Time to reconsider the clinical value of immunoglobulin G4 to foods?

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BACKGROUND: The usefulness of serum antibodies to common food antigens (immunoglobulin G4; IgG4) assay in management of patients suffering from food intolerance was assessed. METHODS: A total of 22 asymptomatic healthy subjects and 68 patients with symptoms referred for suspected food intolerance were studied. Serum IgG4 to 19 common foods was measured by an automated immunoassay. RESULTS: The area under the receiver operating characteristic curve was 0.92 (standard error 0.04) and, at a threshold value of 2.3 U/mL, the IgG4 determination had a sensitivity of 0.81, with a specificity of 0.87. With a pre-test probability of 5% and 20%, the post-test probability of having disease was found to be 24% and 61%, respectively, and 1.1% and 5% if the result was negative. Cohen's K value (0.83) indicated a good agreement between symptoms and IgG4 concentrations. CONCLUSION: Serum IgG4 assay may play a role in ruling out food intolerance, because of its satisfactory negative predictive value (0.99).