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Pulmonary Hamartoma Mimicking Malignancy in Elderly Male Smoker

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Abstract **Case Report**

Pulmonary hamartomas are most common benign tumor of the lung, accounting for 6% of all solitary pulmonary nodules. Most of them are discovered incidentally and are rarely symptomatic. We report a rare case of hamartoma presenting with features of bronchogenic carcinoma in elderly smoker.

Keywords: Hamartoma, Bronchogenic carcinoma, malformation, smoker.

INTRODUCTION

Hamartoma is the most common benign lung tumour [1], it measures usually less than 2cms.They are mostly asymptomatic and incidentally found. It can be parenchymal or endobronchial with an incidence of 0.025%-0.32% [2]. They are tumour like malformation due to abnormal mixing or abnormal development of normal tissue components of organ in which they occur. This abnormality is thought to be the result of variations in the quality, arrangement or degree of differentiation of tissues.

CASE REPORT

A 65 year old male, with no associated co-morbidities presented with complaint of epigastric pain and left sided diffuse chest pain. Patient was being evaluated for acid-peptic disease and cardiac illness.

He had no complaints of shortness of breath, cough, hemoptysis, fever, chest pain, or wheezing. He had a history of pulmonary Tuberculosis 20 years ago, for which he was adequately treated. He was a smoker with 20 pack years and had loss of appetite. He was advised chest X-ray in view of above history prior to upper GI endoscopy which showed right sided lung lesion and was referred to us for further evaluation.

His Chest x-ray revealed a well-defined, homogenous, rounded opacity in the right mid-zone, not obscuring the right heart border (Figure 1 & 2).

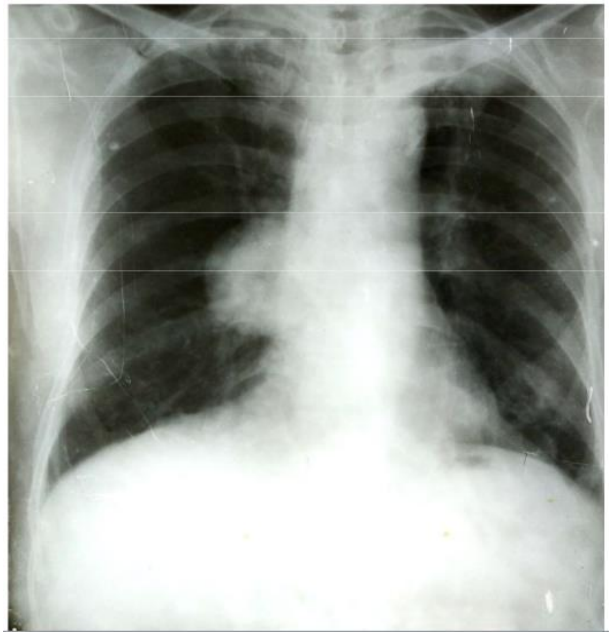

Figure 1: Chest x-ray revealed a well-defined, homogenous, rounded opacity in the right mid-zone

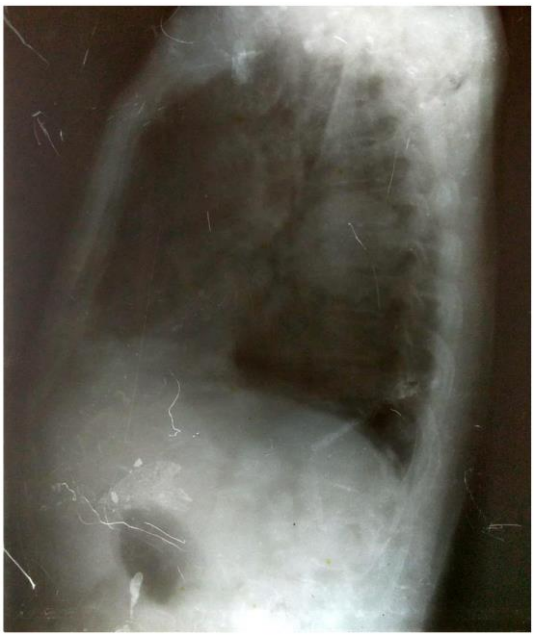

Figure 2

On further interviewing, patient revealed that he was treated for tuberculosis based on chest x-ray and no microbiological confirmation was obtained. Previous records were unavailable.

