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Having a genetical inclination, the symptoms of atopic dermatitis (AD) may occur as a result of several exogenous factors. There are data suggesting a close association between the pronounced *Staphylococcus aureus* (SA) colonization of the skin and nasal cavity in AD patients as well as staphylococcal superantigens in the aetiology of the disease. To assess the possible pathological role of staphylococci and their superantigens we took samples from the nasal cavity, the throat and the skin surface of 106 children suffering from AD. The skin colonization was investigated only in children with active skin signs. The cultured bacteria were screened for the genes of enterotoxin A, B, D, E, and toxic shock syndrome toxin (TSST). Additionally the biofilm-forming ability of the isolated SA strains was also determined. SA was cultured from the throat in 40.1%, from the nasal cavity in 43.8%, and from atopic skin signs in 38.6% of the investigated children. One or more toxin production of the isolated SA strains were found in 30.2% (throat), 41.3% (nasal cavity) and 36.4% (skin) of the patients. Biofilm-forming ability of the strains were observed in 58.1% of the strains isolated from the throat, 54.3% of the isolates from the nose, and 50% of the SA isolated from the skin.

Our data do not support the hypothesis that SA skin colonization and superantigen production are essential requirements in the pathogenesis of AD. This study however does not exclude a possible role of SA in the individual course of AD.

