with the anamnesis in all the 16 cases. For one patient, the ImmunoCAP© ISAC permitted to find out his allergy to a major allergen of peanut and of hazelnut. Thus, the clinician cancelled the planned oral provocation tests for peanut and hazelnut.
Conclusion: Our first results demonstrate that the ImmunoCAP© ISAC gives similar results to those of the sIgE and of the SPT. Most importantly, it permitted to avoid a hazardous oral provocation test in an allergic patient. The results provided by the ImmunoCAP© ISAC allowed us to see, in a single analytical step, the complete allergen sensitization profile of the patients tested. We think that the ImmunoCAP© ISAC will have an essential role to play in the diagnosis and the management of complex patterns of sensitization.

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The early detection of house dust mite IgE antibodies in infants with atopic dermatitis

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Purpose: Early sensitization to house dust mite (HDM) allergens in infants with atopic dermatitis (AD) is a significant risk factor for the development of asthma. However, the detection of sensitization is difficult in infancy because of the low titer levels. Moreover, the majority of commercial detection systems available on the market today have not been able to detect specific-IgE antibody levels to HDM below 0.35 kU/l. We aim to evaluate the detectability of IgE antibody levels to HDM under 0.35 kU/l and the possibility of detecting early sensitization to HDM in infants with AD using two distinct immunoassays.
Methods: Specific-IgE antibody levels to *Dermatophagoides pteronyssinus* (Der p) and *Dermatophagoides farinae* (Der f) were measured in sera from 21 patients with AD at the age of 2 and 3 years using two assays, the Pharmacia CAP systemand the Immulite 2000 3gAllergy assay. Results from the analyses were compared to determine the sensitivity, specificity, and positive/negative predictive values of the Immulite 2000 3gAllergy assay.
Results: Analysis using the Pharmacia CAP system found that none of the patients at age 2 were sensitized to HDM. Fifteen (71.4%) of 21 patients at age three presented with recurrent wheezing and HDM sensitization (Group I) while six (28.6%) patients presented with neither (Group II). Analysis using the Immulite 2000 3gAllergy assay showed that Der p specific-IgE antibody was positive in sera from 3 Group I and 0 Group II patients at age 2 while Der f specific-IgE antibody was positive in sera from seven Group I and two Group II patients at the same age. However, no statistical significance was found ($P = 0.07$ *versus* 0.57). Sensitivity, specificity, and positive/negative predictive values for Der p were 27%, 100%, 100%/56% respectively. Sensitivity, specificity, and positive/negative predictive values for Der f were 46.6%, 66.6%, 77.7%/33.3% respectively. Correlation between the analyses from the Pharmacia CAP system and the Immulite 2000 3gAllergy assay was statistically significant (Der p, $r = 0.92$ *versus* Der f, $r = 0.77$)
Conclusion: Although the sensitivity values of the assay were low, the positive predictive values were relatively high. Given these results, we conclude that lowering the minimum detectable level of specific-IgE antibody is helpful in the early detection of HDM sensitization.

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Evaluation of an allergy lateral flow assay for the detection of specific IgE to food allergens

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Background: Type I hypersensitivity is driven by allergen specific immunoglobulin E (sIgE) and thus sIgE represents a marker for modern allergy diagnosis. Recently, a rapid assay, termed as ALFA (Allergy Lateral Flow Assay) has been evaluated for the detection of allergen specific IgE to inhalant allergens. The objective of our study is the development and evaluation of ALFA tests for the detection of sIgE to food allergens.
Methods: Forty-one sera were selected from the serum bank and tested for specific IgE to egg white (f1), milk (f2), codfish (f3), wheat flour (f4), peanut (f13), soy bean (f14), walnut (f16), hazelnut (f17), crab (f23) and shrimp (f24) by the ALLERG-O-LIQ System. Positive samples and approximately the same number of negative controls were tested for sIgE to the respective food allergen by ALFA. Results were read out using the new ALFA scanning system after 15, 20, 25 and 30 min.
Results: Twenty positive results were found by the ALLERG-O-LIQ System (cut-off = 0.35 IU/ml). The median of all positive results was 1.95 IU/ml and five values were below 1 IU/ml. Receiver operating characteristic analysis showed excellent discrimination between positive ($n = 15$) and negative findings ($n = 26$) using ALFA. No significant difference was observed between different measuring time points. The area under the curve (measurement after 20 min) was calculated as 0.96. At a cut-off value of 1.3 ALFA units and measurement after 20 min, the sensitivity and specificity was found at 85.7% and 100%, respectively.
Conclusion: Based on these data we conclude that ALFA represents a useful technology for the detection allergen specific IgE. Although our cohort contained a high portion of sera with low levels of sIgE ALFA showed good discrimination between positive and negative ALLERG-O-LIQ results. Further studies with a larger cohort of sera are mandatory to verify these promising preliminary results.

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The changes in specificity and sensitivity of various hypersensitivity tests depending on used cut off points in children with atopic eczema

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Background: Clinical relevance of hypersensitivity tests to various allergens can differ in relation to the resulting values of the test and the type of tested allergen in patients with atopic eczema. The aim of our study was to investigate the changes of specificity (SP) and sensitivity (SE) of hypersensitivity tests in different cut off points.
Methods: We tested a group of children with atopic eczema to hypersensitivity to five common aeroallergens (birch and grass pollens, cat dander, *Dermatophagoides pteronyssinus*, *Dermatophagoides farinae*) using atopy patch test (APT), skin prick test (SPT), specific IgE and basophil activation test (BAT). The results of all tests were then compared with a history of eczema worsening related to allergen exposure. We calculated the specificity and sensitivity of all tests, observing the changes of SP and SE in distinct allergens depending on used cut off values.
Results: In APT, the best results were obtained using cut off point of 1^+ (with SP 89–93%, SE 31–67% – in cat dander SE was 0% in all cut off points); however, APT with house-dust mites allergens reached better specificity and sensitivity values in cut off point of 3^+ (SP 80–84%; SE 44–56%). In SPT, the use of common used cut off point (mean wheal diameter of 3 mm) was suitable only for house dust

