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Presenting Author Category

Non-Trainee

Research Category

Clinical

Abstract Title

Prevalence and natural history of aeroallergen sensitization and development of asthma and rhinitis among Canadian children in the CHILD Cohort

Background

Sensitization to aeroallergens is associated with clinical asthma and allergic rhinitis. In the CHILD Cohort participants at age 5 years, 6.1% of children received a specialist clinician diagnosis of asthma and 19.5% were classified as atopic based on a positive skin prick test to any allergen. However, some children with asthma and rhinitis are not sensitized to aeroallergens and some children with aeroallergen sensitization do not develop clinical symptoms.

Objective

We examined changes in sensitization to aeroallergens between ages 5 and 8 years in the CHILD cohort study.

Methods

During their clinical visits at ages 5 and 8 years, children enrolled in the CHILD Cohort completed standardized skin prick testing (SPT) for common aeroallergens including house dust mites (*D. pteronyssinus* and *D. farinae*), cat, dog, molds (*Cladosporium*, *Alternaria tenuis*, *Penicillium* mixed and *Aspergillus fumigatus*), tree pollens (9-Tree mix), grass pollens, and weed pollens. Sensitization was defined by a wheal diameter ≥ 2 mm larger than the negative control. Clinical asthma and rhinitis were examined by reported symptoms and clinician diagnosis during study visits.

Results

Among children with SPT results at 5 years (N=2304), sensitization was present to any aeroallergen (15%), house dust mites (5.0%), cat (5.8%), dog (1.9%), cockroach (1.3%), molds (1.8%), and pollens (6.9%). Among children with SPT results at 8 years (N=1646), sensitization was present to any aeroallergen (37%), house dust mites (15%), cat (14%), dog (3.8%), cockroach (3.7%), molds (*Alternaria* 4.7%, *Cladosporium* 1.5%, *Penicillium* 0.7%, and *Aspergillus* 1.2%), and pollens (trees 10%, grasses 15%, weeds 4.4%, and ragweed 2.8%).

Conclusion

Sensitization to any aeroallergen and individual aeroallergens increased between 5 and 8 years in the CHILD Cohort. Further data analyses will examine the timing and association among development of sensitization, asthma, and allergic rhinitis.

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