CT Chest showed bilateral emphysematous changes, bilateral apical pleural thickening with fibrotic changes ,large thick walled cavity measuring 66x32mm in apicoposterior segment of left upper lobe (maximum wall thickness -13mm), large cystic lesion measuring 51 X 54mm exerting mass effect in superior segment of right lower lobe. Cystic lesion had fluid density with no obvious calcification within (Figure 3 & 4).

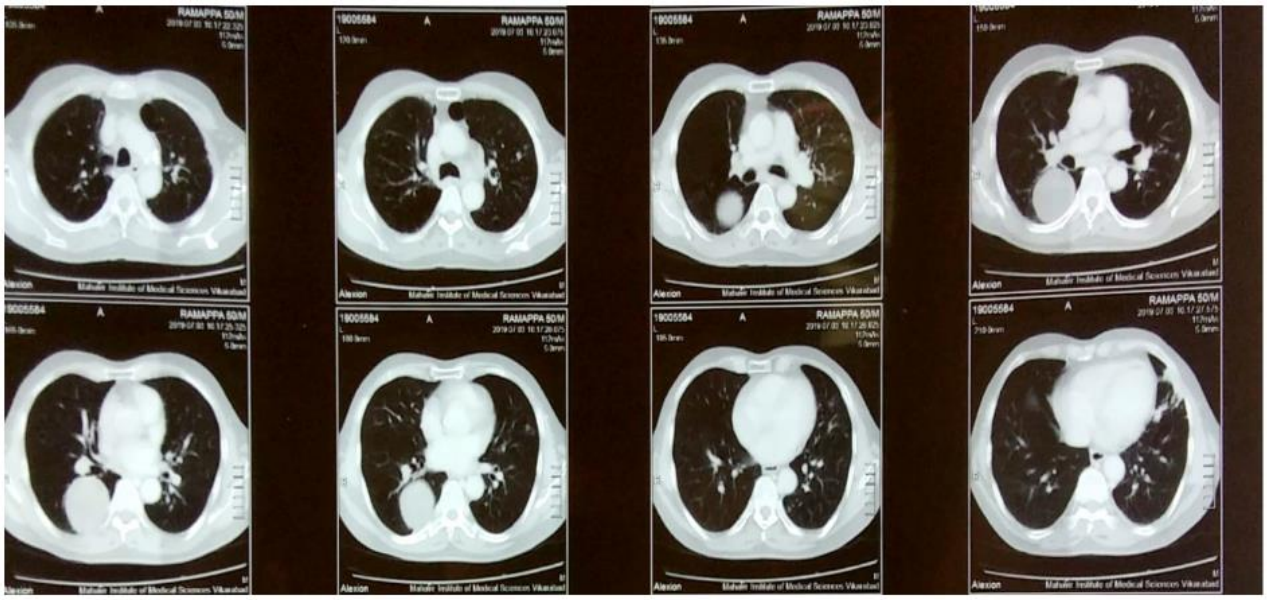

Figure 3: CT scan of chest showed LARGE CYSTIC LESION – 51X54 MM in superior segment of right lower lobe with fluid density without calcification

