



ATOPIC ECZEMA/DERMATITIS

IMPROVEMENT IN THE MICROBIOME OF SUBJECTS WITH DRY SKIN AFTER LONG TERM USAGE OF A MARKETING MOISTURIZER

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Introduction: Recent years have seen unprecedented advances in genomic sequencing technology. The application of these technologies to dermatology have contributed to a resurgence of interest in skin microbiology and the emerging importance of a balanced skin microbiome as a potentially beneficial actor in the maintenance of skin health.

Despite this increasing interest in the skin microbiome, no investigation of the longitudinal effects of moisturizers on the dry skin microbiome have been undertaken.

Objective: This study was conducted to generate fundamental longitudinal insights into how the use of a marketed moisturizer containing glycerin, petroleum jelly and stearic acid impacts the skin microbiome and skin condition of subjects exhibiting dry skin.

Materials and Methods: Healthy, female subjects with either moderately dry skin or non-dry skin on their lower legs provided informed consent to participate in IRB-approved study. Study participants were given a marketed moisturizer containing glycerin, petroleum jelly and stearic acid to use for five weeks. Changes in the skin microbiome was characterized using 16S rRNA gene sequencing before and after five weeks of moisturizer use. Concomitantly, the skin condition was assessed visually and instrumentally over the five weeks of moisturizer use.

Results: Staphylococcus, Cutibacterium and Corynebacterium were the most abundant genera in both the healthy and visually dry skin groups and remained the most abundant genera over the duration of the study. Use of a marketed moisturizing product containing glycerin, petroleum jelly and stearic acid was associated with a significant change in the composition and associations within the microbiome community while also improving the underlying skin condition. After 5 weeks of usage the microbiome associations and underlying skin condition was restored to a non-dry state.





Conclusions: This data suggests that the marketed moisturizer containing glycerin, petroleum jelly and stearic acid helps heal dry skin and restore the microbiome.

