Lactobacillus may relieve symptoms in children with allergic rhinitis

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ABSTRACT

Background: The effect of probiotics on AR is not consistent. We want to determine the efficacy and safety of *Lactobacillus paracasei* subsp. paracasei LP-33 (GM-080) on the disease severity and immune biomarkers in children with allergic rhinitis (AR). **Methods:** A double-blind, prospective, randomized placebo-controlled study was conducted on 122 children aged 5–16 years with AR. Children are randomized to receive different doses of LP-33 and placebo for 3 months. The scores of severities in each symptom, such as sneezing, rhinorrhoea, nasal pruritus and nasal congestion, Nasal Total Symptom Score (NTSS), and Global Assessment by the Investigator in different groups and at different visits were evaluated by ANOVA and GEE model. Immunological parameters IgE and IFN-γ data were also collected were compared at baseline and after 3 months. **Results:** Children receiving LP-33 showed a significant symptom relief in sneezing than the placebo group after treatment (p= 0.033), and this difference started since week 2. NTSS showed a decrease trend. Global Assessment scores by the Investigator were higher in the LP-33 group than the placebo group after treatment p=0.049). IgE decreased and INF- γ increased after 3 months, though failed to reach statistical significance. **Conclusion:** The supplementation of LP-33 was associated with significant alleviation of symptoms of sneezing in children with allergic rhinitis.