Probiotic Supplementation in the First 6 Months of Life in at Risk Asian Infants: Effects on Eczema and Atopic Sensitization at the Age of 1 Year


PURPOSE OF THE STUDY. To determine the effect of probiotic supplementation from birth to 6 months of age on eczema and allergic sensitization at 1 year of age in Asian infants at risk of allergic disease.

STUDY POPULATION. A total of 253 infants with a family history of allergic disease, defined as having a first-degree relative with doctor-diagnosed asthma, allergic rhinitis, or eczema, and positive skin-prick test result to dust mite, were voluntarily recruited prenatally at the clinics or eczema, and positive skin-prick test result to dust mite, were voluntarily recruited prenatally at the clinics.

The subjects were randomly assigned to receive 60 mL/day of commercially available cow’s milk–based formula either with or without probiotic supplementation from birth to the age of 6 months. The probiotics used were Bifidobacterium longum (10⁷ colony-forming units per g) and Lactobacillus rhamnosus (2 × 10⁸ colony-forming units per g). The primary outcome was eczema (pruritic rash with chronic relapsing course), and the secondary outcome was allergen sensitization. Questionnaires and pediatrician evaluations were performed at 1, 3, 6, and 12 months. The scoring atopic dermatitis index was used to objectively define the severity of atopic dermatitis. Skin-prick tests (to soy, milk, egg yolk, egg white, and 2 locally prevalent dust mites) were performed at the 12-month visit. The 2 outcomes were compared by using χ² tests, and logistic regression was used to calculate the odds ratio and to adjust for potential confounders (gender, birth order, prenatal smoking exposure, and feeding history).

RESULTS. The incidence of eczema in the probiotic group (22%) was similar to that in the placebo group (25%) (odds ratio: 0.8 [95% confidence interval: 0.4–1.5]). Severity among those with eczema according to the scoring atopic dermatitis index was not significantly different (P = .17). The rate of sensitization at 1 year showed no difference between the 2 groups (24% [probiotic group] vs 19% [placebo]).

CONCLUSIONS. The results of this study do not support the role of early-life probiotic supplementation as a modality for primary eczema prevention.

Impact of Maternal Atopy and Probiotic Supplementation During Pregnancy on Infant Sensitization: A Double-Blind Placebo-Controlled Study


PURPOSE OF THE STUDY. To explore factors in infant sensitization and the effect of probiotics.

STUDY POPULATION. The researchers evaluated 171 mother-infant pairs from an ongoing, placebo-controlled, double-blind study with nutrition modulation through dietary counseling and probiotic supplementation.
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