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Specific IgG Antibodies as Markers of Adverse Reactions to Food. Contra!

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Specific IgG antibodies against foodstuffs can be found in many different physiological and pathological conditions [1]. Determination of food-specific IgG antibodies with different serological methods (immune precipitation, passive hemagglutination, IgG RAST and ELISA) alone do not prove the existence of an immune complex-mediated type III reaction [2]. Besides clinical aspects that indicate a type III reaction, one needs serological parameters, like the measuring of complement activation or antigen antibodies immune complexes, after controlled provocation with food [3, 4]. The American Academy of Allergy and Immunology Position Statement concluded that the value of the measurement of food-immune complexes towards the diagnosis of food allergy remains unproven and does not have a place in current clinical practise [5].

A follow-up study of children (2-5 years) with food allergy demonstrated that the occurrence of serum IgE and IgG antibodies to milk, egg and fish paralleled in most cases. However, an early high IgG/IgE food antibody ratio seemed to be a good prognostic sign, indicating a possible blocking capacity of IgG antibodies [6]. In another study allergen-specific IgG and IgE antibodies against 35 allergens in sera of 400 atopic patients and 48 healthy subjects were determined, using a commercial chemiluminescent assay [7]. The quality of the IgG assay was confirmed by the separation of the IgG antibodies. The levels of allergen-specific IgG of atopic patients and healthy subjects were similar, but patients with high levels of total IgE showed significantly increased levels of allergen-specific IgG. Considering single allergens or allergen groups, sera levels of IgE and IgG antibodies were quite different. Allergen-specific IgG was found especially against molds and some food allergens, but nearly none against plant inhalant allergens [8].

On the other side, IgG antibodies are not involved in the pathogenesis of atopic diseases. Thus, measurement of specific IgG antibodies to food and mold allergens is an inappropriate diagnostic test in food allergy [9]. At present, the clinical usefulness of IgG-specific antibody measurements is limited to monitoring individuals receiving venom immunotherapy [10]. Other potential uses of IgG and IgG subclass assays have not been validated.

References

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