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Pulmonary Hamartoma A Case Report

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Abstract

Non resolving pneumonia is a common problem encountered in clinical practice estimated to be responsible for significant percentage of inpatient pulmonary consultations. A 29 years old female presented to us with persistant symptoms like cough, low grade intermittent fever on and off and dull aching chest pain on left side. These symptoms were recurrent and were treated with broad spectrum antibiotics. Here we report you this interesting case of pulmonary hamartoma presented to us as non resolving pneumonia.

Keywords: Non resolving pneumonia, Pulmonary hamartoma, Pulmonary benign tumors

Introduction

Non resolving pneumonia is a pneumonia with slow resolution of radiologic infiltrates or clinical symptoms despite adequate antibiotic therapy 1. Exclusion of an alternate diagnosis like tuberculosis, malignancies, pneumonia mimics etc., should be the first step in the approach to this problem2. Adequacy of treatment and patient's compliance should also be considered. Other associated factors causing the systemic or local immunodeficiencies like intra-bronchial obstruction, smoking, diabetes, chronic obstructive pulmonary disease, malignancy, concomitant human immunodeficiency virus (HIV) infection, alcoholism, addictions, immunosuppressant therapy and complications responsible for the delayed resolution should always be kept in mind. However, we may rarely encounter unexpected cause of a non-resolving pneumonia. Here we report a case of pulmonary hamartoma presented to us as non resolving pneumonia in young immunocompetent female patient.

Case Report

29-year-old female presented with 6 months history of recurrent cough, dyspnea on exertion, left side dull aching chest pain and intermittent low-grade fever. She recurrently had these complaints and was treated symptomatically with broad spectrum antibiotics over a period of 6 months by various physicians. She did not have history of hemoptysis, loss of appetite, loss of weight. She did not have any major medical illness or addictions. She was housewife.

On examination she was hemodynamically stable with decreased breath sounds in left axillary and upper inter scapular region. Blood investigations were unremarkable. CBC report showed Hb 11.2, WBC 6500, platelets 2.3L. LFTs, RFTs were within normal limits. HIV done was also negative. Chest radiograph showed left upper and mid zone opacity. (fig1)

Sputum investigations were done. Sputum for AFB and CBNAAT were negative for Mycobacterium tuberculosis (MTB). Bacterial culture and sensitivity showed normal flora, there was no fungal growth on fungal culture and sensitivity. Sputum was negative for malignancy on sputum cytology. Patient was treated with broad spectrum antibiotics.

HRCT Chest was done which showed large left upper lobe consolidation (7 x 4.8 cm) with cavitatory air

bronchogram predominantly in anterior segment showing central necrotic changes (fig 2).

CECT chest was suggestive of non-enhancing lung parenchymal consolidation/mass (fig3).

Patient underwent CT guided percutaneous biopsy which was suggestive of acute on chronic inflammation with no evidence of malignancy. So patient was continued on treatment with higher antibiotics for 2 weeks and was advised follow up. Inspite of adequate treatment with antibiotics, she had persistant symptoms with non resolving radiological lesions. So cardiothoracic surgeon opinion was taken for surgical management consideration.

Fig 1: Chest Xray showing inhomogenous opacity in let upper and mid zon

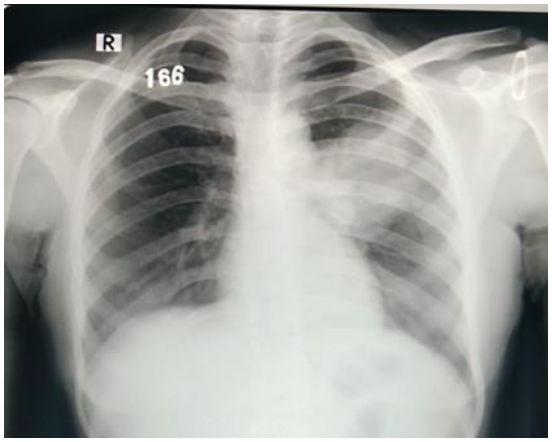

Fig 2: HRCT chest showing left upper lobe consolidation (7x4.8 cm) with air bronchogram and central necrotic changes.

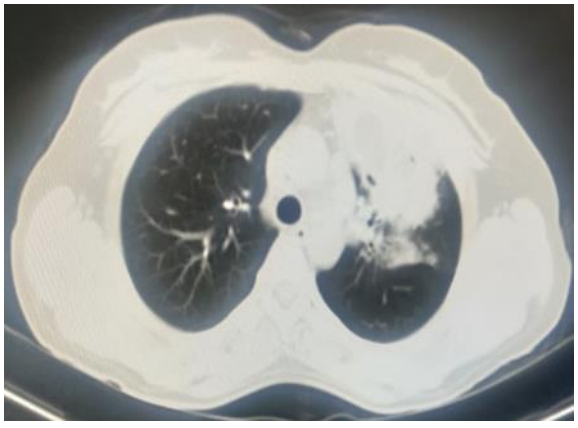

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Fig 3: CECT Thorax showing non enchancing left upper lobe consolidation with areas of liquefaction and cavitatory changes

