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CASE REPORT **OPEN ACCESS**

Spontaneous esophago-Pleural Fistula Presenting As Right Hydropneumothorax-A Rare Fatal Leak

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A B S T R A C T

Esophago-pleural fistula is a rare condition with high morbidity and mortality with non- specific signs and symptoms. Main causes arepost -surgical, endoscopic procedures, secondary to tumors, from chemical injury (ingestion of corrosive substance), due to esophageal TB or spontaneous(rare). Here, we report a patient first presenting as right hydropneumothorax who was diagnosed to have esophago-pleural fistula on further investigation. Patient was planned for surgical repair but died before it since the patient developedsepsisdue to delayed diagnosis and treatment.

KEYWORDS: Esophago-pleural fistulas, Hydropneumothorax, spontaneous.

INTRODUCTION

Esophago-pleural fistulas are abnormal connections between esophagus and pleura. Though esophagus and pleura have anatomical proximity, EPF is uncommon and spontaneous EPF is even rarer.Esophago- pleural fistula is a rare condition occurring secondary to oesophageal surgery, instrumentation, malignancy or pneumonectomy. Spontaneous esophago-pleural fistula is very rare. Management of esophago-pleural fistula involves medical treatment of effusion/empyema that results from fistula and correction of fistula itself. Treatment mainly focuses on: adequatenutrition, treatment of pleural infection and closure of fistula. Conservative therapy includes drainage of empyema, local irrigation, tube feeding, gastrostomy or jejunostomy. Definite surgery-repair or direct reconstruction of esophagus [1].

CASE REPORT

A 39 year old male patient, labourer by occupation, chronic alcoholic and ganja smoker for 20 years, presented with high grade, intermittent fever, cough with foul smelling expectoration for 8days,right side chest pain and pain abdomen for 7 days.

CLINICAL FINDINGS

On Respiratory examination, horizontal line of 3 plane dullness, shifting dullness and succussion splash were observed.Movement of lower part of right side of chest was decreased. Vocal fremitus was decreased in right infra axillary area, infra scapular area. On percussion, hyper-resonant note was observed above Right 5th, 6th, 8th ICS along mid-clavicular line, mid-axillary line and scapular line respectivelyand dull below it. Breath sound was decreased over right interscapular, infra scapular, infra axillary area and Vocal resonance was diminished over right infra axillary area & infra scapular area.

INVESTIGATION AND MANAGEMENT

CXR suggested right hydropneumothorax. Brownish-white colour pus was aspirated from right 7thintercoastal space. It was sent for biochemical tests: ADA-129.6, glucose -5mg/dl, protein-10g/dl, albumin-1.4g/dl, LDH -1470, polymorphic without any atypical cells. Blood WBC was 26,390/microliter, neutrophilic leucocytosis. Pus culture – no growth after 24 hour incubation, pus AFB and CBNAAT were negative.On Gram stain many pus cells were detected. Intercoastal drainage was given and patient was managed conservatively. Sputum AFBwas negative andon CBNAAT, M. Tb was notdetected.On sputum Gram stain, pus cells with no bacteria was found andcultureshowed no growth.

FIGURE 1: PATIENT PRESENTING WITH RIGHT HYDROPNEUMOTHORAX ON CXR-PA VIEW

Due to presence of pus, Intercostal drainage tube of size 32 FG was given in right safety triangle. Systemic antibiotic was given and symptomatic management was done.

After 2 days, patient presented with increased purulent discharge through ICT tube after taking food and gross granular food particles present in ICT tube and bag Patient was kept NPO.

