therapy for food allergy are ongoing in the United States and Europe.

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Specific Oral Tolerance Induction in Children With Very Severe Cow’s Milk-Induced Reactions

PURPOSE OF THE STUDY. To evaluate the safety and efficacy of specific oral tolerance induction for children with severe cow’s milk protein (CMP) allergy.

STUDY POPULATION. The study included 97 children (aged 5 to 17 years) with a history of severe allergic reactions and CMP-specific immunoglobulin E (IgE) levels of >85 kU/L.

METHODS. All subjects underwent a double-blind, placebo-controlled food challenge (DBPCFC) starting with very low amounts of diluted milk. Children were considered eligible for random assignment only if they had symptoms during the DBPCFC to the lowest doses (0.8 mL of whole milk). Sixty had positive test results and were randomly assigned to 1 of 2 groups: group A started the specific-oral-tolerance-induction protocol immediately after the DBPCFC; and group B maintained a milk-free diet for 1 year and then underwent another DBPCFC. CMP-specific IgE levels were obtained at enrollment and at 6 and 12 months. Subjects in group A were monitored as inpatients for 10 days during rapid, daily increases in milk dosage and then discharged from the hospital with instructions for increasing milk ingestion to a final goal of 150 mL per day. Once on 150 mL, subjects were instructed to add dairy products to their diet.

RESULTS. After 1 year, 11 (36%) of 30 children in group A were tolerant to the highest dose of 150 mL of cow’s milk per day with some ingesting additional dairy products, thus allowing them an unrestricted diet. Sixteen (54%) could take limited amounts of milk (5–150 mL), and 3 (10%) were not able to complete the protocol because of persistent respiratory and abdominal complaints. CMP-specific IgE levels measured in group A at 6 and 12 months showed a significant decrease in 15 of 30 subjects. In subjects in group B, DBPCFC results were positive with only minimal amounts of milk in all 30 cases, and only 2 subjects showed a decrease in specific IgE levels. Clinical differences between the groups were significant ($P < .001$). Adverse reactions were common among the subjects in group A, with multiple subjects requiring treatment throughout the protocol. It is interesting to note that 20% of the subjects in group B had adverse reactions after accidental exposure to CMP.

CONCLUSIONS. Specific oral tolerance induction is effective in a significant number of patients with severe cow’s milk allergy.

REVIEWER COMMENTS. Oral desensitization is a novel form of immunotherapy that is under investigation for food allergy, with benefits noted in several clinical studies. Unlike previous studies, this study addressed oral desensitization in children with very severe cow’s milk allergy. The authors noted their success among the subjects studied but were also quick to point out the number of adverse events that occurred when using their protocol. These results are encouraging for patients who suffer from food allergy but highlight the need for additional studies before implementation in clinical practice and the need for close monitoring in highly controlled settings.

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ANAPHYLAXIS

Platelet-Activating Factor, PAF Acetylhydrolase, and Severe Anaphylaxis

PURPOSE OF THE STUDY. To characterize the roles of platelet-activating factor (PAF) and PAF acetylhydrolase, the enzyme that inactivates PAF, in humans.

STUDY POPULATION. The population was a variety of pediatric and adult patients with different levels of allergic disease along with nonallergic controls.

METHODS. Serum PAF levels and activity of PAF acetylhydrolase were measured in 41 patients with anaphylaxis and in 23 control patients. Serum PAF acetylhydrolase activity was also measured in 9 patients with fatal anaphylaxis and compared with that in 26 nonallergic pediatric control patients, 49 nonallergic adult control patients, 63 children with mild peanut allergy, 24 patients with nonfatal anaphylaxis, 10 children who died of nonanaphylactic causes, 15 children with life-threatening asthma, and 19 children with non–life-threatening asthma.

RESULTS. Mean serum PAF levels were significantly higher in patients with anaphylaxis than in patients in the control groups and were correlated with the severity of anaphylaxis. The proportion of subjects with elevated
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