Safety of Tazarotene 0.045% Lotion and Hyperpigmentation Improvements in Black Participants With Moderate-to-Severe Acne

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SYNOPSIS

Acne is one of the major causes of post-inflammation hyperpigmentation (PIH) in patients with skin of color. PIH may be more distressing than the acne itself, and patients with higher skin phototypes may be impacted more greatly than those with lower skin phototypes. Topical retinoids, a mainstay of acne treatment, can also reduce hyperpigmentation via multiple mechanisms, including downregulation of cell proliferation and inflammation. In a review of studies including patients with PIH and/or acne, tazarotene treatment led to significant reductions in hyperpigmentation lesions. For example, significant reductions in the severity, intensity, and/or extent of hyperpigmented lesions were observed after 16–18 weeks of treatment with tazarotene vs adalimumab or placebo. To minimize skin irritation and other skin reactions associated with tazarotene gel and cream formulations, a hydrating, lower-dose tazarotene 0.045% lotion formulation was developed utilizing proprietary polymeric emulsion technology to allow for more efficient delivery of tazarotene into dermal layers.

OBJECTIVE AND METHODS

The objective of this pooled, post hoc analysis was to evaluate the safety of tazarotene 0.045% lotion and its effect on hyperpigmentation in Black individuals with acne.

In two identical phase 3 randomized, double-blind, vehicle-controlled studies (NCT03168321; NCT03368334), participants aged 15 years with moderate-to-severe acne (score of 3 or 4 on the Evaluator’s Global Severity Score) were randomized (1:1) to once-daily tazarotene 0.045% lotion or vehicle lotion for 12 weeks. Caral® hydrating cleansing and Caral® moisturizing lotion (3Dermal, NY) were provided as needed for optimal moisturization/cleansing of the skin.

Safety evaluations included reports of treatment-emergent adverse events (TEAEs) and investigator-assessed hyperpigmentation (graded on a 4-point scale from 0 [none] to 3 [severe]). Post hoc analyses were based on participants’ self-identification of race, including ‘Black or African American’ (herein referred to as Black).

RESULTS

Participants

The pooled intent-to-treat population included 1614 participants, of whom 382 (23.7%) self-identified as Black. The safety population included 253 Black participants.

At baseline, over three-fourths of Black participants in the study were female. As PIH can persist for up to 12 months, over 70% of Black women who had hyperpigmentation at baseline. Rates of investigator-assessed hyperpigmentation in Black participants were 16.2% (n=121) at baseline, 22.7% (n=132) at Week 12, and 21.5% (n=121) at Week 12 with vehicle treatment. Rates of hyperpigmentation decreased by week 12 with tazarotene treatment (baseline: 22.7%, week 12: 13.6%), but remained relatively unchanged with vehicle (22.7% vs 21.5%). Images depicting hyperpigmentation improvement in tazarotene-treated Black participants are published.

Rates and Severity of Hyperpigmentation in Black Participants (Safety Population, Pooled)

<table>
<thead>
<tr>
<th>Week</th>
<th>Tazarotene 0.045% Lotion</th>
<th>Vehicle Lotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>30.4% (n=121)</td>
<td>17.2% (n=132)</td>
</tr>
<tr>
<td>Week 12</td>
<td>22.7% (n=121)</td>
<td>21.5% (n=132)</td>
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</tbody>
</table>

TABLE 1

<table>
<thead>
<tr>
<th>TEAE</th>
<th>Tazarotene 0.045% Lotion (n=121)</th>
<th>Vehicle Lotion (n=132)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any TEAE</td>
<td>30.4% (n=121)</td>
<td>17.2% (n=132)</td>
</tr>
<tr>
<td>Any SAEa</td>
<td>1.0% (n=1)</td>
<td>1.0% (n=1)</td>
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Severity of TEAEs

- Mild: 22.1% (n=26)
- Moderate: 7.5% (n=9)
- Severe: 1.0% (n=1)

Most common TEAEs

- Application site dryness: 8.6% (n=10)
- Application site dryness: 4.3% (n=5)
- Application site dryness: 6.0% (n=7)
- Application site pruritus: 3.2% (n=4)

Viral upper respiratory tract infection

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CONCLUSIONS

Maximizing efficacy while mitigating irritation is a key goal in managing acne in patients with skin of color, given the higher risk of pigmentary alterations in melanin-rich skin. Tazarotene 0.045% lotion was safe and well tolerated, with no reports of application-site irritation or dermatitis in Black participants after 12 weeks of once-daily treatment. Tazarotene treatment led to improvements in hyperpigmentation, an inflammation-associated sequela of acne. As PIH can persist for up to 12 months, additional improvement in hyperpigmentation may be expected with continued tazarotene use.

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REFERENCES


AUTHOR DISCLOSURES

Fran E Cook-Bolden, MD MSc: Consultant: Aquilis Therapeutic, Inc, Galderma, Incyte, Johnson & Johnson, Leo Pharma, L'Oreal, Ortho Dermatologics, Pfizer, Procter & Gamble, Regeneron, Sanofi-Genzyme, Sun Pharma, UCB, Unilever, and Vyne and Speaker: AbbVie, Allergan, Bausch Health, Janssen, Amgen, Biofrontera, BI, BMS, EPI Health, IFM, ISDE, Janssen, Amgen, Biofrontera, BI, BMS, EPI Health, IFM, ISDE, and Janssen. Emily A Tanghetti, MD: Consultant: AbbVie, Almirall, Abbvie, Sol-Gel, Amgen, VisualDx, Eli Lilly, Swiss American, Cutera, Cara, and EPI and Speaker: Regeneron, SANOFI-Genzyme, Pfizer, and SANOFI-Genzyme. Neal Bhatia has served as advisor, consultant, and investigator for AbbVie, Almirall, Biofrontera, BI, Brickell, BMS, EPI Health, IFM, ISDE, Janssen, Allergan, Almirall, Abbvie, Sol-Gel, Amgen, VisualDx, Eli Lilly, Swiss American, Cutera, Cara, and EPI; Speaker fees from Regeneron, SANOFI-Genzyme, Pfizer, and SANOFI-Genzyme.

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