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#635 - MITE MOLECULAR RECOGNITION PROFILES AMONG DIFFERENT SEVERITY STAGES OF ATOPIC DERMATITIS

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Background

Atopic dermatitis (AD) is characterized by a disrupted skin barrier, and a polarized type 2 helper T-cell (Th₂)–mediated immune responses to numerous environmental antigens. As the sensitization profile to both house dust mites (HDM) and storage mites (SM) may differ depending on the specific geographical locations and the underlying allergic disease, the present study aims to characterize the mite molecular pattern of a selected population with different severity grading of AD.

Method

We selected non-consecutive patients sensitized to HDM *-D. pteronyssinus, D. farinae, E. maynei-* and/or SM *-A. siro, B. tropicalis, L. destructor, T. putrescentiae and G. domesticus-* afflicted with mild-to-severe AD according to both SCORAD and EASI severity indexes. Skin test (SPT) with standardized extracts of HDM and SM and Blood serum samples were obtained from all participating subjects. Total IgE and sIgE were quantified including a custom-made panel including crude extracts and 15 molecular mite allergens: Der p 1, Der p 2, Der p 5, Der p 7, Der p 10, Der p 11, Der p 20, Der p 21, Der p 23, Blo t 5, Blo t 10, Blo t 21, Eur m 2, Lep d 2, Tyr p 2 (MADx, Vienna).

Results

All 16 patients, were paired and divided into groups according to their clinical picture and severity, showing a positive SPT for both HDM and SM with varying sensitization patterns. Regarding specific allergens, a prominent recognition was confirmed for major allergens Der p 1, group 2 allergens *-from both HDM and SM-* and Der p 23. Mid-tier allergens (i.e. Der p 5, Blo t 5, Der p 7, Der p 21 and Blo t 21) were also widely represented (reaching serodominance) in the selected cohort. Interestingly, Der p 11 was only present in 6.25% of the current samples. Although no differences were found in the number of identified allergens *-regardless of the AD severity-* molecular titers were significantly raised ($p < 0.001$) in those individuals with the severe presentation of the disease.

Conclusion

Major and mid-tier HDM and SM allergens confirmed a wide serodominant profile in a selected cohort at different severity grading of AD. The role of these individual allergens in the physiopathology of AD and their putative contribution to the disease severity, has yet to be determined.