

# Topical Moisturizer Meaningfully Reduces Disease Severity in Atopic Patients With Xerosis

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## ABSTRACT

**Background:** Repairing the epidermal barrier is critically important in atopic dermatitis (AD), but the effect of moisturizer on quality of life (QOL) is not well characterized.

**Objective:** To assess whether the use of a moisturizer improves QOL in atopic patients with xerosis.

**Methods:** Thirty-five (35) adults with xerosis and AD received a moisturizer designed for AD to apply daily for three months. Adherence was assessed with electronic monitors. Quality of life (QOL) was assessed with the Dermatology Life Quality Index (DLQI) at baseline and follow-up.

**Results:** Mean adherence to the moisturizer was 46%. Dryness improved from 1.9 at baseline to 1.4 at follow-up ( $P=0.02$ ). DLQI improved from 3.3 at baseline to 1.5 at 3 months ( $P=0.005$ ). The “feeling self-conscious or embarrassed due to their skin condition” DLQI item improved from 0.79 at baseline to 0.14 at 3 months ( $P=0.0009$ ).

**Conclusion:** Moisturizers are the foundation of AD treatment. Even non-medicated topical emollients can improve QOL in patients with AD.

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## INTRODUCTION

Repairing the epidermal barrier is critically important in the treatment of atopic dermatitis (AD) and the associated skin dryness (xerosis).<sup>1</sup> While frequently recommended, the effectiveness of moisturizer treatment in AD is not well characterized.<sup>2</sup> We assessed whether the use of a moisturizer designed for atopic dermatitis improves objective and subjective disease severity in atopic patients with xerosis.

## MATERIALS AND METHODS

Thirty-five (35) adult subjects with a diagnosis of xerosis in the context of current or historic AD were recruited from the Department of Dermatology clinics at Atrium Wake Forest Baptist Medical Center. Six patients were excluded due to loss of follow-up. Patients received Cetaphil Pro Eczema moisturizer (Galderma, Ft Worth, TX) equipped with an electronic monitor to measure adherence and were instructed to apply the moisturizer once daily for three months. The use of electronic monitoring was not disclosed until the final visit. Patients were not permitted to apply any other topical moisturizers or prescription treatments during the study period except for daily sunscreen. Xerosis severity was assessed with the Overall Skin Dryness Severity (ODS) score at baseline and follow-up

visits. Effect on QOL was assessed with the total and individual Dermatology Life Quality Index (DLQI) scores at baseline and follow-up. At follow-up, the data from the electronic adherence monitors were downloaded. Data were analyzed using the SAS Software 9.4 Differences in group comparisons by mean score were analyzed with a Student's *t*-test.

## RESULTS

Patient demographics included 57% female and 42% male, an average age of 64, and 96 % Caucasian. Mean adherence to the moisturizer was 46%. After three months of using the moisturizer, dryness improved from 1.9 at baseline to 1.4 at follow-up ( $P=0.02$ ). DLQI improved from 3.3 at baseline to 1.5 at 3 months ( $P=0.005$ ). The “feeling self-conscious or embarrassed due to their skin condition” DLQI item improved from 0.79 at baseline to 0.14 at 3 months ( $P=0.0009$ ).

## DISCUSSION

Xerosis is a common symptom associated with AD that may negatively impact QOL with discomfort, pruritus, and the undesirable appearance of skin.<sup>3</sup> Both disease severity and overall QOL improved with the use of a daily moisturizer alone,

even though adherence to the moisturizer was limited. Patients specifically reported positive effects on their self-image as they felt less “self-conscious and embarrassed due to their skin condition.” These changes were present regardless of patient adherence. A moisturizer designed for AD improves the disease severity of atopic patients with xerosis and does so clinically meaningfully as evidenced by improvements in QOL and patient self-confidence.

## DISCLOSURES

Feldman has received research, speaking and/or consulting support from a variety of companies including Galderma, GSK/Stiefel, Almirall, Leo Pharma, Boehringer Ingelheim, Mylan, Celgene, Pfizer, Valeant, Abbvie, Samsung, Janssen, Lilly, Menlo, Merck, Novartis, Regeneron, Sanofi, Novan, QuriEnt, National Biological Corporation, Caremark, Advance, Medical, Sun Pharma, Suncare Research, Informa, UpToDate, and National Psoriasis Foundation. He is the founder and majority owner of www.DrScore.com and founder and part owner of Causa Research, a company dedicated to enhancing patients’ adherence to treatment. Katherine Kelly, Madison Cook, Rohan Singh, Patrick Perche, Esther Balogh, and Irma Richardson have no conflicts of interest to disclose.

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