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Case Report

Pulmonary Infections in Patients

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Introduction:

25 yrs old male, presented with the history of cough for 1 month, gradual in onset, dry in nature. There is also c/o fever for 1 month, gradual in onset not associated with shivering but associated with loss of weight .Cough and fever also associated with the haemoptysis off and on from one month.

He reports having history of previous pulmonary tuberculosis for which he has taken one complete course of ant tuberculosis drugs. Also having the history of 2.5 pack /yr with cessation 2 yrs ago. There is no family history of any lung disease or tuberculosis. He works as a labourer. There is no history of exposure to fume, dusts, molds, silica or asbestos and denies any drug use. He was initially evaluated by his primary care physician who prescribed a short course of antibiotics for possible pneumonia with no relief in symptoms, and was referred for ancillary testing as well as pulmonary consultation.

Physical examination reveals a healthy comfortable appearing young man who is febrile 100F with normal B/P=110/70, pulse rate 100/min and resting room air pulse ox metric saturation of 95%. Cardiac examination is normal.

Pulmonary function test results are abnormal with a moderately severe restrictive ventilator defect.

The posterioanterior chest radiograph shows cavity with soft tissues density is seen in right upper lobe. CT CHEST shows soft tissue density in right upper lobe (RING OF HALLOW).No enlarged lymph nodes seen in mediastinum.No pleural effusion seen and possibly diagnosis was MYCETOMA.Case discussed with thorasic surgeon .Right upper lobe wedge resection was done .ON gross appearance a lung substance with dilated central cavity containing necrotic material measuring 6x4x4 cm.Microscopic section reaveals a lung substance with dilated central cavity containing necrotic material and fungal hyphae.typical features of ASPERGILLOMA of the lung.

Clinical Discussion

The term aspergilloma used to describe a ball of fungal hyphae within a cavity in the lung. Aspergiloma can occur in other organs including the pleural space.Mycetoma is the name given to a mass of fungal hyphal material growing in a lung cavity. The usual organism is A.fumigatous and thus the lesion usually called Aspergiloma however other fungi and species of aspegilusmay occasionally be found. In most patient there is preexisting lung disease although the condition may occasionally arise in apparently normal lung.Mycetomas are commonly multiple and usually

Occur in upper zones of the lung. Invasive aspergillosis only rarely complicates mycetoma but might be anticipated if such

patient requires corticosteroids or immunosuppressant therapy.

Pathological Discussion

Cavities can occur in the lung following a varieties' of insults such as tuberculosis ,sarcoid,pneumonia/lung abscess,tumor cystic fibrosis. The ball consist of hyphae, inflammatory cells fibrin and debris. Around the cavity is an intense inflammatory response often with considerable extra vascularisation from bronchial arteries and occasional fungal hyphae.

Clinical Features

Many mycetomas cause no symptoms and are simply noted on radiography. As the typical dense rounded shadow containing a cresentric lucent area which outlines the top of the fungus ball and the upper part of the surrounding cavity. 75% present with haemoptysis.Systemic symptoms like fever ,malaise chest pain present.INVESTIGATION Chest x-ray(apical cavity with ball).C.T. Chest (obvious cavity with fungal ball and possibly invasion into the surrounding lung.Sputumculture.AspergillusIgG precipitins.(often higher level seen in other aspergillusdisease.Management May not require treatment (in asymptomatic cases)Itraconazole will not eradicate the fungus but seems to reduce cavity size, and lessen the tendency to haemoptysis .Arterial embolization.Surgical resection.