

#8 Abstract

Low-dose OIT as a safe and feasible treatment to induce sustained unresponsiveness in young children with an allergy to cashew nut.

Allergen immunotherapy / Immunotherapy: clinical / vaccines

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Background

Low-dose oral immunotherapy (OIT) is a food allergy treatment that is mainly provided to increase threshold levels of the specific allergen by its desensitizing effect. The therapy has also shown an immunomodulatory effect in young peanut allergic children associated with the development of long term tolerance. Many of these peanut allergic children have a concomitant allergy to nuts. Tolerance induction for nut allergies would be an important step in the treatment of these patients with a multiple food allergy. Accordingly, a study was performed to assess the safety, feasibility and effectiveness of low-dose OIT in young children with a cashew nut allergy.

Method

As part of a study in which young children with different food allergies received OIT, children aged 9–24 months with a proven allergy to cashew nut, based on sensitization and a positive oral food challenge, were eligible for inclusion. Participants received a maintenance doses of 300 mg/day cashew protein during one year after a build-up phase. The primary endpoint was safety and feasibility. The secondary endpoint was sustained unresponsiveness at four weeks after stopping OIT, as assessed by an oral food challenge test.

Results

Until now, 10 children with a median age of 13 (range 9-23) months at enrolment finished the therapy. All children had a history of eczema and 4 children had a multiple food allergy. Median cashew-specific IgE at inclusion was 7.1 kU/l (IQR 1.7-22.2 kU/l) and the median skin prick test wheal size was 7.5 mm (IQR 5.8-14). The median baseline threshold level determined by a clinical oral food challenge was 300 mg (range 10-3000mg) cashew protein. Allergic side effects during OIT were mild. Moreover, parents assessed the study protocol as feasible. Four weeks after stopping the 1-yr OIT, all children achieved sustained unresponsiveness, consuming 4.4 gram cashew protein without allergic reaction. Subsequently, dietary cashew consumption was continued at home. Cashew-specific IgE levels declined in all patients, to a median level of 2 kU/l (IQR 0.7 to 5kU/l, p=0.012).

Conclusion

OIT for cashew nut allergy in young children is safe, very feasible and highly effective in achieving sustained unresponsiveness in all participating patients. These unique results suggest that OIT is a very promising treatment for infants with a multiple food allergy.