ALLERGIC BRONCHO-PULMONARY ASPERGILLOSIS

(A Case Report)

Col AMARJIT SINGH^{*}, Lt Col BMBN PRASAD⁺, SM

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Introduction

Aspergillosis, a rare disease affecting 5 to 10 per cent of steroid-dependent asthmatics is caused by fungus *Aspergillus* and has a wide spectrum of human illness. Allergic broncho-pulmonary aspergillosis (ABPA) was first described from England in 1952 by Hinson, Moon and Plummer [1]. This case is being presented to highlight the rarity and response to prednisolone treatment.

Case Report

An 18-year-old male patient presented with complaints of cough with expectoration, breathlessness, and fever off and on

for the last 2 years and was diagnosed as pulmonary tuberculosis. He was put on 3 drug anti-tubercular (ATT) regime. As he showed no improvement over a period of 6 months, he was further investigated. His blood count showed TLC of 7,400 cells/cumm with 17 per cent eosinophils and absolute eosinophil count of 1350 cells/cumm. Sputum for fungal culture and skin test for *Aspergillus fumigatus* was positive for both immediate type I and type III. Fungal serology showed positive precipitin antibodies against fungus. Chest radiogram showed areas of consolidation, band shadows, bronchial thickening, and fibrosis (Fig 1). CT scan thorax showed bronchiectasis, consolidation, and atelectasis. There was no fungal ball (Fig 2). The patient was diagnosed as ABPA and put on tab prednisolone 0.5 mg/kg daily for 2 weeks followed by 0.5 mg/kg on alternate day for a period of 3 months. He showed remarkable clinical recovery.

Discussion

Aspergillus fumigatus is the most common organism causing ABPA. Both IgE and IgG have been implicated with *Aspergillus* specific IgE present in the serum of most patients [2]. Clinical manifestations characteristic of ABPA comprising of pulmonary infiltrates, mucopurulent or bloody

Fig. 1: Chest radiogram PA view shows typical areas of 'V' shaped band shadows in right perihilar region, fibrosis in right upper and middle zones, and patchy areas of consolidation and bronchial thickening.

Fig. 2: CT scan thorax showing areas of bronchiectasis, consolidation, and atelectasis.

^{*}Prof & Head, Dept of Radiodiagnosis, Armed Forces Medical College, Pune 411040; ⁺Classified Specialist (Medicine & Resp Diseases), Military Hospital (CTC), Pune 411040.

sputum, and fever frequently cause diagnostic confusion as in the present case where the patient was treated with 3 drug ATT regime for 6 months without relief. Radiographic changes are found in most patients and include bronchiectasis, fibrosis, pulmonary infiltrates, consolidation, blebs and bullae, and perihilar mucoid impactions [3]. Abnormalities are more common in upper than lower zones [4].

The diagnosis in the present case was based on circulating blood eosinophilia greater than 1000 cells/cumm, positive sputum culture, positive skin test for *Aspergillus fumigatus*, positive precipitin antibodies against fungus, and chest radiogram and CT findings. The diagnosis was further strength-

ened by marked clinical improvement following steroids.

REFERENCES

1. Hinson KFW, Moon AJ, Plummer NS. Broncho-pulmonary aspergillosis. Thorax 1952; 7: 317-33.
2. Rosenberg M, Patterson R, Mintger R. Clinical and immunological criteria for the diagnosis of allergic broncho-pulmonary aspergillosis. Ann Intern Med 1977; 86: 405-14.
3. Mc Carthy DS, Simon G, Hargreave PE. The radiological appearance in allergic broncho-pulmonary aspergillosis. Clin Radiol 1970; 21: 336-75.
4. Mintzer R, Rogers L, Kriglik G. The spectrum of radiological findings in allergic broncho-pulmonary aspergillosis. Radiology 1978; 127: 301-7.