Vitamin D Level in Children Is Correlated With Severity of Atopic Dermatitis but Only in Patients With Allergic Sensitizations


PURPOSE OF THE STUDY. To determine the effect of vitamin D on atopc dermatitis (AD) severity in children with and without allergic sensitization.

STUDY POPULATION. Children with AD, followed in the pediatric allergy department of a Turkish tertiary care hospital, were enrolled in this study. Exclusion criteria were use of topical or systematic steroid treatment in the past month and using vitamin supplementation in the past 6 months.

METHODS. Subjects were designated as having mild, moderate, or severe AD based on SCORing Atopic Dermatitis index. Skin prick testing and specific immunoglobulin E testing to foods and aeroallergens allergens were used to determine allergic sensitization. Peripheral eosinophil counts, 25-hydroxy vitamin D levels, and total immunoglobulin E were measured. Patients were grouped according to allergic sensitization.

RESULTS. Seventy-three pediatric AD patients, median age 33 months, were enrolled in the study; 33 of 73 were found to have allergic sensitization. Vitamin D levels of participants with moderate and severe AD were significantly lower than those with mild disease ($P = .01$). In the sensitized group, vitamin D levels of participants with moderate and severe disease were also significantly lower than those of participants with mild severity ($P = .01$). In those not sensitized, vitamin D levels did not differ among those with mild, moderate, and severe AD. There was a negative correlation between SCORing Atopic Dermatitis score and serum vitamin D level in those with allergic sensitization ($P = .047$, $r = -0.349$). There was no correlation in the group without sensitization. Vitamin D was not correlated with eosinophil count or total immunoglobulin E in either AD group.

CONCLUSIONS. In participants with AD and allergic sensitization, those with lower vitamin D levels had more severe AD.

REVIEWER COMMENTS. This study helps set the groundwork for future studies investigating the efficacy of vitamin D supplementation in allergic individuals with moderate to severe AD.

Allergic Rhinitis/Conjunctivitis

Grass Pollen Counts, Air Pollution Levels and Allergic Rhinitis Severity


PURPOSE OF THE STUDY. To assess the association between pollen count and severe seasonal allergic rhinitis (SAR) after controlling for air pollution levels and other confounders.

STUDY POPULATION. A nationwide sample of 36 397 patients in France who were suffering from SAR as defined by Symptomatic Global Score in the upper third quartile and were consulting a physician (general practitioner, ear-nose-throat specialist, pediatrician, or allergist) between May and August 2004. Patients were untreated and had uncomplicated SAR. Patients from all age groups were included.

METHODS. A multilevel model relating severity of SAR as the dependent variable and pollen counts and air pollution levels as independent variables was used. To understand the respective roles of pollen counts and air pollutants, 2 models were used: (1) a model taking into account only daily airborne pollen counts and (2) a model with both daily pollen counts and air pollution concentration.

RESULTS. A rise of 60 grass pollen grains per cubic meter increased the risk of severe SAR by 8% after adjusting for confounders (age, gender, address) and air pollution levels.

CONCLUSIONS. Grass pollen count aggravates SAR in terms of nasal and ocular symptoms in the nationwide sample, and the relationship between severity of SAR and grass pollen counts was not modulated by air pollution.

REVIEWER COMMENTS. This is a large study that quantifies the magnitude of change in SAR severity in relation to measured grass pollen counts. Because air pollution levels did not significantly modify this relationship, monitoring of pollen counts can be informative for the management of SAR regardless of the air quality.

Allergic Rhinitis Is Associated With Otitis Media With Effusion: A Birth Cohort Study


PURPOSE OF THE STUDY. Otitis media with effusion (OME) is often considered to be associated with allergic diseases.
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Doerthe A. Andreae and Julie Wang
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