



Correspondence

Serum IgE assessment in prescribing allergen immunotherapy

Pollen allergy is the most prevalent IgE-mediated disease. Allergen immunotherapy (AIT) is currently the only causal therapy capable of modifying the natural history of allergic disease.¹ However, recognition of the causal allergen is a fundamental requirement (*condicio sine qua non*) for appropriate administration of AIT. This principle is mandatory, mainly because of the wide prevalence of polysensitized patients. The initial diagnostic step is to distinguish simple sensitization from true allergy, such as symptom occurrence after exposure to the sensitizing allergen (*post hoc ergo propter hoc*). Because skin prick testing (SPT) is not able to surely discriminate between sensitization and allergy, Letran and colleagues² performed an interesting study that investigated component-resolved diagnosis (CRD) in patients with pollen allergy. They concluded that habitual use of this kind of protocol is necessary in routine allergologic practice. In fact, the introduction of CRD is providing new diagnostic tools that may lead to the identification of an accurate patient sensitization profile. We completely agree with the authors about this statement and are further persuaded by a previous study that demonstrated that CRD for *Phleum pratense* was able to evaluate a prediction model for patient diagnosis with high reliability.³ In addition, Bet v1 measurement may be useful in common practice because high levels are associated with complicated disease.⁴

Moreover, we underline the clinical importance of serum IgE assessment in the treatment of allergic patients. In this regard, a series of evidence has highlighted the relevance of serum allergen specific IgE assay, mainly in polysensitized patients:

1. Allergen specific IgE, IgG, IgG4, and IgA serum levels are significantly different for each tested allergen; there is also a significant association between IgE levels and allergy severity. Thus, the immunoglobulin production pattern depends on the specificity of the allergenic response.⁵
2. Polysensitized children ($n = 494$), with SPT results unable to define causal allergen, have significantly different serum specific IgE levels. This study evidenced that IgE measurement is more appropriate in polysensitized children.⁶
3. Polysensitized adult patients ($n = 610$), with the same SPT results, have significantly different serum specific IgE values. This study supported the concept that specific IgE measurement is more appropriate in treating polysensitized patients.⁷
4. On the basis of these findings, it was also evidenced that serum IgE discriminates allergy from sensitization better than skin testing (area under the curve = 0.83); serum IgE measurement

is a reliable tool for identifying true allergic patients and choosing the allergen extract for immunotherapy.⁸

5. The level of serum specific IgE, measured before AIT, might be useful for individuating responder patients: in fact, a cutoff could be defined for each causal allergen.⁹

This last issue is important because the availability of a biomarker predicting the AIT outcome would be extremely useful in clinical practice. On the other hand, allergists need to consider prescribing AIT in all patients with the appropriate indication, particularly in polysensitized patients.¹⁰

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