

Relationship between the appearance of atopic dermatitis in childhood and the consumption of probiotics during the neonatal period in premature patients

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Atopic dermatitis (AD) is a health problem whose prevalence is increasing in the last years. Recent research has shown that AD is not only associated with the skin microbiome, but also with the gut microbiome, which plays a key role in the development of allergic diseases, including atopic dermatitis^(1,2). Probiotics contribute to the improvement of the intestinal environment, the balance of immune responses and the regulation of metabolic activity⁽³⁾. The objective of the study is to evaluate the risk of developing AD in children associated with the consumption of probiotics during the neonatal period. In our center we conducted a retrospective cohort study in very low birth weight premature infants born between January 2009 and December 2021. We exclude infants with severe congenital anomalies and those with incomplete records a digital history. We evaluated the risk of developing atopic dermatitis in childhood associated with the consumption of probiotics during the neonatal period (10^9 CFU *L. acidophilus* (ATCC 4356) + 10^9 CFU *L. bifidum* (ATCC 15696) or 10^9 CFU *L. rhamnosus* (LGG) (ATCC 53103). Two groups were evaluated: neonates who received some type of probiotic and those who did not. The study was approved by the hospital ethics committee, and informed consent was requested from the parents of the newborns. Of these patients, 65 died and 36 were excluded due to lack of data in the clinical history. Of the remaining 419 patients, 174 received probiotics up to 35 weeks corrected gestational age. A total of 76 children developed atopic dermatitis in the childhood period, representing 14.3% of the patients who received probiotics. In contrast, of the 245 patients who did not receive probiotics, 20.8% developed atopic dermatitis. The logistic regression model shows us an OR 0.51 (95% CI 0.29-0.88; $p < 0.01$) of developing atopy after receiving probiotics in neonatal period. Premature patients who received probiotics during the neonatal stage have a lower incidence of atopic dermatitis than patients who did not receive them.

Probiotics contribute to the improvement of the intestinal environment and the balance of immune responses and may contribute to a decrease in the incidence of atopic dermatitis. However, more studies are needed to support these conclusions.

References

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