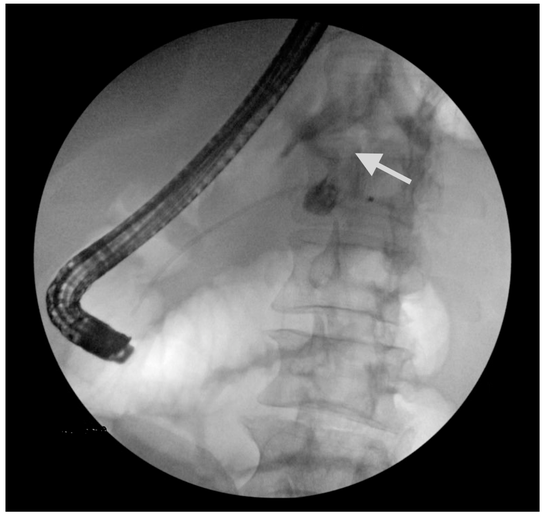

Fig 2. – Endoscopic retrograde cholangiopancreatography (ERCP) demonstrating extravasation of contrast towards the pleural space.

DISCUSSION

- Pancreaticopleural fistulas should be considered in patients with a prior history of alcoholic pancreatitis who present with recurrent pleural effusions despite a negative cardiopulmonary workup.
- The diagnostic workup of PPFs includes chest imaging which may reveal recurrent pleural effusion(s) and a subsequent diagnostic thoracentesis that may demonstrate markedly elevated amylase and lipase in the pleural fluid.
- ERCP may be utilized diagnostically for anatomic mapping and therapeutically for stent placement. Failure of endoscopic therapy may warrant long-term conservative management or surgical intervention.
- In conclusion, PPFs are more prevalent in middle-aged men and often manifest as recurrent left-sided pleural effusions; however, they may less commonly occur in an older demographic or cause bilateral pleural effusions.

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