

Sensitization prevalence of asthmatic children to airborne and food allergens in Sakarya province of Turkey

Abstract

Introduction: Sensitization prevalence studies have been rarely reported from different regions of Turkey and exact rate of some sensitizations in special humid regions still are unknown. This is a part of extensive research including food and inhalant allergen sensitizations evaluated in the same study in a moist province of Turkey, Sakarya.

Aim: Aim of this study was to explore what kind of allergens play a role in sensitizations of asthma patients during childhood in Sakarya Province of Turkey.

Methods: 1311 patients, between 0 and 18 years of age, who thought to have asthma referred to only pediatric allergy outpatient clinic in Sakarya for an allergic evaluation between May 2013-April 2015. Multiple skin prick test system was used as a test apparatus to detect sensitization. For house dust mite testing Dermat. pter./ ermat. farinae; domestic animal allergy: cat/dog; mold allergy: Alternaria/Cladosporium; grass pollen allergy: meadow fescue, nettle, mugwort, fathen, weed mix, cereal mix and grass mix; tree pollen allergy: cypress, ash, pine and olive; for food allergy testing: cow's milk, egg, peanut, hazelnut and fish extracts were utilized. Skin prick test evaluation criteria are as follows: Histamine response (as positive control) and equal positive response to histamine were accepted as (3+). 3+ responses to any allergen extract is assumed to be significant sensitization.

Results: In overall; 864/1311 (65.9%) children showed \geq (3) response. According to 864 patients' evaluation: there were \geq (3) sensitizations to pollen groups (349/864: 40%); mites group (332/864: 38.4%); grasses (277/864: 32%); trees (72/864: 8.3%); molds (75/864: 8.6%); animals (49/864: 5.7%) and foods (59/864: 6.8%). In patients allergic to grass pollens: there were \geq (3) sensitizations to English plantain (23%), grassen (23%), meadow (19%), nettle (24%) and mugwort (10%). In children allergic to tree pollens: there were \geq (3) sensitizations to pine (39%), olive (38%), ash (16%) and cypress (7%).

Conclusion: As expected, there were significant allergies mostly to pollens and mites in allergic bronchitis patients. Also, low overall sensitization rate ($<$ 10% to molds) is of interest in our patients whom referred to us from humid Sakarya province. Similarly, there was somewhat low sensitization rate to house dust mite allergen when compared to other humid regions in Turkey.

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Conflicts of interest

Authors declare that there is no conflict of interest.