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Pyopneumothorax (Right) With Bronchopleural Fistula

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ABSTRACT
A 20year old female came to our OPD with chief complaints of cough with expectoration - 15days,breathlessness-15 days;used antituberculous therapy 1 year back for 2 months only. IT was diagnosed case of bronchiectasis. On clinical examination signs of right-sided hydropneumothorax are found and confirmed by Chest X-ray. ICT was inserted.Pleural fluid CBNAAT revealedRifampcin sensitive Myco tuberculosis.E Coli was isolated from pleural fluid culture.

KEYWORDS: BPF, Pyopneumothorax, Pulmonary Tuberculosis

INTRODUCTION

Bronchopleural fistula (BPF) is communication between the bronchial tree and pleural space.
They are classified as alveolopleural fistula, bronchopleural fistula.
ETIOLOGY: Postoperative, infections, spontaneous rupture of bullae or cyst, trauma,malignancy
TYPES: Acute BPF, Subacute BPF, Chronic BPF
BPF can cause significant morbidity, prolonged hospitalization, and even mortality. The most commoncause of death is aspiration pneumonia resulting in acute respiratory distress syndrome because of flooding of the respiratory tract with secretions. other features include fever and copious amounts ofsputum. BPF closure is done bybronchoscopic placement of glues, gel foams, autologous blood patches, etc.

DISCUSSION

A 20-year-old female patientattended our OPD withcomplaints of cough with expectoration and shortness of breathfor the past 15days, which was sudden inonset and gradually progressive. cough with expectoration since 15 days, sputum is mucopurulent, non-foul smelling.The patient used antituberculous therapy 1 year back for 2 months only. No associated comorbidities are present.
On examination, the patient was tachypnoeic witha respiratory rate of 32breaths per minute, A Pulserate of 86beats per minute, and hypotension; spO2 85% on room air. She was givenoxygen support and was started on IV antibiotics. Under aseptic precautions,the intercostal tube was inserted in the5th intercostal space along the midaxillary line on the right side. 100ml of puswas drained andsent for investigations. A wide swing in air column movement with air leak was noticed. Based on thesputum CBNAATreport patient was started on first-line anti-tubercular therapy and proper ICT care was taken.She was sent for psychiatric consultation as we noticed gloomy behavior; diagnosed with moderate depression and added antipsychotics as advised by the psychiatrist. She was also sent fora cardiothoracic surgeon's opinion as we suspected chronic,persistent BPF that may require surgical intervention.CT surgeons advised review after completion of ATT. The patient was discharged at therequest and advised proper care of ICT at home with periodic followups or at any time if the situation warrants.

INVESTIGATIONS:
Chest Xray: Right-sided homogenous opacity with an air-fluid levelHRCT chest: Presence of large hydropneumothorax with an air-fluid level with completecollapse consolidation and presence of cystic bronchiectaticchangesonthe right side, extensive centrilobularemphysematous changes in the left upper and lower lobe.
CECT chest: Mild degree of mediastinal lymphadenopathy, the collapse of the right lung with Accompanyingcicatricial atelectasis, and cylindrical bronchiectaticchanges.
CBP,renal profile,liver enzymes:with in normal limitsPleural fluid analysis- MTB detected, Rifampicin sensitivePleural fluid gram stain, culture, and sensitivity- E Coli isolated, sensitive to cefoperazone and
SulbactamSputum CBNAAT: MTB detected, Rifampicin sensitivePleural fluid LPA- negative
Sputum liquid culture-negative
A second sample of pleural fluid culture- Klebsiella species isolated

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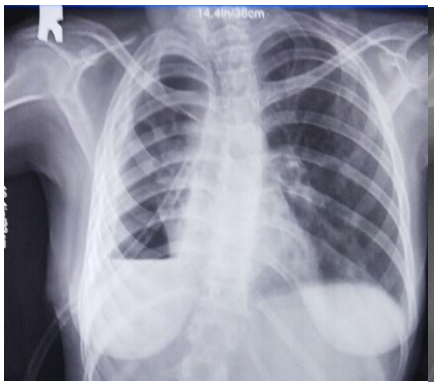
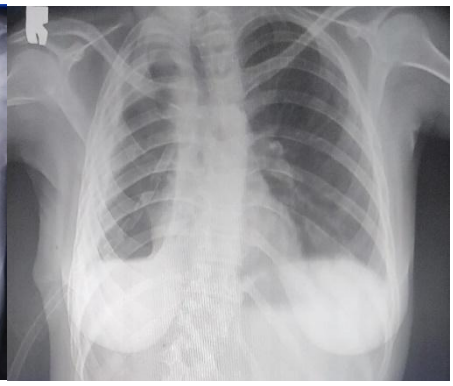
The third sample(after completion of antibiotics): Pleural fluid culture-no organisms isolated

Spirometry: FVC 0.59, FEV1 0.48, FEV1/FVC 71.9, PEF 1.24



Chest x-ray after ICT insertion



chest x-ray at the time of discharge

Drained pus from the right pleural cavity (at the time of admission)

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