

Combination of Lactobacillus Rhamnosus LGG, Vitamin D₃ and Zn in Preventing Atopic Dermatitis in Infancy

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Abstract

Introduction: Atopic dermatitis (AD) is one of the most common atopic conditions in infants and young children. AD is frequently related to food allergies from the very beginning. Therefore it is very frequent cause for outpatient pediatric visits and even more the main cause for overtreatment with skin barrier products. In real life, it deserves our caution due to atopic background and "wait to see" management before aggressive diagnostics and treatment have to be ordered. However, it doesn't mean that no intervention would be preferred, so far some benefit and good results were shown by early introduction of probiotics. Mixtures of probiotics, including Lactobacillus rhamnosus LGG strain in the first place, significantly improved clinical feature of AD in infancy and reduced the risk of AD if given pre- and postnatally.

Objective: The aim of the current study was to assess the effect of oral supplementation with LGG in infancy on eczema development and symptoms severity during the first 2 years of life.

Material and methods: The study was a real life controlled observational study that included 96 patients (52 infants were treated with Lactobacillus rhamnosus combined with vitamin D₃ and zinc, while the rest were advised to use only symptomatic treatment). All children were referred to our clinic due to early life atopic condition and high risk family history positive on atopy. At study entry SCORAD index was defined as well as after 3 and 6 months, respectively.

Results: At the baseline, the infants in the experimental group had higher SCORAD values. During the follow up period a significant reduction in SCORAD index was observed only in the group of participants who were treated with probiotics. They also used less topical treatments and antihistamines.

Conclusion: This study has found that Lactobacillus rhamnosus GG (LGG) formulation with zinc and vitamin D₃ supplementation during the postnatal period (in infancy and early childhood) reduce the severity of atopic dermatitis. Based on the findings, it is recommended to introduce probiotic supplementation as well as vitamin D₃ and zinc in infants and children with atopic dermatitis and positive family history.