Editorial

TROPICAL EOSINOPHILIA

This illness pertaining chiefly to the lungs was initially described from India (Frimodt—Moller and Barton, 1940). The main features were attributed as extreme blood eosinophilia paroxysmal cough and wheezing with scanty sputum and typical pulmonary markings on X-ray study. The relationship between filarial infection and tropical eosinophilia was first reported as early as 1939 (Meyers and Kouwenaar, 1939). Subsequent observations such as a favourable effect of diethylcarbamazine, the presence of antifilarial antibodies in a high titre (Danaraj et al., 1959) and the demonstration of microfilariae in lymph node biopsy (Webb et al., 1960; Danaraj et al., 1966) confirmed this association.

The patient usually a male with a history of residence in a filarial endemic region, presents with bouts of unproductive cough which is worse at night. Dyspnoea with chest pain or a feeling of tightness may be present. Low grade fever, general fatigue and weight loss are common. Physical examination reveals coarse rales and rhonchi. The blood count shows a hypereosinophilia with eosinophil counts over 3000 per cubic millimeter. The chest radiograph projects mottled opacities and increased bronchovascular markings mainly in the midzones and bases of the lungs. The remaining confirmatory laboratory findings in addition to elevated eosinophil counts, are the absence of microfilariae in the peripheral blood, high titres of antifilarial antibodies and a raised immunoglobulin E level to about 1000 units per milliliter.

The other laboratory findings show sensitization of the basophils with specific reaginic antibodies which cause the release of histamine stores in the presence of filarial antigens. The lung biopsy shows histiocyte infiltration in the alveolar spaces in the early phase. In the late stage a mixed cell exudate of eosinophils, histiocytes and lymphocytes organized in nodular patterns is seen which eventually gradually leads to fibrosis. The impairment of lung function projects itself in the form of restrictive abnormalities. Diminished vital capacity, total lung capacity and residual volumes affects a large number of these patients.

The very good response to diethylcarbamazine therapy is the last criterion in confirming the diagnosis of filarial eosinophilia. The symptoms usually disappear after a dose of 5 mg per kilogram body weight per day, of the drug given for a period of ten days.

Pulmonary manifestations associated with eosinophilia are also found in Loeffler's Syndrome, chronic eosinophilic pneumonia and allergic aspergillosis. The absence of filarial antibodies is a characteristic feature in the latter two conditions which makes it an excluding factor from tropical eosinophilia. The immediate therapeutic response to diethylcarbamazine distinguishes this entity from the other related states.

References

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