



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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