

# **Evaluation of the antibacterial activity of a special silk textile in the treatment of atopic dermatitis.**

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**BACKGROUND:** Increased skin *Staphylococcus aureus* colonization is frequently found in atopic patients. The reduction of local overinfection decreases skin inflammation and improves the flares.

**OBJECTIVE:** To evaluate the effectiveness of the antimicrobial activity of a silk fabric (MICROAIR DermaSilk) coated with alkoxy silane quaternary ammonium with durable antimicrobial properties (AEGIS AEM 5572/5) in children affected by atopic dermatitis (AD).

**METHODS:** Sixteen children, 12 affected by AD with symmetric eczematous lesions on the antecubital areas and 4 without any cutaneous disease, used, for 7 days, tubular arm covers made of this special silk fabric but only one of each pair was coated with AEGIS AEM 5572/5. Microbiological examinations were done with standard cultural swabs and by means of quantification of bacterial agents using agar plates at baseline, after 1 h and after 7 days.

**RESULTS:** After 7 days a significant improvement in the mean value of the 'local SCORAD' index was observed in both the covered areas compared to the values obtained at baseline. The reduction in the mean number of colony forming units per square centimetre was similar in both areas.

**CONCLUSIONS:** Although this special silk fabric seems to be able to improve skin lesions in AD, we were unable to demonstrate that such silk fabrics coated with AEGIS AEM 5572/5 have an antibacterial activity in vivo, as shown in vitro.