Flax seed allergy

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Case Report: We report the case of a 46 year-old woman, with personal history of bronchial asthma and rhinoconjunctivitis, who attended our Unit in September 2012 to study an anaphylaxis appeared immediately after eating multicereals biscuits (oat, rice, flax seeds, egg, almonds and raisins). Skin-prick tests (SPT) were positive for dog dander exclusively and negative for house dust mites, fungi, cat and dog epithelia, latex and pollen (Olea europea, Parietaria judaica, Cupressus arizonica, Platanus acerifolia, Graminae family, Artemisia vulgaris); SPT with food allergens were positive to nut, peanut, mustard, tomato, corn, peach and apple and SPT with cereals commercial extracts (corn, wheat, rice, oat, barley, rye, gluten and gliadin) were negative. Prick by prick with golden and toasted linseed was positive. Total IgE (UniCAP, Thermofisher) was 282 KU/l, specific IgE to dog dander 3.26 KU/l, peach 1.63 KU/l, wheat 0.54 KU/l, rye 0.38 KU/l, apple 1.14 KU/l, Pru p 3 1.97 KU/l, omega-5 gliadin 0-KU/l, tomato 2.22 KU/l. The microarray ISAC (Termofisher) showed polysensitization to both cross-reactivity and species-specific allergens: Can f 5 35 ISU, Cry j 1 0.4 ISU, Cup a 1 1.8 ISU, Ara h 9 0.3 ISU, Jug r 3 0.4 ISU, Pru p 3 0.4 ISU, Art v 3 0.5 ISU, other determinations were negative.

Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) immunoblotting was performed with gold and toasted flax seed extract. IgE immunoblotting with the patient’s serum, under reducing conditions, showed an IgE binding band < 14 kDa both in the gold flax seed and in the toasted linseed extract.

We present a case of a patient with anaphylaxis due to flax seed allergy with a LTPs sensitization and asthma and rhinitis due to dog dander allergy with monosensitization to kallicrein. The patient remains asymptomatic with a free diet without flaxseed.

The prevalence of allergy to seeds is highly influenced by the geographical area and eating habits. In Spain, according to Alergologica 2005, seeds allergy represents 1.6% of food allergy. The cases reported of flax seed allergy in pubmed are anecdotal but linseed is recognized as an increasingly important food allergen since its introduction in diet for its nutritional benefits and its use as a laxative. To date, no flaxseed allergen has been characterized yet.