Tazarotene 0.045% Lotion for Truncal Acne: Efficacy, Tolerability, and Spreadability

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SYNOPSIS

Truncal acne (occurring on the chest and back) is common among patients with facial acne. 1 Although its pathophysiology may be somewhat different, 1,2 as there are no specific guidelines for the treatment of truncal acne, facial acne treatment guidelines are often the basis for its management. 3,4

Successful treatment of truncal acne is complicated by the involvement of a large body surface area that is typically covered in clothing. 5

Topical vehicles that provide ease of spreadability, rapid cutaneous penetration/effective drug delivery, and lack of residue are highly desirable for truncal acne treatment. 6

A low-dose tazarotene 0.045% lotion formulation (Arvela®, Ortho Dermatologics) was developed utilizing polymeric emulation technology (Figure 1). This highly spreadable lotion formulation was developed to allow for more efficient delivery of tazarotene into dermal layers. 7

In phase 1 studies, this lotion demonstrated low irritation/contact dermatitis potential and no allergenic sensitization. 8

OBJECTIVES

To evaluate tazarotene 0.045% lotion on the trunk using three studies with distinct objectives:

- Study 1: determine the efficacy, safety, and tolerability of tazarotene 0.045% lotion in the treatment of truncal acne
- Study 2: compare the irritation potential with repeated application of tazarotene 0.045% lotion and trifarotene 0.005% cream on the trunk
- Study 3: evaluate the spreadability of tazarotene 0.045% lotion and trifarotene 0.005% cream on the trunk

FIGURE 1. Polymeric Emulsion Technology for Tazarotene 0.045% Lotion

REFERENCES


AUTHOR DISCLOSURES

Leon H Kircik has acted as an investigator, advisor, speaker, and consultant for Ortho Dermatologics. Zoe D Draelas received funding from Ortho Dermatologics to conduct the research presented here. Eric Guenin is an employee of Ortho Dermatologics and may hold stock and/or stock options in its parent company.

CONCLUSIONS

- Tazarotene 0.045% lotion utilizes polymeric emulsion technology to enhance hydration, moisturization, and skin barrier function.
- Tazarotene 0.045% lotion led to statistically significant reductions in truncal acne severity and lesion counts; ~90% of subjects achieved clear or almost clear skin with 12 weeks of once-daily use and most subjects had no tolerability issues.
- This easy-to-apply tazarotene lotion was associated with less irritation and ~30% greater skin coverage compared with trifarotene cream.
- Less product needed to cover the same skin area equals more applications per unit volume.

STUDY 1: EFFICACY, SAFETY, AND TOLERABILITY IN TRUNCAL ACNE

Tazarotene 0.045% Lotion

- Subjects aged ≥12 years
- Moderate truncal acne (Investigator's Global Assessment score = 3)
- Once-daily treatment with tazarotene 0.045% lotion for 12 weeks

Demographics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tazarotene 0.045% Lotion (n=19)</th>
<th>Trifarotene 0.005% Cream (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean)</td>
<td>24.1 years</td>
<td>25.6 years</td>
</tr>
<tr>
<td>Sex: Male/Female</td>
<td>55%/45%</td>
<td>45%/55%</td>
</tr>
<tr>
<td>Disease Duration</td>
<td>&lt; 3 years</td>
<td>≥ 3 years</td>
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<tr>
<td>Severity:</td>
<td>None/Trace/Mild</td>
<td>None/Trace/Mild</td>
</tr>
<tr>
<td>COMORBS:</td>
<td>None/Trace</td>
<td>None/Trace</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>None/Trace</td>
<td>None/Trace</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>54.2% White, 45.8% Black</td>
<td>52.6% White, 10.5% Black</td>
</tr>
</tbody>
</table>

Cutaneous Tolerability and Safety

- Mean spreadability (%): Tazarotene 0.045% Lotion = 95% vs Trifarotene 0.005% Cream = 85%

Steady state, noninflammation least squares model.

REFERENCES