



POSTER PRESENTATION

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Immunologic responses to the major allergen of *Olea Europaea* in local and systemic allergic rhinitis subjects

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Background

Ole e 1 is one of the major allergens from olive tree pollen. Up to date there are no specific studies that evaluate in depth the *in vitro* responses to this purified allergen. The goal of the study was to thoroughly evaluate the cellular responses to nOle e 1 in allergic rhinitis (AR) and local allergic rhinitis (LAR) patients with sensitization to olive tree pollen (OL) demonstrated by nasal allergen provocation test (NAPT).

Methods

Twelve subjects with AR (+NAPT with OL, + skin testing and specific IgE (sIgE) to OL), 12 subjects with LAR (+ NAPT with OL, - skin testing and sIgE to OL), and 12 subjects as control group (CG) (- NAPT, - skin testing and sIgE to OL) were selected. Basophil activation tests (BAT) with OL and nOle e 1, along with dendritic cell (DC) maturation/proliferation studies in response to nOle e 1 stimulation, were carried out in all subjects. Local ethical committee approved the study.

Results

All AR subjects had positive BAT responses to OL and 10/12 to nOle e1 (83%); 8/12 LAR (66.6%) had a positive BAT with OL and 4/12 (33%) to nOle e1, with only one subject of the control group with a positive BAT to both OL and nOle e1 (8%). DC proliferation and maturation were increased in SAR>LAR>CG but with no significant differences (maturation: 66.7%/57%/50%; proliferation: 40%/20%/0%).

Conclusion

BAT with OL and nOle e1 in LAR group showed sensitivity between 66.6 and 33%, demonstrating specific basophil activation with pollens in patients with LAR. DC proliferation and maturation were demonstrated in SAR and LAR subjects although with no significant differences with CG.

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