Case Report

Straw coloured Right sided Pleuropancreatic effusion: a diagnosis not to be missed

Dr Arvind Vala*, Dr Meghna Patel, Dr Kiran Rami***, Dr. Kaushal Bhavsar******

* Resident(R2), ** Associate professor, *** Professor and HOD, **** Assistant professor,

Department of Respiratory medicine, GMERS Sola, Ahmedabad

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ABSTRACT

Pleural effusion secondary to chronic pancreatitis is an uncommon condition accounting for less than 1% of patients and usually left sided, haemorrhagic. Rarely it may be right sided and straw coloured causing difficulty in establishing the diagnosis, especially if the chest symptoms are disproportionally more than abdominal symptoms. We report a rare case of 41 years old alcoholic male who had history of right sided chest pain, cough with expectoration, breathlessness, abdominal pain for 2 months. Pleural fluid examination suggested straw coloured, lymphocytic predominant exudate with law adenosine deaminase and high lipase and amylase level. To rule out alcoholic pancreatitis CT scan thorax and abdomen was done, which demonstrated pancreatic pseudocyst and right sided gross pleural effusion. Conservative treatment was given in form of intercostal chest tube drainage, higher antibiotics, somatostatin analogue low fat diet for three to four weeks.

INTRODUCTION

Pancreatic pleural effusion due to chronic pancreatitis with pseudocyst accounting for less than 1% of cases. Pleural fluid is usually haemorrhagic, left sided with markedly increased amylase activity. Because of low incidence, we are presenting a case of right sided pleural effusion secondary to chronic pancreatitis managed conservatively. Pancreatic pleural effusion usually presents on left side. Gross pleural effusion is a known but rare complication of chronic pancreatitis.

CASE REPORT

A 41-year-old male patient presented with right side chest pain, cough, sputum and upper abdominal pain for a period of 2 months. He had history of tobacco chewing since 5 years and consumed 90 ml country liquor/day for 20 years and last intake was before 2 months with no history of smoking. His vital signs (temperature, pulse, Blood pressure and spo2) were within normal limit. Expansion of the right hemi-thorax was diminished. Percussion tone was dull and breath sounds were diminished and vocal resonance decreased over right side of chest. Laboratory reports showed complete blood counts, renal function test, liver function test and RBS within normal limits. On the chest X-ray- right sided homogenous opacity, obliteration of right costophrenic angle with shifting of trachea and mediastinum opposite side suggestive of right sided pleural effusion (fig. A) and also confirmed by USG Thorax.

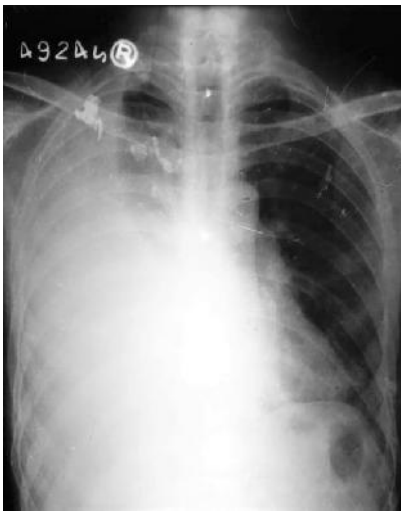
His pleural fluid examination revealed uniformly straw coloured fluid with a total cell count of 160/cu mm with 90%neutrophils, 10% lymphocytes, Malignant cells were not found in fluid cytology report. Microorganisms, AFB and fungal elements were not found. Biochemical analysis showed exudative fluid with total proteins 3.4 g/dl, glucose 101 mg/dl, and Adenosine Deaminase (ADA) 45.66 U/L.

