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A RARE CASE OF LUNG ABSCESS COEXISTING WITH BRONCHOPLEURAL SUBCUTANEOUS FISTULA

Respiratory Medicine

Dr. Mohammed Riaz Post Graduate Student, Department of Respiratory Medicine, Sree Balaji Medical College and Hospital, Chrompet , Chennai

Dr. Sabarinath Ravichandar Assistant Professor, Department of Respiratory Medicine, Sree Balaji Medical College and Hospital, Chrompet , Chennai

Dr. Roopesh Kishan Post Graduate Student, Department of Respiratory Medicine, Sree Balaji Medical College and Hospital, Chrompet , Chennai

ABSTRACT

Lung abscess usually considered primary arising from lung parenchyma and is secondary when it's complicates from another underlying mechanism such as vascular emboli or rupture of extra pulmonary abscess into lung[2].The co-existence of lung abscess with bronchopleural subcutaneous fistula is not common and with its variable presentation it becomes difficult to manage as such[6].In this case study we hereby refer to the coexistence of Lung abscess with Bronchopleural subcutaneous fistula where early recognition and management resulted in favourable prognosis, preventing complications .

KEYWORDS

Lung Abscess, Brochopleural Subcutaneous Fistula.

INTRODUCTION:

Lung abscess as we know is a necrosis liquefactive in nature with formation of cavities containing necrotic fluid or debris caused by pathogenic infection or may be due to aspiration etc [1]. Bronchopleural fistula is one of the most common causes of lung abscess and a bronchopleural fistula serves as a link between the pleural cavity and the bronchial tree [3]. It may develop from untreated pneumococcal or other pyogenic empyema, as a result of draining a lung abscess or even results from trauma. But it is most frequently encountered in pulmonary tuberculosis .Over a decade, mortality from lung abscess was about 75%. Open drainage of abscess decreased mortality around 20-35% and with adequate antibiotic therapy mortality dropped about 8.7%. Same time progress in oral & dental hygiene declined the incidence of lung abscesses.[4]. Pulmonary physiotherapy and postural drainage are also needed in some. Surgical procedures are required in selective patients for the purpose of drainage or pulmonary resection [5]. In this case report we discuss about a patient with a lung abscess whom developed a refractory bronchopleural fistula.

History:

A 57 year old male security by occupation presented with complaints of Cough with expectoration for 15 days, Mucopurulent in consistency ,yellowish in colour, non-blood stained ,non foul smelling. Complaints of Swelling on left sided anterior chest wall aggravated with coughing for Past 1 month gradually progressive in nature ,Fever for past 15 days associated with evening rise of temperature and chills with rigor, chest tightness diffuses in nature ,non aggravating and non-radiating. Patient has history of biomass exposure for past 50 years and known smoker for past 25 years with a smoking index of 600 and alcoholic for past 30 years. Patient is a known case of coronary artery disease under medication with no other co morbidities and other significant family history.

Clinical Examination: revealed the patient was conscious oriented and febrile. Patient was not anaemic/no icterus/no clubbing / cyanosis /pedal oedema/ JVP was not elevated.

Local Examination:

5 x 3 cm swelling located in left anterior chest wall, non-pulsating, associated with cough reflex

Vitals:

- Saturation-98% at Room air, PR- 86bpmRR-22cycles/minute, BP-130/80mmhg
- CVS-S1S2 heard, no other added sounds
- RS-Bilateral wheeze with bilateral basal crepts were heard.
- CNS-No focal neurological deficit
- Abdomen – soft, No evidence of organomegaly.

