Pollen-food syndrome in a pediatric population attending an Allergy Clinic in Mexico city

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Aims: The aim of this study was to explore the epidemiological characteristics and sensitization patterns in children with pollen food syndrome (PFS) at a specialist allergy clinic in Mexico city.

Methods: We enrolled in this study every patient aged between 6 and 18 years reviewed at the Pediatric National Institute Allergy clinic between March 2015 and March 2016. Diagnosis of PFS was made according to PFS diagnostic questionnaire and algorithm by Skypala et al. Skin prick testing (SPT) to pollens and prick by prick testing (PPT) to fresh foods were performed in a subset of patients with PFS. Those negative to PPT, underwent open oral food challenge (OFC).

Results: Within the studied population prevalence of PFS was 5.4%. Their average age was 10+/-3, 60% between 6 and 10 years, 35% from 11 to 14 years and only 5% between 15 and 18 years; 45% were women and 55% men. Apple (55%), peach (50%) and banana (50%), were the foods most commonly implicated. Rosaceae family was responsible in 75% of the cases, followed by Musaceae with 50%, Lauraceae with 45% and Cucurbitaceae and Fabaceae with 40%. All but one patient had allergic rhinitis, 50% had asthma, 35% atopic dermatitis, 25% had all three and 10% had other type of food allergy. In the subset of patients with PPT to fresh foods, 90% had a positive result and 10% had a negative one, these patients underwent open OFC which turned out positive. Sensitization to Quercus robur and Alnus glutinosa were the most frequents (40%), followed by Fraxinus excelsior (35%) and Betula verrucosa (30%).

Discussion: There is little knowledge about FPS in Mexico and there are no previous studies in pediatric population. We found that FPS affects males and females equally, being more frequent between 6-10 years. When compared with international literature, the prevalence is similar and we also found apple and peach as the most frequent foods implicated. Although, we also found banana as a frequent food responsible for FPS, similar to what is reported in the Mexican study performed in adults. Contrary to studies performed worldwide, we found birch sensitization in only 30% in FPS, being more frequent other Alnus glutinosa and Quercus robur.

Conclusion: It appears to be a significant difference in sensitization patterns to aeroallergens in Mexican pediatric population with FPS. Foods implicated seem to be similar to national and international reports. More studies are required to known the real characteristics of FPS in Mexico.