



POSTER PRESENTATION

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Tomato hypersensitivity in peach allergic patients: rPru p3 and rPru p1 positivity is predictive of the symptom severity

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Background

allergy to tomato is very common in the Mediterranean area, where tomato consumption has increased in the last years: fresh in salads, cooked in household sauces or industrially processed foods. Many patients allergic to tomato present severe reactions and have symptoms also with commercial tomato products.

Objective

to examine the possibility of a relationship between severe allergic symptoms to tomatoes and peach; and, in the event of such a relationship, examine the correlation between severe tomato allergy and IgE positivity to peach allergens, i.e. Pru p 3 and Pru p 1.

Methods

within a population of patients with different grades of OAS for peach (mild-OAS, group A; and severe systemic symptoms to peach, group B) we selected patients with documented allergic reactions to tomato. We investigated the type of reaction to tomato by means of a clinical questionnaire, skin prick tests, prick + prick with fresh tomato and anti-rPru p 1, 3, 4, anti-rBet v 1, 2 and 4 IgE specific measurements. We compared the kind of clinical reactions to tomato between group A and group B patients. Statistical analyses were carried out with parametric and non parametric tests to examine the relationship between anti-rPru p 1 and 3 IgE levels and symptom severity.

Results

patients with severe symptoms to peach (group B) were at major risk of presenting severe symptoms to tomato ($p=0.017$). We investigated this correlation and found that patients with systemic severe symptoms to tomato presented higher specific IgE levels to rPru p 3 than patients with mild OAS ($p=0.0291$). On the contrary patients with mild OAS to tomato presented higher rPru p 1 specific IgE levels than patients with severe systemic symptoms ($p=0.047$).

Conclusions

peach and tomato allergy are strictly interrelated and IgE positivity to rPru p 3 can be considered a biological marker of severe symptoms to tomato, whereas IgE to rPru p 1 can be considered a marker for milder symptoms.

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