



A CASE OF PULMONARY HAMARTOMA

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ABSTRACT Pulmonary hamartomas are one of the most common benign tumors of the lung They account for 8% of all lung neoplasms.

They are usually asymptomatic and found incidentally when imaging the chest for other reasons.

We report one such case of pulmonary hamartoma in a 64 year old male with non specific symptoms.

KEYWORDS :**HISTORY**

64 year old male was referred for chest X- Ray with complaints of intermittent cough since 2-3 months. He had no complaints of fever, breathlessness, hemoptysis.

There was no history of diabetes, hypertension or past history of tuberculosis.

Complete blood count reports of patient revealed normal hemoglobin, white blood cell count, platelet count and ESR.



FIGURE 1: Chest X Ray PA view shows a well defined homogenous rounded lesion in right lower zone medially which is not obscuring the right dome of diaphragm or the right cardiac border Lesion is surrounded by a rim of lucency.

Above findings confirm that it is a pulmonary lesion

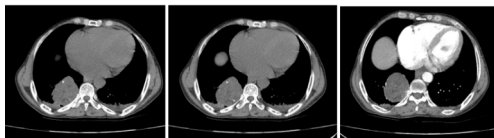


Figure 2:

A and B: Axial non contrast CT Chest images show well defined rounded homogenous soft tissue lesion in right lower lobe posteriorly and approximately measuring 64x54x51mm with few areas of calcification and few hypodense areas within the tumor with HU value (-40 to -60 HU) –suggestive of fat.

Minimal bilateral pleural effusion is noted.

C: Axial Post contrast CT Chest image shows minimal heterogenous enhancement of the lesion.



Figure 3

A and B: MRI Axial T1W and Coronal T2W images respectively show a well defined rounded lesion in right lower lobe of lung posteriorly (approximately measuring 64x54x51 mm) which appears hypointense on T1W and hyperintense on T2W images with few areas of hypointensity.

Minimal bilateral pleural effusion is seen

C: MRI Axial GRE shows homogenous isointense lesion with few areas of hypointensity suggestive of calcification.

DIFFERENTIALS:

Based on above imaging findings few common differentials can be listed :

Pulmonary hamartoma.

Lipoma.

Granuloma.

Carcinoid tumor.



Figure 4:

A and B images are CT Guided biopsy images of right lower lobe mass lesion.

C: High resolution 10x histopathology image of the provided biopsy specimen confirmed it to be a hamartoma.

DISCUSSION:

Pulmonary hamartomas are one of the most common benign tumors of the lung and are composed of cartilage, connective tissue, muscle, fat and bone.

Patients usually present between 40 to 50 years of age.

There is male predilection (M:F = 2.5:1).

Pulmonary hamartomas are usually asymptomatic and found incidentally when imaging the chest for other reasons or they can occasionally present with haemoptysis, bronchial obstruction and cough.

They account for 8% of all lung neoplasms.

CT FINDINGS:

On CT they typically appear as well-circumscribed masses with either lobulated or smooth margins. Lesion shows presence of fat and approximately 20-30% have calcification/ossification (popcorn-like). Cavitation is not seen.

Post Contrast images on CT show evidence of heterogenous enhancement.

Presence of fat in a well-circumscribed solitary pulmonary nodule which does not demonstrate significant growth overtime is essentially pathognomonic of a pulmonary hamartoma and no further investigations are required.

MRI FINDINGS:

T1W images show - Heterogeneous signal, mainly intermediate signal.

T2W images -

High signal due to fat and cartilaginous components.

Low signal regions representing fibrous or calcific material.

T1+C: Heterogeneous enhancement is seen.

TREATMENT AND PROGNOSIS:

Malignant transformation is extremely rare and a peripheral small hamartoma with no atypical features can be safely left alone with follow-up to exclude growth.

In atypical cases, or in cases of endobronchial hamartomas causing distal complications, surgical resection is curative.

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