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"A CASE REPORT OF SYNCRONISED TUBERCULOSIS/ ASPERGILOSIS / SPINDLE CELL TUMOUR ADMITTED IN THE P.D.U. CIVIL HOSPITAL, RAJKOT, GUJARAT."

General Medicine

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ABSTRACT

Pulmonary tuberculosis, pulmonary aspergillosis and lung cancer are amongst the most common causes of pulmonary cavities; however, concurrence of all three in a patient is rare. Here we present unusual case of pulmonary cavity synchronised with spindle cell tumour tuberculosis and aspergillosis.

KEYWORDS

Pulmonary cavity disease, pulmonary tuberculosis, pulmonary aspergillosis, lung neoplasm, CECT Thorax, HRCT Thorax and Aspergillus antigen test.

INTRODUCTION

Pulmonary cavities are defined as 'gas-filled space that develops within pulmonary consoli-dation, a mass or a nodule, and are fre¬quent manifestation of a wide variety of patho¬logical process involving the lung. Either infectious diseases or non-infectious diseases may produce cavities in the lung. Lung cancer, mycobacterium tuberculosis or aspergillosis infection are three major causes of pulmonary cavity, however, the synchronous of lung neoplasm, tuberculosis and aspergillosis has rarely been seen. In this article, we present a case of pulmonary cavity with co-existence of tuberculosis, aspergillosis and spindle cell tumour.

CASE REPORT

A 64year old male, chronic smoker, farmer by occupation, admitted to the department of pulmonary medicine for complaining of cough with mild mucoid expectoration, breathlessness, right side chest pain, decreased appetite and weight loss for 1 months of duration. No complain of fever or hemoptysis. Patient was physically active and stable. Patient was known case Diabetes Mellitus 2 on treatment.

EXAMINATION

Patient was thin old man, afebrile with normal pulse 74/min, BP-118/78mm Hg, RR-18/min and maintaining SpO2 97% on Room Air. Auscultatory finding suggestive of decrease air entry on right side of chest. No any enlarged cervical and axillary lymph nodes palpable on local examination. Digital clubbing not present.

INVESTIGATION

Haematological examinations revealed a haemoglobin of 14.2gm/dl, TLC-24900/cumm with neutrophilia and normal platelet count. other investigations RFT, LFT, RBS and coagulation profile were normal. Serum CEA was normal. Sputum cytology shows no malignant cell, Sputum AFB & CBNNAT shows negative results. Ultrasonography of chest shows left upper zone haziness and right side pleural based mass. CECT AND HRCT THORAX done s/o large well-defined well circumscribed, homogeneous solidly looking soft tissue space occupying lesion is seen involving superior segment of lower lobar region of right lung field which has broad based towards adjacent pleura and does not involve adjacent bronchus and does not invade adjacent bony rib. Large ill-defined consolidation with internal air bronchogram and few small cavitation and surrounding ground glass haziness and tiny nodular infiltrates in Left upper lobe.

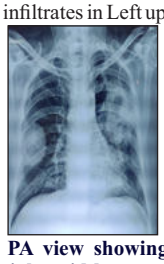

Figure-1: Chest X-ray PA view showing well defined rounded radio opaque lesion in right mid lower zone in periphery? mass lesion and ill-defined patchy opacity with central small radiolucent cavities noted in left perihilar region in upper mid zone.

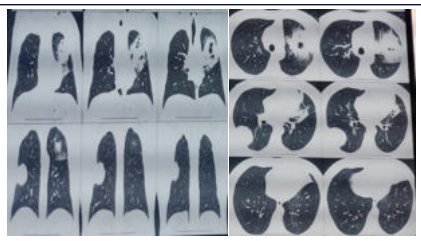

Figure-2 CT scan of thorax images solidly looking soft tissue space occupying lesion on right lung field and cavities within dense consolidations of left upper lobe.

SUSPICION

On basis of clinical assessment and CT thorax we can include
(1) Tuberculosis
(2) Aspergillosis
(3) Lung cancer

CONFIRMATORY INVESTIGATION

CT guided FNAC done from right lateral chest wall which is s/o spindle cell neoplasm and histopathological examination confirm benign spindle cell neoplasm Schwannoma likely. Bronchoscopy was performed and BAL collected and send for investigation. BAL cytology and culture was negative. BAL CBNAAT s/o MTB detected very low with rifampicin resistance not detected. Serum Aspergillus antigen -positive (1.3). Above findings confirmed tuberculosis with aspergillosis.

DISCUSSION

Pulmonary cavities with nodules are common radiological appearances of various aetiologies. Pulmonary tuberculosis, pulmonary aspergillosis and lung cancer are amongst the most com-mon causes of pulmonary cavities. The CT morphological feature of a cavitation that suggests malignancy include wall thickness over 4 mm at the thinnest part, irregular inner and outer margins, associated soft tissue mass with or without infiltration of the thoracic wall and enlarged lymph node. Occasionally, a cavitated lung cancer may have thin walls. Tuber-culosis, however, may present a typical cavitary lesions located in the apical and posterior segments of the upper lobes and the superior segments of the lower lobes. The cavity walls may be thick or thin, with or without air-fluid levels. As for aspergillosis, the most frequent findings reported were single or multiple thick-walled cavitary upper lobe lesion. As signs, symptoms and radiologic findings can be masked by pre-existing disease, diagnosis of lung cancer superimposed on pulmonary TB or pulmonary aspergillosis is difficult and, in most cases, delayed until an advanced stage.

We reported a case of 64-year-old immunocompetent male presented with mass like lesion as well cavitary lesion. Pulmonary aspergillosis, comprising of non-invasive semi-invasive, invasive and allergic bronchopulmonary aspergillosis, is more frequently observed in patients with immunodeficiency or diabetes mellitus. In our case, the

patient tends to be chronic cavitary pulmonary aspergillosis (CCPA) for semi-invasive characteristics according to the diagnostic criteria. Nam et al, reported CCPA tends to affect persons with abnormal pulmonary defence mechanisms as a result of underlying lung disease, and tuberculosis ranks the first. The acute onset of symptoms is sometimes helpful to distinguish malignant and non-malignant disease, but a benign infection may, for instance, cause haemoptysis when affecting a nearby vessel. Benign diseases may also cause fatigue and weight loss similar to malignancies. Acute onset of fever is usually helpful to distinguish benign disorders from malignancies, but a pulmonary cancer may present with a superinfection secondary to the tumour. However, the combination of symptoms, laboratory results, past clinical history, and imaging findings leads to recognition of the correct diagnosis.

CONCLUSION

In elderly group of patients with afebrile, chronic cough, coupled with dyspnea and weight loss with chest x- ray and CT suggestive of cavities should raise suspicion of tuberculosis and aspergillosis. The uniqueness of our case report is that the co-existence of lung benign spindle cell tumour whose prognosis is good after surgical resection, active pulmonary tuberculosis and pulmonary aspergillosis has to the best of our knowledge not been reported in the literature before. Repeated bronchoscopy and CT-guided needle biopsy are essential tools for the accurate diagnosis.However,PET/CT is helpful in the early differential diagnosis if malignancy suspected.

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