included immediate-type clinical manifestations within 2 hours of cow’s milk ingestion, skin prick tests ≥3 mm, and serum specific IgE levels ≥0.35 kU/L for whole cow’s milk, casein, α-lactalbumin, or β-lactoglobulin. Persistence of CMP allergy in the 4 weeks before tolerance induction was based on positive skin and serum testing and a positive double-blind placebo-controlled food challenge to cow’s milk. Exclusion criteria included anaphylactic shock after cow’s milk ingestion, non-IgE-mediated or nonimmunologic adverse reactions, malignant or immunopathologic disease, immunosuppressive therapy, concurrent β-blocker use, and diseases contraindicating the use of epinephrine.

METHODS. Patients (n = 79) were recruited in this randomized, parallel group study. 19 declined to participate. Sixty patients were randomly assigned to 1 of 2 groups, each consisting of 30 patients. The active group initiated oral desensitization immediately after food challenge. The control group maintained a milk-free diet for 1 year. The primary study variable was desensitization to CMP 1 year after the start of the trial. Patients tolerating oral desensitization were considered desensitized. Skin testing and serum specific IgE testing were repeated 1 year after initial provocation testing.

RESULTS. In the active group, 27 patients (90%) achieved full desensitization, and all remained tolerant of the full dose at the 12-month follow-up visit. Twenty-four patients (80%) had either a mild or moderate reaction during desensitization. The most common adverse reactions were urticaria-angioedema, followed by cough. The mean duration of follow-up was 14.2 months in the active group, and 12.5 months in the control group. Skin reactivity and serum specific IgE to milk and casein decreased significantly in the active group. In the control group, 23 patients (76.7%) remained allergic at the 12-month follow-up visit.

CONCLUSIONS. Oral desensitization was effective in a significant percentage of 2-year-old children with CMP allergy. Oral desensitization is an alternative to elimination diets.

REVIEWER COMMENTS. The current study adds to the limited body of information available on alternatives to elimination diets in patients with CMP allergy. Because many children outgrow allergy to CMP, the risks and benefits associated with desensitization in early childhood must be carefully considered. Although no patients in the current study had severe reactions during desensitization, larger studies are needed to fully evaluate the risk of severe adverse reactions.

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Oral Rush Desensitization to Egg: Efficacy and Safety

PURPOSE OF THE STUDY. Previously published oral desensitization protocols require weeks to months. The current study evaluates the safety, efficacy, and immunologic effects of a rapid egg oral desensitization protocol.

STUDY POPULATION. Twenty-three patients between 5 and 17 years of age with symptomatic immunoglobulin (Ig) E-mediated egg allergy were recruited from the Allergy Clinic of Ciudad Real General Hospital. Patients had a clinical history of IgE-mediated egg allergy and at least 1 of the following: a positive skin prick test to commercial egg extract, detection of serum specific IgE (>0.35 kU/L) to egg white or its proteins measured by fluorescence enzyme immunoassay, a positive oral challenge test within the previous 3 months, or an unequivocal history of reaction to egg within the previous 3 months.

METHODS. Skin prick testing to pasteurized raw egg white and commercial extracts of egg, egg white, ovalbumin, and ovomucoid were performed before desensitization and at 3, 6, and 12 months after desensitization. Egg-specific IgE and IgG were measured before desensitization; at week 3; and at 3, 6, and 12 months after desensitization. Desensitization was achieved when the patient tolerated 1 whole cooked egg (30 mL of egg white) and 8 mL (1/4 of white of whole egg) of raw egg white. The desensitization was planned for a 5-day period but was individualized for each patient based on adverse reactions. Variables measured included the number and severity of adverse reactions, minimum dose that triggered symptoms, days until tolerance to a whole cooked egg, skin prick test wheal size, and egg-specific IgE and IgG before desensitization and during the minimum 6-month follow-up period.

RESULTS. Twenty (86.9%) of the 23 patients achieved tolerance to a whole cooked egg. Fourteen patients achieved tolerance within 5 days. Six patients achieved tolerance in <10 days. One patient discontinued desensitization due to repeated gastrointestinal adverse reactions. Two patients were switched to a slow desensitization protocol and achieved tolerance in 60 and 80 days, respectively. Eighteen patients experienced at least 1 adverse reaction during desensitization. There were 35 mild and 20 moderate reactions. Desensitization led to a fall in the mean values of skin prick test wheal size and specific IgE levels significant at 6 months after desensitization and an increase in specific IgG levels significant at 3 weeks after desensitization.

CONCLUSIONS. The described protocol is safe and effective but must be performed in a highly supervised setting.
Egg allergic patients can be desensitized within 5 days, without increased risk compared with earlier reported, slower protocols.

REVIEWER COMMENTS. Egg is a common ingredient in a wide variety of foods. Desensitizing egg-allergic patients would reduce the risk of anaphylaxis associated with accidental ingestion and allow patients to consume a broader diet. Although the current study shows great promise, oral desensitization has significant inherent risks. Additional studies addressing patient selection, dosing, and long-term tolerance are essential before rapid oral desensitization becomes a commonly performed procedure.

The Ability of Adults and Children to Visually Identify Peanuts and Tree Nuts

PURPOSE OF THE STUDY. To determine the ability of children and adults to visually identify and differentiate peanuts and tree nuts by displaying the nuts in commonly purchased and used forms.

STUDY POPULATION. One thousand one hundred five self-selected adults and children (456 children aged 6–18 years) visiting an interactive children’s science center.

METHODS. Participants were recruited to a nut display consisting of 19 numbered compartments displaying peanuts and 9 tree nuts in commonly purchased and used forms. Data on demographics, personal or family history of peanut or nut allergy, current or previous roles in child care, teaching, food preparation or serving, or patient care were collected. Participants were then asked to identify each nut in the display.

RESULTS. There was a wide distribution of correct answers. The mean number of correct answers was 8.4 of 19; the responses of adults (11.1) were better than those who were not, but those in the food allergy clinic performed better than those who were not, but those in the food allergy clinic performed better than those in the food allergy clinic.

CONCLUSIONS. Children reported a significantly greater impact of their food allergies on quality of life compared with their parental-proxy reports. This demonstrates a difference in perspective between children and their parents, and it is important to recognize this potential discordance in the clinical setting.

REVIEWER COMMENTS. This study represents the first published comparison of child and parent-proxy reported HRQoL by using validated measures. There may be cultural differences influencing quality-of-life perceptions in the Netherlands that are not similar in other countries. It would be interesting, however, to conduct larger-scale, multicenter, multinational studies.
Oral Rush Desensitization to Egg: Efficacy and Safety
Karla L. Davis and Conrad S. Belnap
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