

# Dermatitis, Atopic

## P700

### Contact sensitization pattern in 172 atopic patients

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**BACKGROUND:** The term atopy describes individuals with a polygenic inherited disposition to develop one or more of the following disorders: atopic dermatitis (AD), allergic rhinitis (AR) and/or allergic asthma (AA). While consensus exists that among atopic individuals there is a heightened tendency to develop IgE-type-I antibodies to environmental factors, some authors have claimed a decreased cell mediated immunity, which would lead to the observation of decreased rates of allergic contact dermatitis (ACD).

**OBJECTIVE:** The purpose of our study was the investigation of contact sensitization patterns in atopic patients compared to those without atopy.

**METHODS:** After obtaining approval from the Institutional Review Board, data were collected from charts reviewed for 1247 patients undergoing patch testing to the standard and supplemental series at the MGH between 1990 and 2006. By accepted criteria 172 patients were classified as atopic individuals (AI) and the remaining 1075 as non atopic individuals (NAI). Patients were only tested during periods of quiescent inflammatory disease. Statistical analyses were carried out by contingency tables using chi-square test and Fisher's exact test.

**RESULTS:** Sensitization rates (65% AI vs. 57.4% NAI) and average numbers of positive responses (1.5 AI vs. 1.3 NAI) were higher in AI. Leading allergens observed for both groups were nickel and fragrance mix. Potassium dichromate ( $p < .001$ ) and phenylmercuric acetate ( $p < .0005$ ) were significantly greater in the AI group. ACD was the most frequent diagnosis in both groups (41.9% AI vs. 45.5% NAI). In addition, more NAI were employed in wet/irritant occupations ( $p < .005$ ), and a final diagnosis of irritant contact dermatitis in this group was seen more commonly.

**CONCLUSION:** Atopic individuals were shown to be at least as likely to have ACD as NAI. Hence our findings do not support the hypothesis of decreased cell mediated immunity. Most frequent sensitizers were similar in the two groups, suggesting that important sensitization sources are the same. Low numbers of atopic employees in wet/irritant work professions and final diagnosis of ICD result most probably due to avoidance of these professions, because of knowledge about their skin vulnerability.

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