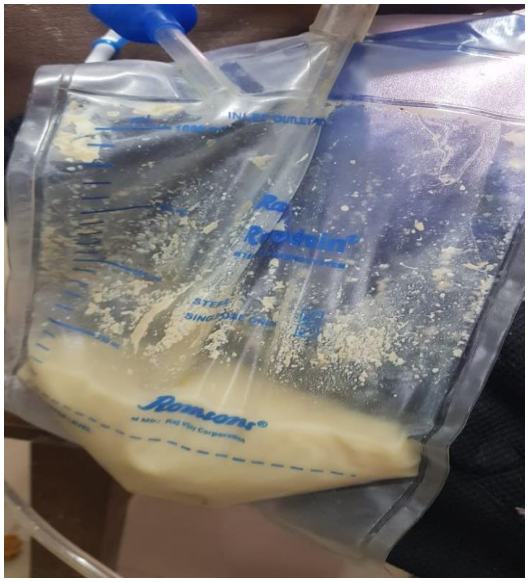

FIGURE 2: PRESENCE OF FOOD PARTICLES IN INTERCOSTAL TUBE AND BAG AFTER TAKING FOOD

Esophago-gastro- duodenoscopy suggested esophago-pleural fistula noted at 36 cm, erosive antral gastritis and 1st part duodenal ulcer. Under endoscopy guidance Ryle's tube was inserted. On HRCT Thorax, oral contrast was noted in right pleural cavity. A fistulous tract of size 2-3 cm in right lower 1/3rd of oesophagus connecting to right pleural cavity, right hydropneumothorax with ICT was present. On histopathology, nonspecific chronic inflammation was found.

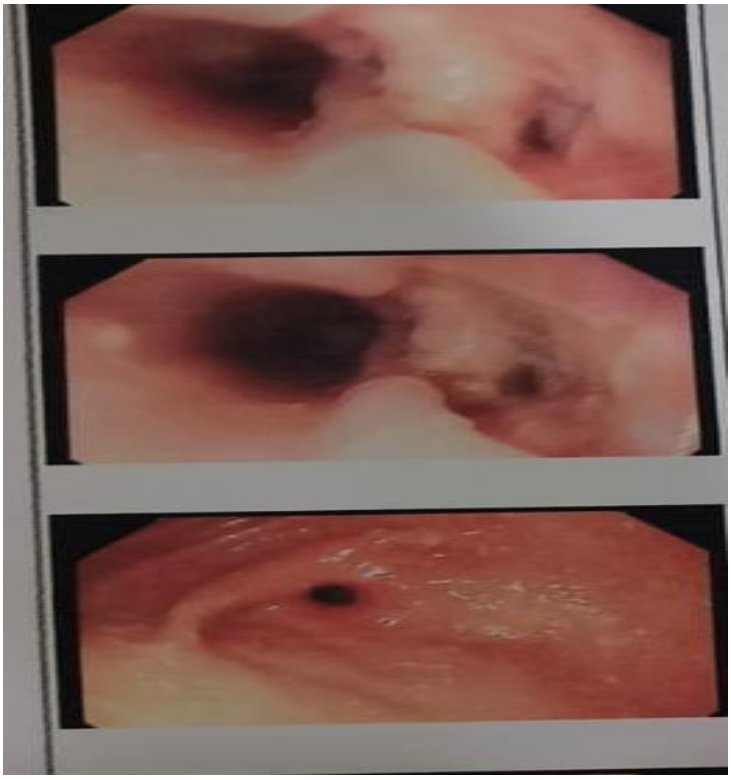

FIGURE 3: UPPER GI ENDOSCOPY REPORT SHOWING ESOPHAGO-PLEURAL FISTULA AND DUODENAL ULCER

Tuberculosis, carcinoma and any other chronic disease was ruled out. No prior history of trauma, instrumentation was present. Hence, provisional diagnosis was made as SPONTANEOUS ESOPHAGO-PLEURAL FISTULA.

Patient was managed conservatively with systemic antibiotics(Metronidazole-500 mg IV 8 hourly andMeropenem-1gm IV 8 hourly)and other symptomatic treatment. The patient was planned for surgical repair. But patient developed sepsis and died after 7 days.

RESULT AND DISCUSSION

Since, in this case patient is alcoholic we suspect this fistula is due to sudden increase in intra-esophageal pressure associated with forceful vomiting or retching.

Esophago-pleural fistula is a rare condition with high morbidity and mortality. Hence, early diagnosis with imaging is important otherwise it may result in continued respiratory contamination, sepsis and death. Hence, early diagnosis by clinical suspicion, endoscopy, HRCT with oral contrast and early definite management is required due to its poor prognosis.

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