Effect of Oral Immunotherapy to Peanut on Food-Specific Quality of Life

PURPOSE OF THE STUDY. The purpose of this study was to evaluate the effect of peanut oral immunotherapy on food-specific quality of life.

STUDY POPULATION. The study enrolled 100 children, 5 to 18 years of age, with suspected or known peanut allergy based on history, elevated specific immunoglobulin E to peanut, and skin testing. If a subject did not meet inclusion criteria (eg, skin-prick wheal ≤7 mm, no anaphylaxis, reaction more than 1 year ago, or peanut immunoglobulin E <15), a single blind food challenge was performed to confirm allergy before enrollment.

METHODS. A desensitization protocol was performed starting with 0.1 mg of peanut protein and doubling in the amount given every 30 minutes to a maximum of 6 mg on day 1 (maximum cumulative dose of 12 mg). On day 2, subjects returned and were given the maximum tolerated dose from the previous day. If tolerated, subjects were discharged with instructions to continue this daily dosing at home. Subjects returned every 2 weeks for increases in daily dosing to a maximum of 450 mg per day. Food allergy quality of life questionnaires were given to the parents of the youngest subjects, as well as subjects 8 to 12 years old, and adolescents 13 to 18 years old on entry to the study, and again when maintenance dosing was achieved.

RESULTS. A total of 90 subjects reached a maintenance dose of 450 mg peanut protein per day (equal to 3 peanut M&Ms) and completed pre- and postdesensitization quality of life questionnaires. Excluded were 3 subjects still advancing to maintenance at the time of publication, and 7 who dropped out during the buildup phase (4 of them had gastrointestinal symptoms). There was significant improvement in the following areas of the quality of life by questionnaire: allergen avoidance, dietary restriction, risk of accidental exposure, food-related anxiety, and social and dietary limitations. Emotional impact was not noted to have a significant difference in the adolescents’ survey, but was significant in the other age groups. Furthermore, quality of life was significantly improved for the youngest group (with parents filling out the questionnaire), as well as for the early teen (8–12) and adolescent groups filling out their own questionnaires.

CONCLUSIONS. The results of this study showed that there is an improvement in the quality of life in children and adolescents with peanut allergy after desensitization.

Frequent Baked Egg Ingestion Was Not Associated With Change in Rate of Decline in Egg Skin-Prick Test in Children With Challenge-Confirmed Egg Allergy

PURPOSE OF THE STUDY. To determine if the natural history of egg allergy would be altered by the frequent ingestion of baked egg in food challenge–confirmed egg-allergic children.

STUDY POPULATION. A retrospective clinical cohort study of 125 children from the Department of Allergy and Immunology, Royal Children’s Hospital, Victoria, Australia, was completed. Participants from 1996 to 2005 with challenge-proven egg allergy were included, providing they had at least 2 egg skin-prick tests performed within this period.

METHODS. A telephone questionnaire was conducted to assess the frequency of baked egg ingestion as follows: (1) frequent (more than once per week), (2) regular (more than once every 3 months, up to once per week or less), or (3) strict avoidance (once every 3 months or less). A multiple linear regression analysis, adjusting for possible confounders, was used to examine the relationship between frequency of baked egg ingestion and the rate of decline in egg skin-prick test size.

RESULTS. The mean rate of decline in egg skin-prick test size in all children was 0.7 mm per year (95% confidence interval [CI] 0.5–1.0 mm per year). The frequency of baked egg ingestion did not affect the rate of decline in egg skin-prick test size ($P = .57$). Individual results for each group were as follows: frequent ingestion ($n = 21$, mean 0.4 mm per year, 95% CI 0.3–1.2 mm per year), regular ingestion ($n = 37$, mean 0.9 mm per year, 95% CI 0.4–1.4 mm per year), and strict avoidance ($n = 67$, mean 0.7 mm per year, 95% CI 0.4–1.1 mm per year).

CONCLUSIONS. Frequent baked egg ingestion was not associated with a different rate of decline in egg skin-prick test compared with strict avoidance in egg-allergic children.

REVIEWER COMMENTS. This study shows the psychosocial impact that peanut desensitization can make in the lives of children with peanut allergy. The authors are forthcoming in pointing out that the desensitized population was not compared with a matched, nondesensitized group and further research is warranted.
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