Massive recurrent pleural effusion due to pancreaticopleural fistula

A 42-year-old male patient presented to the emergency wing in July 2014 with severe breathlessness. The patient was an alcoholic and had experienced multiple episodes of right-sided pleural effusion in the preceding 6 months. Laboratory study revealed serum amylase – 900 IU/L, serum lipase – 527 IU/L. Pleural fluid amylase was 51,480 IU/L.

Imaging Findings:
Chest PA radiograph revealed white-out right hemithorax (Fig. 1a). Ultrasound revealed massive right pleural effusion and acute chronic pancreatitis. CECT identified pancreatitis with small pseudocysts in the abdomen and thoracic cavity along with right pleural effusion (Fig. 2) MRI with MRCP revealed a fistulous tract from pancreatic pseudocyst to right pleural cavity (Fig. 3a, b). The patient was treated successfully with medical management and a two-month follow-up radiograph was taken (Fig. 1b).

Discussion:
Pancreaticopleural fistula (PPF) is a type of internal fistula, wherein the pancreatic secretions drain directly into the pleural cavity. It can occur as a complication of acute and chronic pancreatitis or after a traumatic disruption of the pancreatic duct [1]. Patients present with chest symptoms, which leads to a diagnostic dilemma. Diagnosis requires a high index of clinical suspicion in patients who develop alcohol-induced pancreatitis and present with pleural effusion, which is recurrent or persistent. The amylase content is very high in the pleural fluid. Due to varied clinical presentations of a pancreaticopleural fistula, imaging plays an important role. Computed tomography is the initial imaging, which identifies chest abnormalities in addition to pancreatic pathology. MRI with MRCP is very useful in visualization of a pancreaticopleural fistula and also identifying other complications of pancreatitis [2]. Therapeutic treatment of PPF consists of administration of somatostatin, intercostal tube drainage and endoscopic drainage with pancreatic sphincterotomy and stenting of the pancreatic duct [3].

LEARNING POINTS:
• A high index of suspicion for pancreaticopleural fistula in patients who develop alcohol-induced pancreatitis and
present with recurrent or persistent pleural effusion is needed.

- Always exclude pancreaticopleural fistula as a cause of effusion in massive right-sided pleural effusion in a case of pancreatitis (normally reactive effusion is mild to moderate with left side predominance in pancreatitis).

**Differential Diagnosis List:** Massive recurrent pleural effusion due to pancreaticopleural fistula., Pleural effusion due to acute pancreatitis, Pleural effusions due to malignancy

**Final Diagnosis:** Massive recurrent pleural effusion due to pancreaticopleural fistula.

**References:**


Figure 1

Description: Massive right pleural effusion. Origin: Emergency wing of Dr. Pinnamaneni Siddhartha institute of medical sciences, Chinnoutpally, India
Description: Resolution of pleural effusion. Origin: Emergency wing of Dr. Pinnamaneni Siddhartha institute of medical sciences, Chinnoutpally, India
Description: Pseudocysts in abdomen and thoracic cavity along with right pleural effusion. Origin: Emergency wing of Dr. Pinnamaneni Siddhartha institute of medical sciences, Chinnoutpally, INDIA
**Figure 3**

**Description:** Fistulous tract identified from pancreatic pseudocyst to right pleural cavity. **Origin:** Emergency wing of Dr. Pinnamaneni Siddhartha institute of medical sciences, Chinnoutpally, INDIA

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