**PP015**

**Accuracy of skin prick test to access plant food allergy**

Diana Silva, André Moreira, José Plácido, Alice Coimbra

Serviço de Imunoalergologia, Centro Hospitalar de São João E.P.E., Porto, Portugal

**Background:** Plant food allergy diagnosis is challenging due to the different implicated foods, clinical manifestations and geographic diversity. We aimed to assess the diagnostic accuracy of single food allergenic proteins combined with plant and food skin prick test extracts (SPT) to evaluate plant food allergy.

**Methods:** This is a cross-sectional retrospective study. All SPT performed in an allergy department of Porto, Portugal from 09/2014 to 12/2015 (n=3141 patients) were included and those evaluating sensitization with extracts to fresh fruits (soy, watermelon, banana, apple, peach, kiwi, avocado, fig), nuts (walnut, hazelnut, almond, pinenut, peanut and chestnut), lipid transfer proteins (LTP), profilin and latex were selected (n=189 patients). Clinical and demographic data, sIgE, SPT with fresh foods, and open food challenges (OFC) results were reviewed from patients records. Plant food allergy syndromes were identified and the accuracy of the skin tests were calculated using medical diagnosis as the gold standard. Continuous data are presented as median and interquartile range and categorical as n(%). Mann-whitney and Chi-square were used to compare differences between groups.

**Results:** Of all the tests, 89(48%) were performed due to plant food allergy suspicion and in 58(65%) diagnosis was confirmed: profilin mediated allergy (n=17); LTP allergy syndrome (n=20); both profilin and LTP (n=2); birch-plant food syndrome (n=4), latex-fruit (n=4); and to specific foods (peanut n=3; walnut n=1; banana n=1; kiwi n=4; wheat n=1; blackberry n=1). Most were women 41(71%), with a median age of 22 [18;32] years, 43(74%) had rhinitis and 15(26%) asthma. Oral allergy symptoms (OAS) were the most common complaint 27(47%), followed by anaphylaxis 15(26%) and urticaria/angioedema 14(24%). LTP mediated syndrome had more anaphylaxis and a lower number of OAS compared with profilin mediated syndrome (10 vs 1, p=0.003; 3 vs 14, p<0.001). The sensitivity and specificity of using combined SPT extracts was 83.0 CI 95% [69.7;91.5] and 95.7[76.0;99.8], respectively. Using only LTP and profilin improved specificity 100.0[82.2;100.0] but not sensitivity 71.7[57.4;82.8].

**Conclusion:** LTP and profilin plant food mediated allergy syndrome were the most frequently encountered in our population. LTP sensitization was associated with more severe reactions. SPT with extracts including LTP and profilin were useful as a first line diagnostic tool to identify plant food allergy syndromes.