

# Abstract

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## Correlation between serum 25 (OH)-vitamin D levels and severity of atopic dermatitis in children.

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**BACKGROUND:** Vitamin D deficiency could be associated with the prevalence of atopic dermatitis (AD). We carried out a study to see whether deficient/insufficient levels of vitamin D correlate with the severity of atopic skin disease.

**METHODS:** Using the SCORAD index, we evaluated the severity of disease in thirty-seven children (18 males) between 8 months and 12 years of age with AD, consecutively enrolled in the study. 25 hydroxyvitamin D serum levels were determined by a chemiluminescent method. Specific immunoglobulin E (sIgE) to *Staphylococcus aureus* enterotoxins and *Malassezia furfur* were assayed by the ImmunoCAP system. ANOVA and the Pearson correlation test were used for statistical evaluation.

**RESULTS:** We found severe, moderate and mild AD in 9 (24%), 13 (35%) and 15 (41%) children, respectively. Mean 25 hydroxyvitamin D serum levels were significantly higher ( $p < 0.05$ ) in patients with mild disease ( $36.9 \pm 15.7$  ng/ml) compared to those with moderate ( $27.5 \pm 8.3$  ng/ml) or severe AD ( $20.5 \pm 5.9$  ng/ml) conditions. The prevalence of patients with sIgE to microbial antigens increased in relation to vitamin D deficiency and AD severity.

**CONCLUSIONS:** These data suggest that vitamin D deficiency may be related to the severity of atopic dermatitis and advocate the need for studies evaluating the use of vitamin D as a potential treatment in patients with this disease.

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