

Sensitization to Allergens among Patients with Allergic Rhinitis in Warm Dry Climates

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Objective: To investigate sensitization to aeroallergens, animal dander, house dust mite (HDM) and mould in adult patients with allergic rhinitis without previous history of treatment in warm dry climates.

Design: Prospective study.

Setting: ENT clinic Alfah International Hospital, Riyadh, Saudi Arabia.

Method: Sera were screened for specific IgE by using an immunoblot assay to twenty allergens namely: alder, birch, hazel, mixed grasses, rye, mugwort, plantain, oak; cat, dog, horse, guinea pig, golden hamster, rabbit; *pteronyssinus farinae*, *alternata*, *Penicillium*, *Cladosporium*, and *Aspergillus*.

Result: Specific IgE antibodies were detected in 29/42 (69%) of all the subjects. The sensitization rate was highest for pollen while results for other allergen groups are as follows: pollen 86/127 (66.9%), animal dander 29/127 (22.8%), HDM 11/127 (8.6%) and moulds 2/127 (1.6%). Among allergenic pollen, mixed grasses were the most common cause of sensitization 14/127 (11.0%). Sensitization rate to cat and dog danders are 12/127 (9.4%) and 10/127 (7.9%), while dander from horse 4/127 (3.1%), guinea pig 1/127 (0.8%) and golden hamster 2/127 (1.6%) caused lower rates of sensitization. *Pteronyssinus* and *farinae* are the most prevalent indoor sensitizers 4/127 (3.1%) and 7/127 (5.5%). Sensitization to mould is relatively rare 2/127 (1.6%).

Conclusion: The results show that even in warm climates, pollen, animal dander and HDM allergens may be important sensitizing allergens. Pollens of local horticultural plants are the main sensitizing allergens among these patients. The practice of greening the country seems to contribute to increased rates of allergic sensitization of persons prone to allergic rhinitis. Local environmental and genetic factors are probably involved in the pathogenesis of the disease.

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