Acne-Related Quality of Life: Correlation Between Acne Symptom Scores and Other Domains Following Treatment with Tretinoin 0.05% Lotion

Heather C Woolery-Lloyd, MD1; Julie C Harper, MD2; Eric Guenin, PharmD, PhD, MPH3

Department of Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, FL; Dermatology & Skin Care Center of Birmingham, Birmingham, AL; Ortho Dermatologics, Bridgewater, NJ

ACKNOWLEDGEMENTS: Medical writing support was provided by Prescott Medical Communications Group (Chicago, IL) with financial support from Ortho Dermatologics

SYNOPSIS

Quality of life (QoL) in patients with acne has been shown to correlate more strongly with patient-reported severity than physician-reported severity, suggesting that patient perception may be important to consider during acne treatment. In acne patients, the psychosocial impacts are greater compared with other dermatologic conditions, particularly with feelings of despair and distress1. The first lotion formulation of tretinoin was developed by utilizing novel polymeric emulsion technology to provide an important alternative option to treat acne patients2. In two phase 3 studies (NCT02932306, NCT02965456), tretinoin 0.05% lotion was shown to be highly effective and well tolerated in patients with moderate-to-severe acne1.

OBJECTIVE

To evaluate if improvements in QoL with tretinoin 0.05% were correlated with improvements in acne symptoms.

METHODS

QoL data from two multicenter, randomized, double-blind, vehicle-controlled studies were pooled in this post hoc analysis. Participants with moderate or severe acne were randomized (1:1) to receive tretinoin 0.05% lotion or vehicle, once-daily for 12 weeks.

In these studies, CeraVe® hydrating cleanser and CeraVe® moisturizing lotion (L’Oreal, NY) were provided as needed for optimal moisturization/cleaning of the skin.

QoL was assessed using the validated Acne-QoL questionnaire in 4 different domains: self-perception, social, emotional, and acne symptoms.

RESULTS

The pooled population included 1640 participants (tretinoin, n=879; vehicle, n=761; 90.55% of whom were female; participant ages ranged from 9 to 58 years).

Mean changes from baseline to Week 12 in Acne-QoL domain scores indicated greater improvements with tretinoin 0.05% vs vehicle: self-perception (7.4 vs 6.7); role-emotional (6.8 vs 6.0); role-social (6.8 vs 6.0); and acne symptoms (6.5 vs 5.6).

There was a significant correlation between improvements in acne symptoms and the other 3 QoL domains at baseline and at Week 12 (P<0.001).

The correlation between the acne symptom domain (which represents the severity of acne) and the other three domains was assessed:

Higher scores for each domain reflect improved health-related QoL, with the acne symptom domain score correlating inversely with acne severity (ie, higher score = improvement in acne symptoms).

The correlation between the acne symptom domain and the other domains was similar at baseline, with a Pearson’s correlation of 0.69 for self-perception (Figure 1) and role-emotional (Figure 2) and 0.66 for role-social (Figure 3).

At Week 12, correlations were similar (0.68, 0.67, and 0.61, respectively) with clearer improvements seen with tretinoin treatment (Figures 1, 2, and 3) [higher scores for each domain vs baseline].

FIGURE 1: Correlation Between Acne Symptoms and Self-Perception at Baseline and Week 12 in Patients Treated With Tretinoin 0.05% Lotion (ITT population; Pooled Data)

FIGURE 2: Correlation Between Acne Symptoms and Role-Emotional at Baseline and Week 12 in Patients Treated With Tretinoin 0.05% Lotion (ITT population; Pooled Data)

FIGURE 3: Correlation Between Acne Symptoms and Role-Social at Baseline and Week 12 in Patients Treated With Tretinoin 0.05% Lotion (ITT population; Pooled Data)

CONCLUSIONS

Improvements in acne symptoms scores correlated with improvements in the other QoL domains; these correlations were observed following 12 weeks of treatment with tretinoin 0.05% lotion.

These findings suggest the improvement seen in acne symptoms are associated with improvements in other measures of QoL.

REFERENCES


AUTHOR DISCLOSURES

Dr. Heather Woolery-Lloyd is an employee of Ortho Dermatologics, LLC. She has served as a speaker for Akzonobel and Ortho Dermatologics, consultant for Ortho Dermatologics, and received grant/research funding from Eli Lilly, Suneion, Neutrogena, Pizer, Enbloc, LEO Pharma, Roussel, and Pfizer.

Dr. Eric Guenin is an employee of Ortho Dermatologics.