Course In The Hospital: Patient came with above mentioned complaints, following investigations were done, all parameters were found to be normal except TC-11450, N-75, L-17, E-1.9

Chest X-ray PA View:

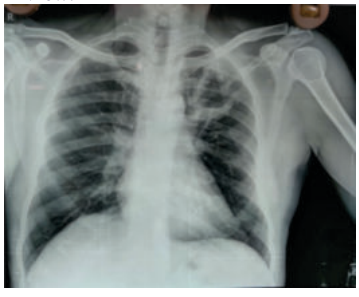

Figure 1

1]Prior Management - Left upper zone thick-walled cavity Elevated broncho vascular markings

Figure 2

2]Post Management - Resolution of left upper zone thick-walled cavity with adequate antibiotic support

CT Chest:

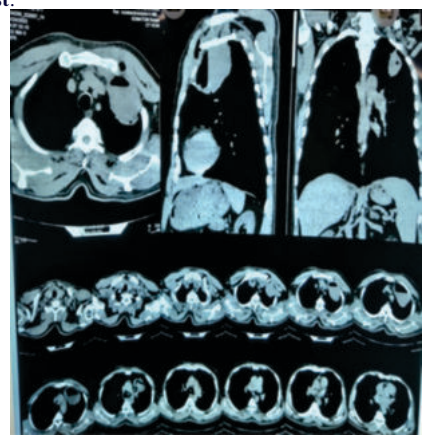

Figure 3
3] A well-defined cavitary mass lesion 9x8x7.2cm in left upper lobe with rupture of cavitary lesion into anterior part of lower neck and supraclavicular region with air locality in soft tissue plane.

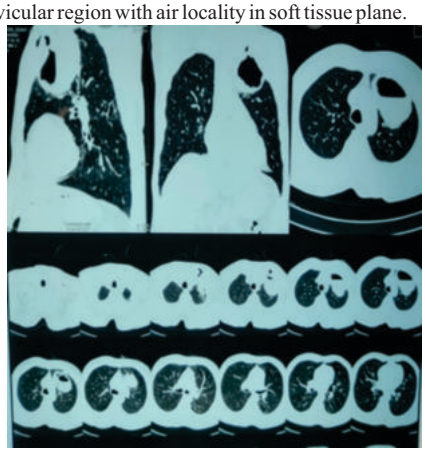

Figure 4
4] Lung abscess with rupture, subtle ground glass opacities noted in left lower lobe with mild bronchiectatic changes.

USG Chest Revealed:

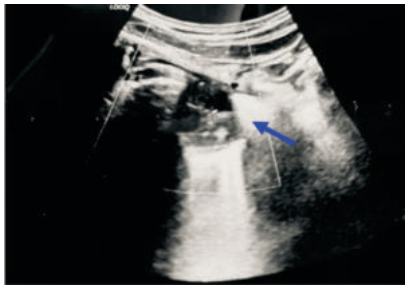

Figure 5
5] A heteroecious collection sized 3.3 x 2.5 x 2.5 with suspicious connection to anterior chest wall. With no external openings noted in the skin

DISCUSSION:
Lung abscesses occasionally rupture complicated by emphysema with a broncho pleural fistula. Such fistulas create a pathway between the bronchus and thoracic cavity leading to increased susceptibility of recurrent respiratory tract infection, respiratory dysfunction and may lead to secondary pneumothorax which requires emergency chest tube drainage. Lung abscess with bronchopleural fistula needs three staged treatment strategy such as controlling infection, controlling respiratory dysfunction and mainly eliminating the air leak which has the most potential complication of developing into secondary pneumothorax which could be prevented. Treatment of choice should be adequate antimicrobial therapy for this disease where among 10% of cases needs surgery such as lobectomy or pneumonectomy when drainage of abscess fails [7]. However, in any case if the patient's condition worsens into respiratory failure, closure of the fistula will be difficult in them. Endobronchial Watanabe spigot (EWS) based treatment is considered for broncho pleural fistula which does not improve with thoracic drainage alone, finally if the fistula does not respond to EWS surgical closure in considered [8].

In our case the fistula was limited and couldn't penetrate the chest wall further and timely antimicrobial therapy helped in resolvement of the abscess thus preventing grave complications.

CONCLUSION:
In conclusion, the co-existence of lung abscess with bronchopleural subcutaneous fistula is rare and with its variable presentation it becomes difficult to manage. Lung abscess with Bronchopleural subcutaneous fistula where early recognition and adequate antimicrobial therapy is needed inspite with adequate medical management around 10% results grave complication such as secondary pneumothorax hence should be always ready for any emergency intervention.

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