BACKGROUND

Psoriasis is a chronic, immune-mediated disease characterized by scaly, erythematous, and pruritic plaques that can be painful and disfiguring.

There is a need for efficacious topical therapies for plaque psoriasis without concern for duration of treatment due to potential for long-term side effects or local irritation. However, no topical with novel mechanisms have been FDA approved in recent years.

Tapinarof is a first-in-class, non-steroidal topical therapeutic and hydration receptor modulating agent (TRM) under development for the treatment of psoriasis and atopic dermatitis.

PSOARING 1 and 2 were pivotal Phase 3 studies designed to assess the efficacy and safety of tapinarof cream 1% once daily (QD) in patients with plaque psoriasis.

OBJECTIVE

To present the pivotal Phase 3 efficacy data of tapinarof 1% QD versus vehicle QD for the treatment of plaque psoriasis in two separate trials: PSOARING 1 and PSOARING 2.

METHODS

Study Design

In two identical, Phase 3, multicenter (US and Canada), double-blind, vehicle-controlled, randomized studies, patients with mild to severe plaque psoriasis were randomized 2:1 to receive tapinarof cream 1% QD or vehicle QD for 12 weeks (Figure 1). Following the double-blind period, patients could enroll in a separate open-label, long-term extension study for an additional 40 weeks of treatment or complete a follow-up visit 6 weeks after the end of treatment (Figure 1).

Endpoints and Statistical Analysis

The primary endpoint was PGA response at Week 12, defined as the proportion of patients with a PGA score of clear (0) or almost clear (1) and ≥ 20% improvement in PASI score from baseline to Week 12.

The key secondary endpoint was the proportion of patients who achieved PASI75 from baseline to Week 12.

The incidence, frequency, and nature of adverse events (AEs) and serious AEs were monitored from the start of study treatment until the end of study visits.

Safety

Study discontinuations due to AEs and serious TEAEs were rare in both studies. Overall, treatment-emergent AEs (TEAEs) in PSOARING 1 and 2 were comparable, in which the majority were mild or moderate in severity and did not lead to study discontinuation (Table 2).

RESULTS

Patient Disposition and Baseline Characteristics

In PSOARING 1 and 2, a total of 365 and 355 patients were randomized (ITT), respectively, across 97 sites in the US and Canada.

Overall, demographic and baseline characteristics were comparable across treatment groups and studies (Table 1). At baseline, 79.2% and 83.9% of patients had a PGA score of 3, mean (SD) PASI score was 8.9 (4.1) and 8.6 (4.0), respectively.

Endpoints

Primary Endpoint: PGA Response

The primary endpoint was PGA response at Week 12, defined as the proportion of patients with a PGA score of clear (0) or almost clear (1) and ≥ 20% improvement in PASI score from baseline to Week 12.

Secondary Endpoint: PASI75

PASI75 response rates at Week 12 were highly statistically significant in the tapinarof cream 1% QD group versus the vehicle group in both PSOARING 1 and 2 (Table 1).

Secondary Endpoint: Psoriasis Area and Severity Index (PASI)

At Week 12, PASI scores in the tapinarof cream 1% QD group were significantly lower than in the vehicle group in both PSOARING 1 and 2 (Table 1).

Secondary Endpoint: Physician Global Assessment (PGA)

PGA response rates at Week 12 were highly statistically significant in the tapinarof cream 1% QD group versus the vehicle group in both PSOARING 1 and 2 (Table 1).

Table 1. Baseline Patient Demographics and Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>PSOARING 1</th>
<th>PSOARING 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>50.0 (8.7)</td>
<td>48.7 (8.7)</td>
</tr>
<tr>
<td>Gender, n (%)</td>
<td>Male: 159 (49.7)</td>
<td>Male: 149 (47.7)</td>
</tr>
<tr>
<td>BMI, kg/m², mean (SD)</td>
<td>27.1 (8.6)</td>
<td>27.6 (9.0)</td>
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<td>PASI, mean (SD)</td>
<td>8.1 (4.9)</td>
<td>8.3 (5.5)</td>
</tr>
<tr>
<td>PGA, mean (SD)</td>
<td>2.2 (0.8)</td>
<td>2.3 (0.9)</td>
</tr>
<tr>
<td>Sex Distribution</td>
<td>Male: 159 (49.7)</td>
<td>Male: 149 (47.7)</td>
</tr>
<tr>
<td>BMI Distribution</td>
<td>Normal: 302 (89.8)</td>
<td>Normal: 293 (87.6)</td>
</tr>
<tr>
<td>BMI, kg/m²</td>
<td>Mean (SD)</td>
<td>27.1 (8.6)</td>
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CONCLUSIONS

Both the primary and secondary endpoints were met, demonstrating highly statistically significant and clinically meaningful efficacy with tapinarof cream 1% QD compared with vehicle.

PASI75 response of 1% QD was very well tolerated, consistent with previous studies.

PASI75 response of 1% QD for the treatment of plaque psoriasis: efficacy and safety in two pivotal Phase 3 trials

REFERENCES


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