



PAEDIATRIC DERMATOLOGY

EVALUATION OF TOLERABILITY AND CLEANSING PROPERTIES OF LINIMENT IN COMPARISON TO WATER IN THE DIAPER AREA SKIN CARE IN A PEDIATRIC POPULATION

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Introduction: cleansing of babies' diaper area is necessary as exposure to urine and feces several times per day will alter skin barrier and may lead to diaper dermatitis. The skin of the diaper area is usually cleansed using cosmetic products that will help removing urine and feces. Cleansing with only water seems today to be more and more preferred by parents.

Objective: to evaluate tolerability and washing properties of water compared to liniment for diaper area hygiene.

Material and methods: an open-label clinical study has been performed on 40 subjects aged from 3 to 12 months with a cross over design. During a first period of 7 days, parents used water or liniment for diaper care and switched for a second period of 7 days. At day 0 and day 7 clinical evaluations, measure of skin hydration, trans epidermal water loss and pH as well as parent self-assessment, were performed. Biological samples of skin surface were collected to assay cholesterol as a marker of residual feces impurity. At day 14 a comparative questionnaire was filled by the parents.

Results: both water and liniment were well tolerated. No subject developed diaper dermatitis during the study. Liniment improved suppleness and softness significantly better than water. Parents considered at day 14 that liniment cleansed more effectively than water. Instrumental measurement showed that liniment improved hydration and transepidermal water loss while water was devoid of beneficial effect. No pH modification was observed after either liniment or water usage. Cholesterol assessed as feces biomarker was significantly lower after 7 days with liniment usage compared to water.

Conclusion: this study demonstrates the tolerability of liniment for diaper skin cleansing. Some results suggest that it may improve both washing and diaper skin protection compared to water.

