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#18 - Case of acute allergic reaction to sunflower seeds in the 4-years old boy

Sharikadze, Olena / Zubchenko, Svitlana / Yuriev, Serhii

Case Report

Excessive addition of sunflower seed to various foods, including children's diet, may contribute to increase in seed hypersensitivity. Identification of a specific seed as the culprit is often not explored or difficult to verify. Some studies have suggested that methionine-rich 2S albumin (SFA-8/SSA) is a major allergen in sunflower seed (m. w. of 16–17 kDA). Other studies suggested a lipid transfer protein (m. w. 13 kDA) as a potential sunflower seed allergen. Possible cross-reactivity among sunflower seeds and other foods or pollens – Brazil nut, mustard, pistachio, mugwort pollen. Storage proteins and LTP – major allergens which can cause severe reactions.

A 4-years old boy was admitted to the pediatric clinic with skin reactions, including hives, trouble breathing and low blood pressure after eating bread with butter (bread contained sunflower seeds).

DH Rash and oral edema developed for the first time in 10 minutes after eating candy that contained different nuts and seeds. The child's condition returned to normal following i.v chloropyramine hydrochloride (20 mg) and dexamethasone sodium phosphate (20 mg), Recommendations were made to exclude all kinds of nuts.

PE Was born healthy. Normal condition (weight - 18 kg, height - 103 cm. The boy has been on the diet excluding candy and baked products. Food allergy was absent in the past.

FH without allergic diseases. The child had a canary at home and often fed it with seeds.

Results LD Food allergy screening: "fx5" – 0.17 kU/l - negative;

MAD ALEX¹ – seed of sunflower – 1.95 kU/l (N - \leq 0.10), Almond, Brazil Nut, Cashew, Hazel Nut, Peanut, Pistachio, Soy, Walnut, Green Bean, Pecan – \leq 0.10 kU/l – negative.

Prick-prick tests with sunflower seed paste were positive (12 mm)

Prick-prick tests with different kinds of sunflower oils were negative. We have suggested that a technological process probably removes allergenic lipid derivatives (oleosins) which could be responsible for negative results.

Diagnosis. Food allergy to sunflower seed (Hel a).

Recommendation. Do not eat products containing sunflower seeds. If necessary – Epipen junior. Refrain from eating nuts.