

MEDICAL THERAPIES AND PHARMACOLOGY

EFFICACY EVALUATION OF A LOTION CONTAINING NIACINAMIDE, HELIANTHUS SEED OIL AND B. PARKII BUTTER IN IMPROVING HYDRATION, SKIN BARRIER FUNCTION AND TRANSEPIDERMAL WATER LOSS IN DM TYPE 2 PATIENTS.

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Introduction: Dry skin is a frequent condition in diabetes patients. Dermocosmetics are essential in the management of skin hydration and control of xerosis symptoms on DM patient.

Objective: Evaluate the efficacy of a lotion containing 3% niacinamide, 3% Helianthus seed oil and 3% Butyrospermum parkii butter in providing hydration, prevention of transepidermal water loss (TEWL) and improvement of skin barrier function on type II DM patients.

Material and Methods: 33 patients with type II diabetes were included. Evaluations were performed before and after 1, 12 and 24 hours of application and after 28 days of home use : Hydration (evaluated by Corneometer® 825); TEWL (by Tewameter® TM300); Lipid organization of the stratum corneum to verify the increase in the fraction of the orthorhombic structure and the strengthening of the skin barrier (infrared spectroscopy by FTIR-ATR); Analysis of dryness and general skin characteristics through image analysis (Visioscan® USB 98).

Results: The corneometry analysis showed an increase in skin hydration of up to 49.8% after first application and 54.0% after 28 days of home use. Evaporimetry analysis showed a reduction in TEWL up to 5.1% after the first application and 8.9% after 28 days of home use. The lotion provided significant alteration in the crystalline structure of the skin, increasing the fraction of the orthorhombic structure, and consequently the strengthening of the skin barrier after 28 days of treatment, in comparison to the initial skin condition and control. The analysis of the images demonstrated a significant reduction ($p < 0.05$) in mean skin peeling of 7.8% and a significant reduction ($p < 0.05$) in mean skin roughness of 14.9% after 28 days of treatment.



Conclusion : The present lotion enhances skin hydration on type II diabetes patients. In addition, it strengthens skin barrier and promotes reduction of the whitish appearance, providing reduction of skin roughness.