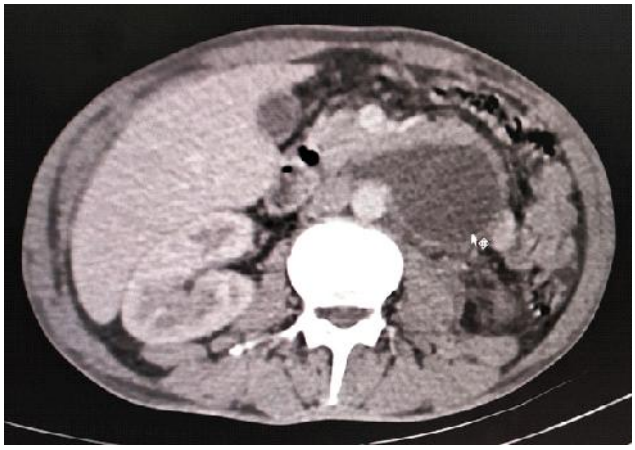
After all these investigations we could not found etiological diagnosis. As patient is alcoholic we undergo for USG abdomen to rule out alcoholic pancreatitis and reports showed pancreatic pseudocyst with atrophic pancreas so we sent pleural fluid lipase and amylase, which was 1997 U/L and 57 U/L respectively.

Patient underwent CT thorax and abdomen and it showed pancreatic pseudocyst with atrophic pancreas (fig. b) with massive right sided pleural effusion. Intercostal drainage tube was inserted and surgical consultant opinion was taken and was put on higher antibiotics for 4 weeks, somatostatin analogue and low fat diet as per their advice. By above management patient was improved, ICD removed and patient was discharged.

The chest X-ray- right sided homogenous opacity, obliteration of right costophrenic angle with shifting of trachea and mediastinum opposite side suggestive of right sided pleural effusion (fig. A)

Correspondence Address : **Dr. Arvind Vala**
B-246, Sitaram society, Bombay market to Puna gam road, Surat - 395010
Email ID:-arvindvala.av7@gmail.com





CT thorax and abdomen and it showed pancreatic pseudocyst with atrophic pancreas (fig. b)

DISCUSSION

Pleural effusion often occurs as a complication of pancreatic disorders such as acute pancreatitis, pancreatic abscess, pseudocyst, and chronic pancreatitis.1 The incidence of pleural effusion with acute pancreatitis in older reports was about 3 – 7 % . 2 Chronic pancreatitis is mostly caused by heavy alcohol consumption.3

The pathogenic mechanism involved in the formation of the pleural effusion include direct contact of pancreatic enzymes with the diaphragm, haematogenous transfer of pancreatic enzymes into pleura. Transfer of pancreatic secretions through trans diaphragmatic lymphatics and formation of pleuropancreatic fistula which results in direct communication of pancreatic pseudocyst with pleural cavity. Rarely there may spontaneous rupture of the pseudocyst into the pleural cavity causing massive pleural effusion.4

Pleural effusion due to a pancreaticopleural fistula is a rare complication of pancreatitis. Incidence is estimated at 0.4% in patients with pancreatitis rising to 4.5% in patients with an existing pancreatic pseudocyst. The diagnosis of pleural effusion secondary to pancreaticopleural fistula is based on a pleural effusion with raised pleural fluid amylase and imaging to confirm a pseudocyst or fistulous tract.

The available treatments include: (1) medical treatment with pancreatic rest, usually via NJ feeding, pancreatic enzyme replacement therapy, chest drainage and a somatostatin analogue; (2) endoscopic retrograde cholangiopancreatography with or without pancreatic stenting and (3) surgery. Medical treatment aims to reduce exocrine secretions from the pancreas by reducing pancreatic stimulation as a substantial number of pancreaticopleural fistulas will close spontaneously using conservative measures.5

CONCLUSION

Right sided pleural effusion in the setting of pancreatitis is rare and being straw colour in nature is further extremely rare. Pancreatitis should be taken into consideration when patient is alcoholic and has elevated amylase level. Lack of awareness can result in delay in the diagnosis and morbidity. This case is, hence, presented to make the physicians aware of this rare presentation.

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