

Allergic bronchopulmonary aspergillosis with tuberculosis like lesion: A case report

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Abstract

Aspergillus is a member of molds, commonly known as *filamentous fungi*. It is predominantly found in the Northern hemisphere, especially in autumn and winter season. In this report we present a young male patient who referred to Tikrit Teaching Hospital with persistent cough, large amount viscid sputum, fever and shortness of breath for three months. Before his referring to the Hospital, he diagnosed in the Primary Health Care Centre as a case of Pulmonary Tuberculosis and anti-tuberculous drugs have been prescribed to him for more than one month without any improvement. After complete history taking, thorough physical examination in the hospital, chest X ray, CT scan and sputum examination were done which proved the diagnosis of allergic bronchopulmonary aspergillosis (ABPA).

Case report

A 26 years old male, smoker patient referred to Tikrit teaching hospital with persistent cough, large amount viscid sputum, fever and shortness of breath for 3 months. The patient had smoked 15 cigarettes daily for 10 years. He consulted a GP, who gave him anti-tuberculosis therapy for more than one month without any improvement. Physical examination revealed well built young man, he was dyspneic, but no cyanosis or clubbing, coarse crepitations and rhonchi were heard on both upper and middle zones.

Chest X-ray show bilateral upper zones opacities, and CT scan revealed dense opacities suggestive for central bronchiectasis. WBC count was 9700/mm³ with 9% eosinophils and ESR was 85mm / in first hour. Sputum examination for AFB was done several times and all are negative, but heavy hyphae of *Aspergillus fumigatus* were found in the sputum. The diagnosis of ABPA was established, anti-tuberculosis therapy was stopped and intravenous hydrocortisone 100 mg for each six hours was started with Aminophylline and a very well response within 1 week was obtained.

Discussion

Aspergillus species can cause a wide spectrum of diseases in human, ranging from

hypersensitivity to direct angioinvasion ⁽¹⁾. *Aspergillus fumigatus* primarily affect the lung causing; atopic asthma, allergic bronchopulmonary aspergillosis (ABPA), necrotizing aspergillus pneumonia, aspergilloma and invasive pulmonary aspergillosis ⁽²⁾. Although ABPA has received international attention, it is still not diagnosed as frequently and as early as it should be to treat the patients properly and to avoid inappropriate lung damage ⁽³⁾. Diagnosis of ABPA depend on history of bronchial asthma, radiological infiltration of the lungs, immediate cutaneous reaction to aspergillus antigen, elevated serum IgE and peripheral eosinophilia ⁽⁴⁾.

Allergic bronchopulmonary aspergillosis is characterized by episodic asthma, peripheral eosinophilia, positive skin test for *Aspergillus fumigatus* antigens, elevated IgE for *Aspergillus fumigatus* antigens and radiological abnormalities in form of pulmonary infiltrate or central bronchiectasis⁽⁵⁾.

Aspergillus fumigatus is a common saprophyte in the upper respiratory tract of normal individual. It can cause atopic asthma, Harris KE et al ⁽⁶⁾ reported that about 10% of atopic asthma are caused by *Aspergillus fumigatus*, while Becker JW et al ⁽⁷⁾ found that about 7% of atopic asthma are caused by *Aspergillus fumigatus*. However other diseases which can be caused by

Aspergillus fumigatus like ABPA, necrotizing aspergillus pneumonia, aspergilloma and invasive pulmonary aspergillosis are rare, but can occur in diabetic, alcoholic and immunocompromised patients⁽⁸⁾.

References

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