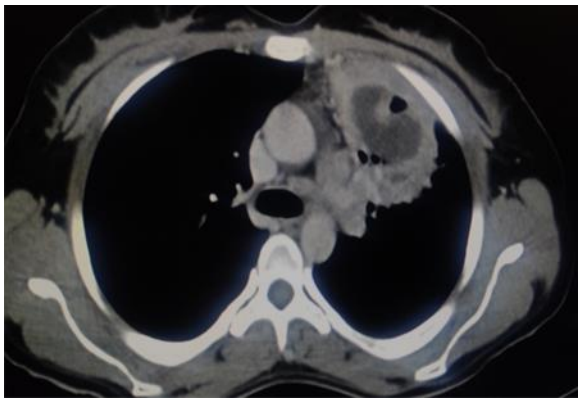
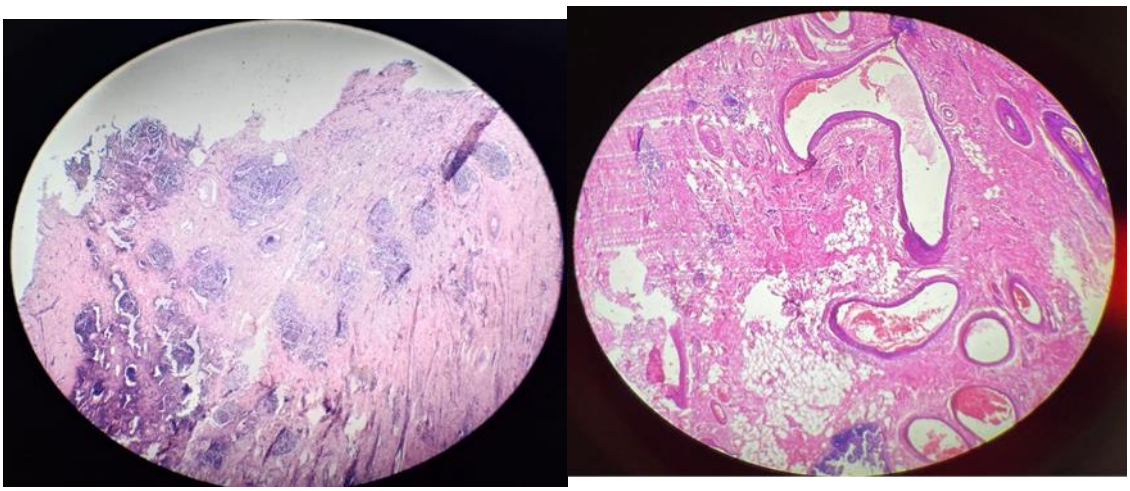


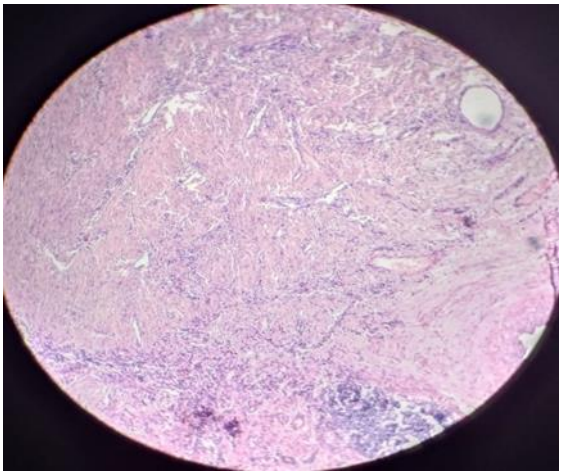
Fig 4: 1) Low power view showing

a) lymphoid aggregates and round to oval glands lined by cuboidal to columnar epithelium

b) blood vessels and adipose tissue.



2) Scanner view showing skeletal muscle and area of necrosis lined by inflammatory cells.



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After team discussion, we planned for surgical management. Patient underwent left upper lobectomy.

Histopathological report of surgical specimen showed all features suggestive of Pulmonary hamartoma (fig 4).

Discussion:

Most tumors that involve the tracheobronchial tree are malignant. Benign tumors account for less than 1% of all lung tumors. Among these, hamartomas constitute the commonest benign tumour3. Hamartomas are benign tumours of the lung which develop in the fibrous connective tissue of the bronchus and may contain cartilage, bone, fat, smooth muscle, and respiratory endothelium4. Though initially believed to be a developmental anomaly, recent cytogenetic studies have shown chromosomal bands of recombination located at positions 6p21 and 14q24, suggesting that hamartomas are mesenchymal clonal neoplasms9. Hamartomas are 2 to 4 times more common in males than females. The disease usually occurs in the sixth and seventh decades of life3.

Hamartomas in lung can be parenchymal (90%) or endobronchial (10%). Parenchymal hamartomas usually contain chondroid (80%), fibroblastic (12%), fatty (5%), and osseous tissues (3%). Endobronchial hamartomas can be chondroid (50%), fatty (33%), and fibroblastic (8%)5. Although rare pulmonary disease these are most common benign pulmonary tumour. Radiologically though popcorn calcification is the typical diagnostic feature, it may be seen only in 5–50% of the cases 6,7. Hamartomas are benign tumours with low risk for malignancy8. Surgery remains the only definitive, curative option. The prognosis for patient with pulmonary hamartoma is excellent. Lesions are slow growing, where symptoms are present and persistant, surgery is curative. Subsequent malignancy or malignant transformations are rare.

In our case, the patient was treated surgically without any complications.

Acknowledgement:

We appreciate our patient & her family for their trust & consent to participate in this case study.

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