



World Allergy Congress™ 2007

Bangkok, Thailand
2-6 December 2007



Abstract Title

Comparison between skin prick test and a reversed enzyme allergeo-sorbent test

Abstract Text

Background: Several methods are available for the quantitative determination of allergen specific immunoglobulin E (sIgE) representing a hallmark in the diagnosis of type I hypersensitivity reactions and allergic diseases. One of these methods, the ALLERG-O-LIQ system (Dr. Fooke Laboratorien, Germany), is based on the reversed enzyme allergeo sorbent test protocol using anti-IgE coated microtiterplates combined with biotinylated allergens and streptavidine-HRP conjugate. Objective of our study is the comparison of the ALLERG-O-LIQ and skin prick test (SPT) results. **Methods:** Serum samples (n=96) were collected from undiagnosed individuals and tested for sIgE to ten common inhalant allergens including Timothy Grass (g6), Cultivated Rye (g12), Mugwort (w6), *Alternaria alternata* (m6), *D. pteronyssinus* (d1), *D. farinae* (d2), cat (e1), dog (e2) and *Aspergillus fumigatus* (m3). Further, skin prick tests (SPT, Allergopharma, Germany) to above mentioned allergens were performed. Agreement between the results of ALLERG-O-LIQ and SPT was statistically evaluated using different methods including kappa agreement, positive (PPV) and negative predictive value (NPV) and diagnostic efficiency (DE). **Results:** The prevalence (in %) of the individual allergens was found at (SPT / ALLERG-O-LIQ) 38.5 / 33.3 (g6), 33.3 / 26.0 (g12), 16.7 / 8.3 (w6), 6.3 / 7.3 (m6), 33.3 / 24.0 (t3), 27.1 / 16.7 (d1), 27.1 / 17.7 (d2), 21.9 / 10.4 (e1), 6.3 / 7.3 (e2) and 0.0 / 1.0 (m3). The agreement (% / Kappa) between both methods was 88.2 / 0.80 (g6), 90.4 / 0.83 (g12), 86.7 / 0.53 (w6), 95.8 / 0.75 (m6), 87.7 / 0.77 (t3), 83.8 / 0.64 (d1), 87.8 / 0.73 (d2), 84.9 / 0.59 (e1) and 95.8 / 0.75 (e5). Statistics for m3 was not calculated. Overall agreement (% / Kappa / X2) for seasonal, perennial and all allergens tested was 89.7 / 0.78 / 292.3, 90.1 / 0.68 / 231.7 and 89.9 / 0.74 / 544.0, respectively. Sensitivity, specificity, PPV, NPV and DE (all values in %) were found at 73.2, 98.6, 94.7, 91.4 (seasonal) 59.5, 99.0, 92.2, 92.5, 92.5 (perennial) and 92.1 and 67.8, 98.8, 93.8, 92.0 and 92.3 (combined). **Conclusion:** Overall, ALLERG-O-LIQ and SPT results are in good agreement. However, differences in the sensitivity of ALLERG-O-LIQ were observed among individual allergens. Based on our data we conclude that ALLERG-O-LIQ represents a reliable test for the quantitative detection of sIgE to inhalant allergens.

Topics

12 Diagnosis of allergy, including IgE

Presentation Preference

Oral presentation

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