ORIGINAL ARTICLE

Clinical meaningfulness of complete skin clearance in psoriasis

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Background: New psoriasis therapies have increased the ability to achieve skin clearance. However, insufficient evidence exists on the impact of total skin clearance from the patient perspective.

Objective: We sought to determine if complete skin clearance is clinically meaningful compared with treatment responses without clearance.

Methods: Pooled data from 3 phase-III trials were used to compare results for patients with complete skin clearance (Psoriasis Area and Severity Index [PASI] 100 or static Physician Global Assessment score 0) with patients without complete skin clearance (PASI 75 to <100 or static Physician Global Assessment score 1) based on Psoriasis Symptom Inventory and Dermatology Life Quality Index.

Results: Percentages of patients with Psoriasis Symptom Inventory score 0 were 45% for those achieving PASI 100 and 8% for PASI 75 to <100 ($P < .001$). Respective percentages with Dermatology Life Quality Index score 0/1 were 80% and 55% ($P < .001$). PASI 100 resulted in incremental improvement over PASI 90 to <100 (incremental differences of 28% for Psoriasis Symptom Inventory score 0 and 18% for Dermatology Life Quality Index score 0). Similar results were observed for static Physician Global Assessment scores 0 versus 1.

Conclusions: Complete skin clearance represents a clinically meaningful end point and outcome for patients, reflected in experiences of no psoriasis symptoms and no impairment on health-related quality of life. (J Am Acad Dermatol http://dx.doi.org/10.1016/j.jaad.2016.03.026.)

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The ultimate goal for patients with psoriasis is to be no longer impaired in their daily lives by the disease in such aspects as loss of work and income, stigmatization, and psychological comorbidities including depression and suicidal ideation.[1-5]

This is best evaluated by patient-reported outcomes including health-related quality of life (HRQoL) measures such as the Derma-tology Life Quality Index (DLQI). Specifically, a DLQI score of 0 or 1 indicates absence of interference of psoriasis with important aspects of daily life.[6] Although improvements in clinician-rated symptoms and disease activity assessments, such as the Psoriasis Area Severity Index (PASI) and the static Physician Global Assessment (sPGA), are strongly associated with improvements in patient-reported HRQoL and symptom severity scores,[7-9] the degree of skin clearance required to induce optimal patient-reported HRQoL has not been investigated.

End points such as PASI 75 and sPGA success (eg, sPGA score 0 [clearance] or 1 [response without clearance]) have been appropriate to date, based on results achievable with available treatments. Patients with PASI 75 or sPGA score of 0/1 are considered responders to psoriasis therapy; however, remaining residual disease can continue to impair HRQoL. Although newer biologic therapies have significantly increased the proportion of patients achieving complete (PASI 100) or almost complete (PASI 90 to <100) skin clearance, there is limited understanding of associated residual disease and patient burden in terms of symptoms and HRQoL.[10-12]

Evidence from clinical and observational studies supports complete and persistent skin clearance as a treatment target. The current analyses were conducted to test the hypothesis that achieving complete clearance is clinically meaningful compared with treatment responses without clearance. We examined the effect of total skin clearance on dermatology-specific symptoms and HRQoL in patients with moderate to severe plaque psoriasis.

CAPSULE SUMMARY

- Insufficient evidence exists on the impact of total skin clearance from the patient perspective.
- Complete skin clearance results in significant improvements in patient-reported signs and symptoms of disease severity and health-related quality of life.
- The findings support the use of Psoriasis Area and Severity Index 100 as a differentiating clinically relevant end points in addition to Psoriasis Area and Severity Index 90 and Psoriasis Area and Severity Index 75.

METHODS

Patients and data source

This was a secondary analysis of pooled data from the nonplacebo arms of 3 phase-III studies of brodalumab in patients with moderate to severe plaque psoriasis designed with the primary end points of PASI 75, PASI 100, and sPGA score 0/1 at week 12 (AMAGINE-1, -2, and -3; NCT01708590, NCT01708603, and NCT01708629). Data for patients who achieved at least PASI 75 (n = 2644) or sPGA score 0/1 (n = 2357) were pooled from nonplacebo arms of the phase-III studies and used to classify patients into 1 of 4 ordinal categories of clinical outcomes based on percent PASI improvement from baseline (PASI 75 to <100, PASI 75 to <90, PASI 90 to <100, and PASI 100) and into 1 of 2 categories of clinical outcomes based on sPGA score (sPGA = 0/clear vs sPGA = 1/almost clear) at week 12 or 52.

Study instruments

The PASI score (0-72) is a measure of plaque qualities and the area involved with psoriasis. Higher scores indicate more severe and/or extensive psoriasis.[13] PASI response without clearance was defined as achieving PASI 75 to <100 for the main analysis; in a supportive analysis, PASI response without clearance was subdivided into PASI 75 to <90 and PASI 90 to <100. Complete clearance was defined as PASI 100.

The sPGA score of psoriasis (0 [clear] to 6 [severe]) is an assessment of induration, erythema, and desquamation.[14] Response without clearance was indicated by sPGA score 1 and complete clearance by sPGA score 0.

The Psoriasis Symptom Inventory (PSI) is an 8-item patient-reported outcome instrument measuring itch, redness, scaling, burning, stinging, cracking, flaking, and pain on a 5-point Likert-type scale (0 [not at all severe] to 4 [very severe]). Individual item scores were summed to create a PSI total score (0-32), with the lower scores indicating less severity of psoriasis signs and symptoms.