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Rhinitis, sinusitis and ocular disease – 2088. Evaluation of blood markers for determination of atopy in Indian patients with symptoms of respiratory allergy

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Background

The cause of allergy-like symptoms may be due to IgE mediated allergy, but also because of other mechanisms. There is a need to find a simple and convenient test to identify/exclude atopy for a correct and proper patient management in patients with respiratory allergies in India.

Methods

105 patients (18-60 years) with a clinical diagnosis of asthma and/or rhinitis, based only on clinical history and physical examination,visiting an Otolaryngology department in a tertiary hospital were included in the study. Phadiatop, a test with extensive data published in the West showing >90% sensitivity and specificity, was used as the gold standard for atopy. Phadiatop measures IgE antibodies to a balanced mixture of common environmental allergens relevant for the geographical area and the age of the patients (adults). For each patient the result of Phadiatop was compared with: I. Clinical history (Hx), II. Total IgE level (T-IgE) and III. Absolute Eosinophil Count (AEC).

Results

Phadiatop revealed atopy in 69% (72/105) of the patients, which means that approx. 1/3 of the patients diagnosed with IgE-mediated allergy by Hx in fact were not allergic. The sensitivity for atopic disease was 90.3% and 33.3% for T-IgE and AEC, respectively. Among the 33 patients with positive Hx but negative Phadiatop; 7 patients had increased T-IgE level and 8 had increased AEC, however only one patient with both tests positive. The efficiency of T-IgE and AEC to diagnose atopic allergy was 83.8% and 46.7% respectively, compared with Phadiatop.

Conclusions

Diagnosing patients with allergy-like respiratory symptoms is difficult without using any tests; by Hx only, the allergy diagnosis was overestimated in more than 30% of the cases, which is in agreement with earlier findings. Although valuable, a good clinical history is not definitive. The results from this study suggest that Phadiatop could be a very useful and cost saving initial test in India when differentiating between atopic and non-atopic allergy, but further investigations of the Indian allergen coverage may be needed.

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