

Poster Session TPS 16

CRD: Epidemiology, methods and food allergens

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Differences in the sensitization patterns between immigrant populations according to their origin

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Background: Spain has experienced a huge immigration phenomenon during the last decades with 10.7% of foreigners in 2014. Accordingly, the number of foreign patients attended at Allergy Departments has risen.

Method: Thirty-two immigrant patients, aged 7–58 years were included in 2 study groups according to their origin. Group A: immigrants from Center/South America and Group B: from Europe/Northern Africa. All patients were studied due to moderate/severe anaphylactic episodes. A database with the sensitization profile of native patients (Mediterranean Area) was used as a control group (C). Component resolved diagnosis was performed by a multiplex allergen chip IgE-analysis and software (MIA v.3.1.2.). Values = >0.3 ISU were considered positive.

Results: Group A accounted for 15 patients, with 7 (46.6%) being positive for house dust mites (HDM). All of them were positive for HDM group 1 allergen and five for group 2. Three patients (20%) were positive for grass and olive pollens (Phl p 1 and Ole e 1). Three patients (20%) were positive for animal dander (Fel d 1). Finally, two patients (13.3%) showed a positive result for LTP's (Pru p 3). Seventeen patients were included in group B. Ten (58.82%) were positive for pollen allergens (all of them to grass Phl p 1 and 5 to Ole e 1 and Cup a 1). Seven (41.17%) were positive for HDM (all to HDM group 2). Four patients (23.53%) were positive for PR-10 proteins (all to Mal d 1) and four patients positive to LTP's (Pru p 3).

Conclusion: There are clear differences of sensitization between the groups. Patients from group A are more frequently sensitized to group 1 allergens from HDM, while patients from group B and native group are more frequently sensitized to group 2. Patients from group B are more frequently sensitized to pollen allergens,

with positive PR-10 proteins (typical pattern from Central and North Europe). This pattern is practically absent in group B and the native population. LTP allergens are the most frequent food related allergens in both foreign groups, as in the native population (with a much higher frequency). We hypothesize that migration induces changes in allergen exposure which may add new sensitizations (LTP's) but maintain some original sensitization patterns (HDM group 1, PR-10).

Conclusion: GRP-specific IgE determination may also be utilized as an important marker for apple-allergic patients.

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Uncontrolled allergic rhinoconjunctivitis to pollen and a new oral allergy syndrome with fresh fruits: should we take a top down or a bottom up approach?

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Case report: 21-year-old woman who referred 5-year allergic rhinoconjunctivitis symptoms from March to September, achieving only partial control despite daily oral antihistamine and nasal corticosteroid. Since 2 years, she also referred lip angioedema with throat tightness immediately after ingesting fresh fruit (watermelon, melon, orange, tangerine, peach, cherry and kiwi), with resolution 1 h after oral antihistamine intake. She tolerated canned and cooked fruits. She had a family history of allergic conjunctivitis. Her personal medical history and examination were otherwise unremarkable.

Skin prick tests (SPT) with a standardized panel of inhalant allergens (GA2LEN) from different commercial laboratories, were positive to grass (mix, genera: *Dactylis*, *Festuca*, *Lolium*, *Phleum*, *Poa*) (4 mm mean wheal diameter), *Parietaria* sp. (4 mm) and weed pollens (mix, genera: *Artemisia*, *Chenopodium*, *Plantago*, *Salsola*) (17.5 mm). A more detailed SPT panel, showed positivity to *Chenopodium* sp. (3.5 mm), *Plantago* sp. (3 mm), melon (5.5 mm), peach (5.5 mm) and profilin (Pho d 2) (7.5 mm); however, they were negative to *Artemisia* sp. and *Parietaria* sp. sIgE levels were positive to pollens from *Phleum pratensis* = 12.6 kU/l, *Plantago lanceolata* = 0.70 kU/l, *Parietaria*

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Evaluation of Gibberellin-regulated protein specific IgE in Japanese patients with apple allergy

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Background: It has been reported that severe symptoms in peach allergic patients are related to new allergen 'Gibberellin-Regulated Protein (GRP, Pru p7)'. Although peaches and apples belong to the highly cross reactive Rosaceae family, GRP as an allergen for apple sensitivity has not been reported. In this study, we evaluated the clinical utility of GRP specific IgE measurements in apple allergic patients.

Methods: We evaluated 40 apple-allergic patients (22 male and 18 female, aged 3–39 years [median age: 12.5]) registered in Fruits Allergy Component Study Group (<http://fruit-allergy.jp/>) and 8 non-allergic subjects. Clinical types of these 40 patients were oral reaction (25), systemic symptoms (15). Specific IgE levels in serum were determined for peach, apple, PR-10, LTP, profilin, white birch, Japanese alder, Japanese cedar, Bet v1, Bet v2 and CCD using a specific IgE assay. The specific IgE measurement for GRP was performed using an ELISA method.

Results: The median values of GRP-specific IgE levels by ELISA were 0.12 IUa/l (0.016–0.368) for oral reaction 0.002 IUa/l (0.013–0.023) for systemic symptoms.