

THE RELATIONSHIP OF ENDOGENOUS FACTORS TO ATOPIC DERMATITIS IN CHILDREN: A PILOT STUDY

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Background and Aim. Atopic dermatitis (AD) is one of the most common skin diseases found in children. Among the various etiological factors responsible for the increased prevalence of atopic diseases over the past few decades, the role of vitamin D and other endogenous factors such as stress and hormonal disbalance has been emphasized. The aim - to evaluate the relationship between vitamin D, serum prolactin, serum cortisol, thyrotropic hormone, and cholesterol concentrations with disease activity of pediatric atopic dermatitis patients.

Material and Methods. We compared 2 groups of children from 6 to 17 years of age: 27 children in the atopic dermatitis group (according to Hanifin and Rajka Diagnostic Criteria) and 15 healthy children in the control group. Disease severity was determined using the SCORing Atopic Dermatitis index (SCORAD). A t-test or Mann-Whitney test was used to compare the difference between mean values. A P value <0.05 was considered significant.

Results. Serum levels of 25(OH)D were higher in patients with AD compared to control group ($p < 0.001$; mean concentration in AD group: 63.05 nmol/l, control group – 43.77 nmol/l). We did not find difference between vitamin D level and AD severity according to SCORAD index ($r = 0.132$, $p = 0.549$). We did not find difference between groups comparing serum morning cortisol ($p = 0.351$), median value AD 158.70 nmol/l (88.81-527.80), control - 242 nmol/l (2.73-520.60), thyrotropic hormone ($p = 0.401$; median value AD 1.96 mIU/ml (0.89-4.88), control – 1.59 mIU/ml (0.96-3.89)) and cholesterol level ($p = 0.793$; median value in AD 3.97 mmol/l (3.33-5.61), control - 4.11 mmol/l (3.07-5.51)). We found that prolactin level was lower compared with controls ($p = 0.049$; median value AD group 144.95 mIU/l (64.00-1417.00), control – 228.40 mIU/l (104.70-502.10)).

Conclusions. Data suggest that lower prolactin and higher vitamin D levels may be related to AD, but not significantly related to AD severity. Cortisol, thyrotropic hormone, and cholesterol levels in atopic dermatitis were not different from controls.

Keywords: atopic dermatitis, children, endogenous factors, prolactin, vitamin D