Chronic Necrotising Aspergillosis Presenting as Secondary Spontaneous Pneumothorax in an Immunocompetent Patient

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Case Description

A 32 year old male presented with complaints of pain in right upper part of chest and breathlessness for last 10 days. There was history of intermittent fever for past 6 months, associated with weight loss of more than 10% of body weight. Patient had taken ATT for 6 months from DOTS for pulmonary tuberculosis 2 years back. On examination blood pressure was 110/70 mm Hg, pulse rate was 90/min with no pallor, icterus, cyanosis, clubbing, oedema or lymphadenopathy. Chest examination revealed tympanic percussion note over right axillary, right supraclavicular and interscapular areas with diminished vesicular breath sounds, coarse crepitations were present in bilateral infrascapular regions. Investigations revealed SpO₂ of 93% in room air with pO₂ 76% and pCO₂ of 38%, haemoglobin of 7.6 gm/dl, total leucocyte count of 10700/cumm, differential leucocyte count N 76, L 23, E 01, platelet count 4.4l/cumm and ESR of 20 mm in 1ʰ hour. X-ray chest revealed fibrosis and collapse of right upper and middle zone of lung with compensatory emphysema of left lung with two nodular opacities in left upper and mid zone of lung field. Contrast enhanced computed tomography of thorax revealed bilateral multiple cavitary lesions with intracavitary irregularly shaped mobile isodense lesions having characteristic air crescents suggestive of aspergilloma with pericavitary infiltration and pleural thickening of bilateral upper zones and right middle zone of lung. Right sided loculated pneumothorax in upper and mid zone with partial collapse of right lung field with multiple communicating broncho-pleural fistulae was seen. Sputum culture revealed profuse growth of *Aspergillus fumigatus*. Z-N staining for acid-fast bacilli was negative. Gram staining and bacterial culture did not result in any growth. HIV-1 and 2 antigens were non-reactive (ELISA).

Chronic Necrotising Aspergillosis (CNA) also called semi-invasive aspergillosis is an indolent, destructive process of the lung due to invasion by *Aspergillus* species (usually *A. fumigatus*). CNA is usually seen in middle-aged and elderly patients with documented or suspected underlying lung diseases like COPD, inactive tuberculosis, previous
lung resection, radiation therapy, pneumoconiosis, cystic fibrosis, lung infarction or rarely, sarcoidosis. We are presenting the case because chronic necrotising aspergillosis as a cause of secondary spontaneous pneumothorax is rare in literature.

References