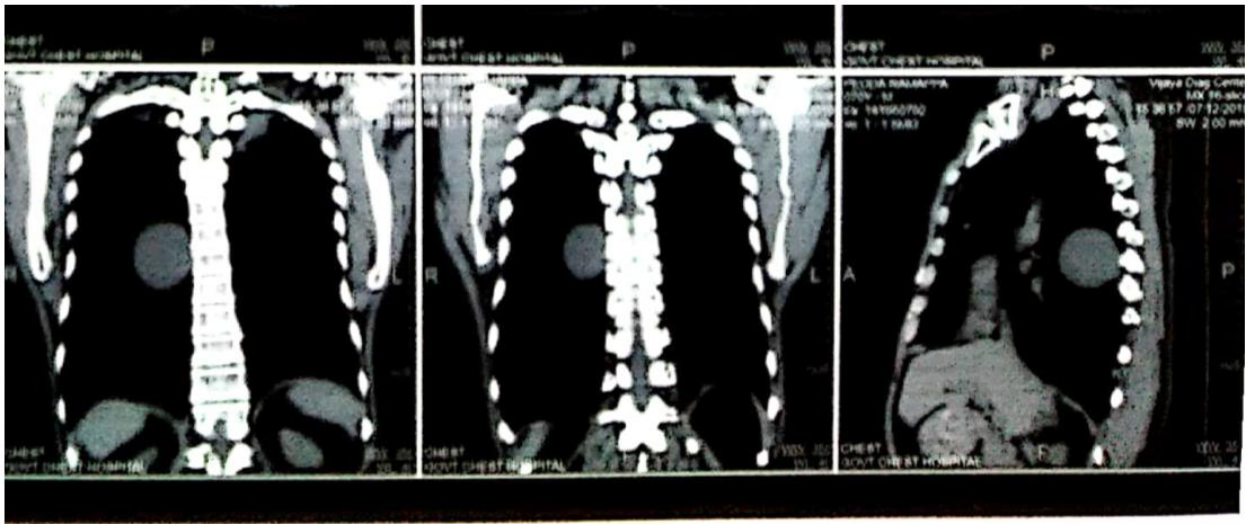

Figure 4: CT Chest showed large cystic lesion measuring in superior segment of right lower lobe

USG chest showed 5x5.5 cm rounded solid hyper-echoic lesion in the right lower lobe. Bronchoscopy revealed no abnormality.

Right postero-lateral thoracotomy was done, and a 5x5 cm rounded mass was excised from the postero- superior segment of right lower lobe. It was found to be lobulated, soft tissue mass, 5cm in diameter, gray-brown in colour with no capsule. Cut section showed nodular surface with areas of dark brown –grey white streaks (Figure 5). Histopathologic examination concluded it to be Pulmonary Hamartoma (Figure 6).

Figure 5: A 5x5 cm rounded mass was excised from the postero- superior segment of right lower lobe

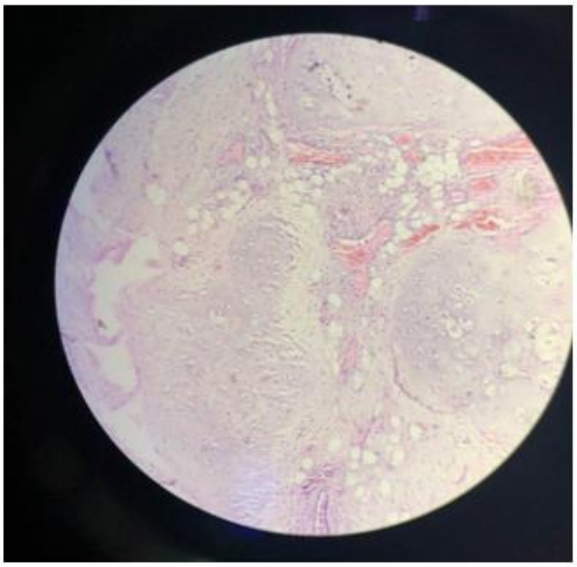

Figure 6: Histopathological examination revealed features suggestive of hamartoma

DISCUSSION

Pulmonary Hamartomas were first described by Albrecht in 1904 .Hamartomas also known as mesenchymomas, are composed of a mixture of normal components of lung, that is, bronchial epithelium, cartilage, and mesenchymal connective and fibroblastic tissues [3]. Majority originate in the periphery of lung and are asymptomatic with male preponderance [4]. Very rarely, a hamartoma in lung can present with symptoms such as hemoptysis, cough, or chest pain. Those presenting with the above-mentioned symptoms are either endobronchial (10–20%) or parenchymal (80%) [5]. Parenchymal lesions (80%) range in size from 1 cm to 8 cm in diameter [6] or are so huge that they may have pressure effect on adjacent parenchyma of lung, bronchus, or major vessels.

In present case scenario, elderly smoker who was having chest pain with loss of appetite and well

defined mass lesion on chest x-ray raised a suspicion of bronchogenic carcinoma. Radiologically, Popcorn-like calcification maybe observed in hamartomas [7]. The density of lesion on CT varied which augmented the need for further work-up.

Pulmonary hamartomas have very less malignant potential, and most of them are asymptomatic, but because the differential diagnosis is broad comprising of malignant lesions, accurate diagnosis is of prime importance. And since the hamartomas have a tendency of expansion, recurrence and chance of malignant transformation, surgical resection must be planned. The prognosis is excellent [8].

CONCLUSION

Hamartoma is diagnosed by CT scan, however the final diagnosis can be made based on histopathologic findings only. A solitary pulmonary lesion of more than 2.5 cm or when the possibility of malignancy cannot be excluded, surgical resection is mandatory.

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