

EFFECTIVENESS OF A CERAMIDE-RICH BODY CREAM IN ALLEVIATING THE SIGNS AND SYMPTOMS OF DRY AFRICAN SKIN: A RANDOMIZED, MONOCENTRIC CLINICAL ANALYSIS OF HYDRATION AND SKIN BARRIER FUNCTION

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INTRODUCTION

The prevalence of xerosis among individuals of African descent is well documented in literature¹, however, its impact on the African population remains an unsolved tension point. Xerosis is associated with reduced skin barrier function², and recent clinical data reaffirms the reduction of key ceramide subclasses in dry African skin compared to normal African skin³. Despite its prevalence, there remains a significant gap in knowledge regarding the underlying causes and optimal treatments for xerosis in this population. This research aims to bridge that gap by examining how ceramide-based moisturizers can alleviate dry skin symptoms in African skin.

This study evaluated the clinical efficacy, impact on skin barrier function, and subject perception of a ceramide-containing body cream, applied twice daily on the legs of African subjects with mild to moderate dry and itchy skin, for 6 consecutive weeks.

METHODS

This research employed a randomized, monocentric clinical study design:

Subjects recruited: African panel consisting of 56 women, aged 18-65 years old, representing phototypes I-VI, with signs and symptoms of mild to moderate dry and itchy skin.

Clinical evaluation: Skin dryness, flakiness, erythema, dullness, and roughness was assessed by a dermatologist on a 5-point grading system at baseline, post-product application, day 1, day 14 and day 42.

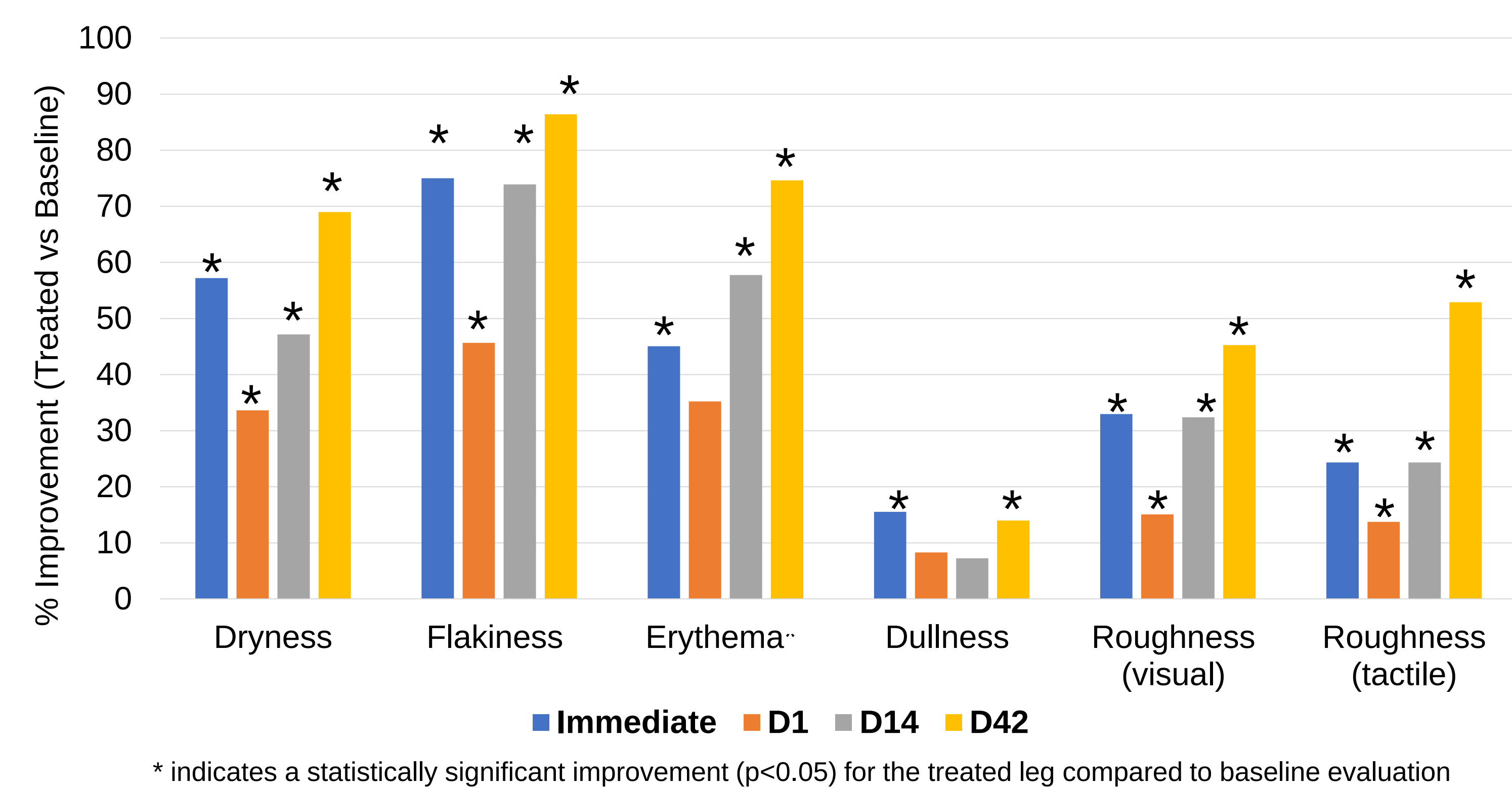
Instrumental Evaluation: Electrical capacitance and transepidermal water loss (TEWL) were measured with a Corneometer CM 825 (Courage & Khazaka) and Tewameter TM 300 (Courage & Khazaka), respectively, at baseline, day 1, day 14 and day 42.

