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Titel des Beitrags: Serum 25(OH)D concentrations and atopic diseases at age 10: results from the GINIplus and LISAplus birth cohort studies.

Abstract: Vitamin D is well recognized for its role in skeletal health and its involvement in the modulation of the immune system. In the literature, controversial results are reported for atopic diseases. Thus, we investigated the association between vitamin D status and the prevalence of atopic diseases. Serum 25-hydroxy-vitamin D (25(OH)D) concentrations were measured in a sample of 2815 10-years old children from two German birth cohort studies. Self-reported physician-diagnosed eczema, hay fever or allergic rhinitis, and asthma were used as outcome variables as well as specific IgE positivity against common allergens. We applied logistic regression models, deriving adjusted odds ratio estimates (aOR) and 95% confidence intervals (CI). For asthma and hay fever or allergic rhinitis, no associations existed with serum 25(OH)D concentrations. We observed a significant positive relationship between serum 25(OH)D levels and eczema at age 10 (aOR = 1.09, CI = 1.01-1.17, per 10 nmol/l increase in serum 25(OH)D levels) and for the lifetime prevalence of eczema (aOR = 1.05, CI = 1.01-1.09). Specific IgE positivity for food allergens (aOR = 1.07, CI = 1.02-1.11) and aeroallergens (aOR = 1.05, CI = 1.01-1.08) at age 10, as well as
 lifetime prevalence, was significantly related to the vitamin D status. In this study we found no indication that higher blood 25(OH)D levels are associated with decreased risk for any of the atopic outcomes in children. However, we observed a positive association of serum 25(OH)D concentrations with eczema and detectable specific IgE. Due to the given limitations of our study, the clinical relevance of these findings needs further clarification.