CHILDHOOD ALLERGIC SENSITIZATION TO PEANUT IN A GENERAL POPULATION-BASED SAMPLE. THE 6C STUDY

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Background: Few data are available on allergic sensitisation to peanut and its relationship to clinical manifestations at the population level.

Aims: The purpose of this study is to estimate the prevalence of allergic sensitization to peanut in a general population-based sample of children by using standardized methods.

Methods: In the frame of the 6 French cities study (French ISAAC), Skin Prick Tests (SPT) to peanut were performed in 6,726 children aged from 9 to 11 years and their parents filled the ISAAC questionnaire. Pea and cashew nut were tested in a subgroup of the studied population (N=755 children).

Results: The global prevalence of allergic sensitization to peanut, as defined by a positive SPT (mean wheal diameter > 3 mm) was 1.14% [range: 0.38% to 1.90%]. The city of residence had a significant influence on the prevalence of allergic sensitization to peanut ($\chi^2$, p<0.01). Boys were at higher risk of allergic sensitization than girls (1.29% vs. 1.01%), but the influence of sex on the prevalence of allergic sensitization to peanut was not significant ($\chi^2$, p=0.28). Children whose mothers were born in France were more likely to be SPT positive to peanut than those whose mothers were born in South Europe or in other countries (Africa, Asia…) (1.34 %, 0.86%, <0.5 % respectively; p<0.05). Allergic sensitization to peanut was significantly related to past year asthma (2.85% among asthmatics, 1.02% among non asthmatics, p<0.01) and to past year rhinoconjunctivitis (RC) (3.04% among RC+, 0.95% among RC-, p<0.001). Children were less SPT positive to pea (0.66%) and cashew nut (0.40%) than to peanut (1.59%) in the sub-sample having had all the three tests. No associations were found between SPT positivity to peanut, pea and cashew nut.

Conclusion: Allergic sensitization to peanut was not uncommon in our population-based sample (1.14%). It was related to asthma and rhinoconjunctivitis. An earlier diagnosis of allergic sensitization to peanut and assessment of risk factors, may lead to an earlier intervention.