Subject self assessment: Product tolerance and subject satisfaction were self-assessed by participants post-application, day 1, day 14 and day 42 using a self assessment questionnaire.

RESULTS

Clinical evaluation results (Fig 1) showed the following statistically significant improvement in skin dryness, flakiness, erythema, dullness and skin roughness (visual and tactile), in comparison with the untreated baseline evaluation:

Figure 1: Mean percentage improvements in clinical parameters based on dermatologist assessment.



Instrumental evaluation results showed a statistically significant improvement in electrical capacitance and reduction in TEWL at each time point compared to baseline (Fig 2a & 2b):

Figure 2a: Mean improvement in electrical capacitance (a.u.) from baseline to D42

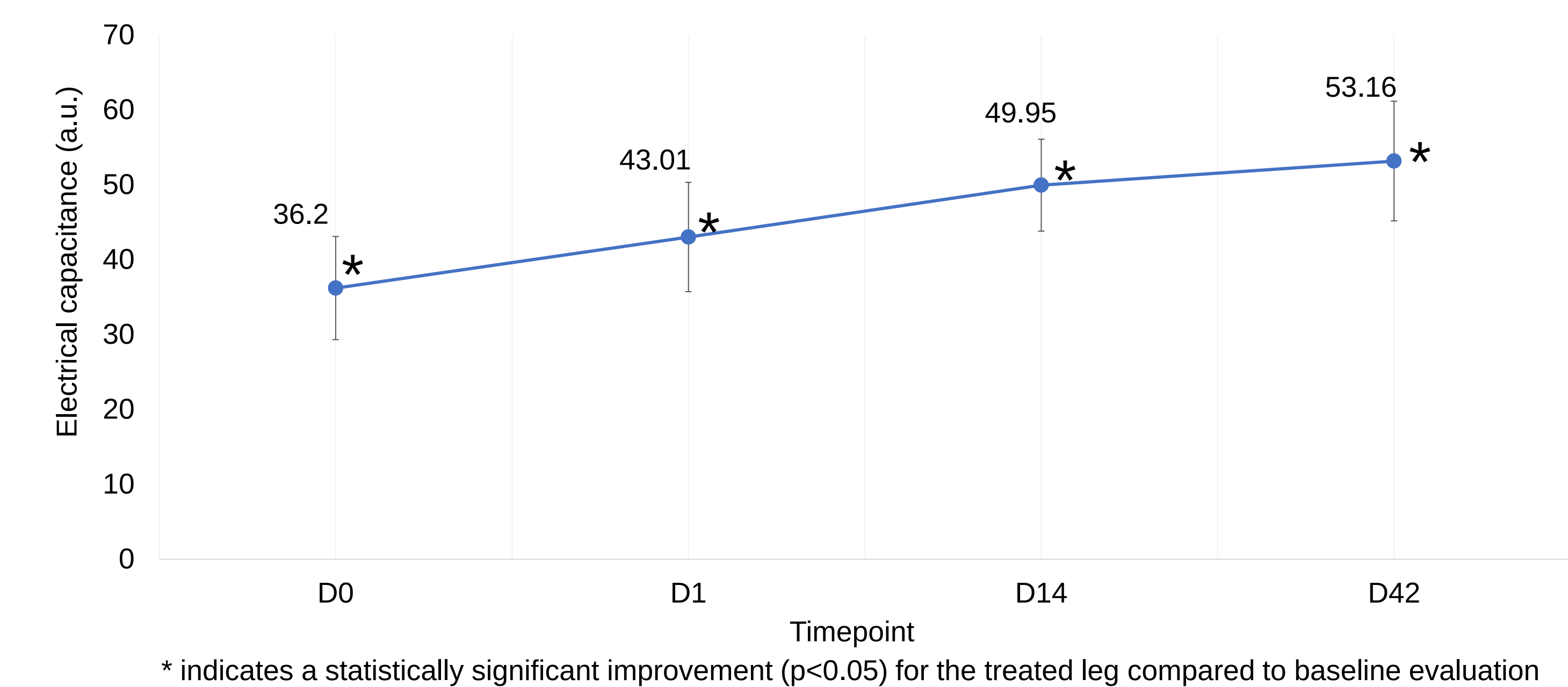
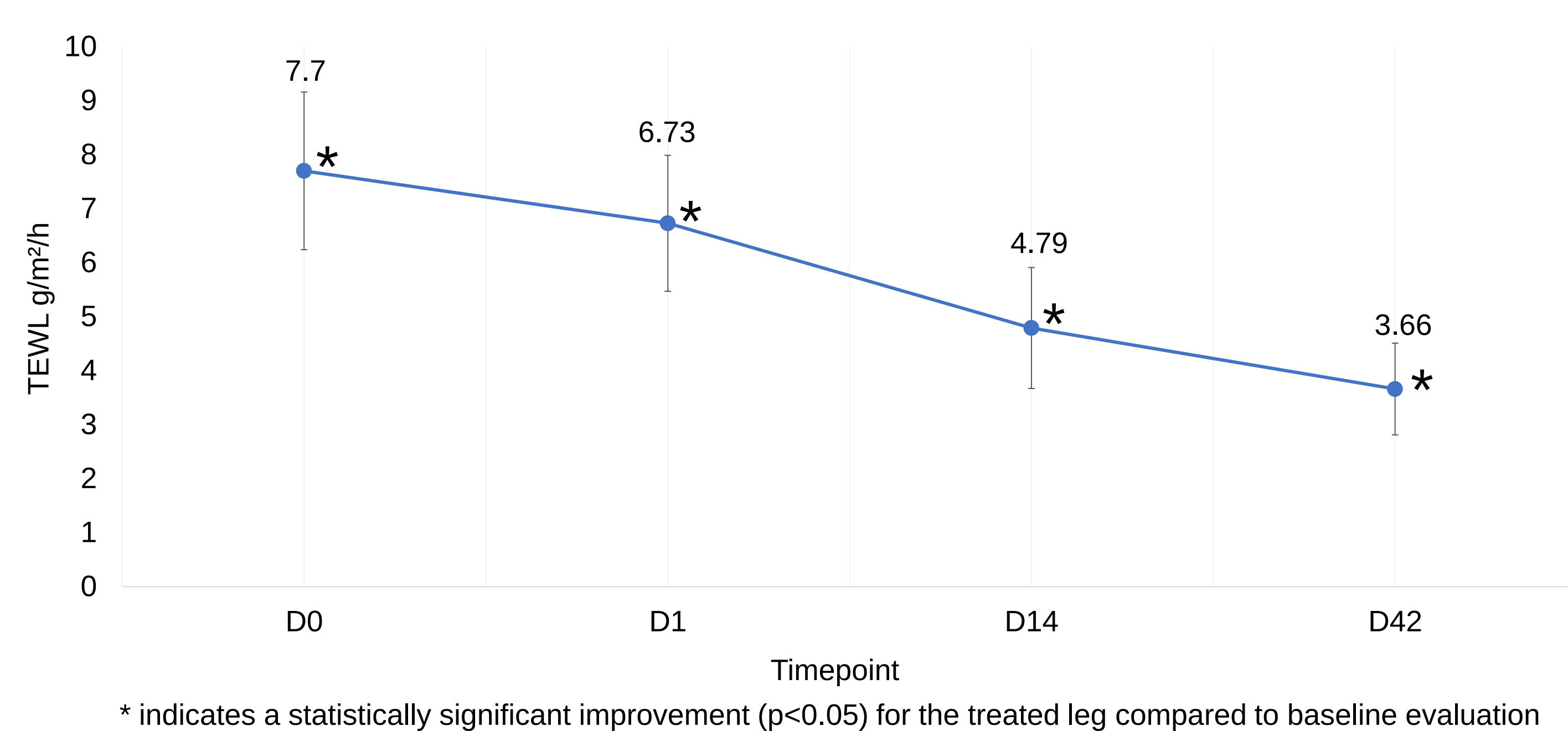


Figure 2b: Mean improvement in TEWL (g/m²/h) from baseline to D42



Subject self assessment results indicated that the product was exceptionally well-judged for its cosmetic acceptability and efficacy, with 100% of subjects indicating that they would continue to use the test product. Subject feedback aligned with clinical and instrumental findings, such that participants reported the product to be hydrating, soothing and effective in alleviating signs and symptoms associated with dry skin.

CONCLUSIONS

Results confirm the immediate and long-term efficacy of a ceramide-containing body cream in alleviating the signs and symptoms of dry African skin, thereby emphasizing its relevance in the improvement of skin barrier function in the African population. The test product was well tolerated and well appreciated by the subjects, leading to high satisfaction, and suggesting high compliance. These findings add valuable insights to the existing knowledge gap on effective treatments for xerosis in African populations.

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