Seminar: New aspects on skin compatibility of fragrances

Surveillance of allergies to fragrances through clinical epidemiology

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Contact sensitisation to fragrances is common both in clinical and population samples. The spectrum of allergens is broad and diverse and to some extent covered by a set of screening agents patch tested in the standard (baseline) series, namely the fragrance mix I with 8 single constituents, the fragrance-mix II with 6 substances, and myroxylon pereirae (balsam of Peru) and oil of turpentine. Further fragrances are tested as single compounds or essential oils in aimed testing of specific series.

Analyses of more recent IVDK data show the following:

15.1% of all patients tested with the German baseline series reacted positive (to FM I 6.6% to FM II 4.6% or Myroxylon pereirae resin (balsam of Peru), 6.8% . Among the single constituents of FM I, Evernia prunastri (oak moss abs.) was the leading, and amyl cinnamal the least frequent allergen. Among fragrances not included in FM I or FM II, Evernia furfuracea (tree moss abs.) was the most common allergen. Positive reactions to the FM II occurred in 4.9% of patients tested. Of those reacting to the FM II and tested with the single compounds, 47.7% reacted to hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC; Lyral ®), 16.1% to citral, 11.4% to farnesol, 3.8% to hexyl cinnamal, 2.7% to coumarin, and 2.5% to citronellol. A subgroup of patients was also tested with essential oils and positive reactions most commonly occurred to ylang-ylang oil (I and II) (3.1%) lemongrass oil (1.8%), jasmine absolute (1.6%), sandalwood oil and clove oil (1.5% each).

With regard to time trends, the development of contact allergies to FM I, and FM II is not uniform. After a decrease of contact allergies to the FM I after 2000, no further decrease was noted in the course of the last years, whereas contact allergies to the FM II seem to be on a slight but continuous rise. In total, contact allergies to fragrances remain frequent and need a continuous surveillance to identify single problematic compounds which could and should be subject to aimed preventive measures (e.g. through recommended use levels).