Long-term proactive management of psoriasis vulgaris with fixed-dose combination of calcipotriene 0.005% and betamethasone dipropionate 0.064% foam: results of a Phase III randomized controlled trial

Mark Lebwohl¹, Jean-Philippe Lacour², Monika Liljedahl³, Charles Lynde^{4,5}, Marie Holst Mørch³, Diamant Thaci⁶ and Richard B Warren⁷

1Department of Dermatology, Icahn School of Medicine at Mount Sinai, New York, NY, USA; 2Department of Dermatology, University Hospital of Nice, France; 3LEO Pharma A/S, Ballerup, Denmark; 4Lynde Dermatology, Probity Medical Research, Markham, ON, Canada; 5Department of Medicine, University of Toronto, Toronto, ON, Canada: ⁶Institute and Comprehensive Center for Inflammation Medicine, University of Lübeck, Eubeck, Germany: ⁷Dermatology Centre, Salford Royal NHS Foundation Trust and NIHR Biomedical Research Centre, University of Manchester, Manchester, UK

Figure 2. Patient disposition

Discontinued (n=141 SAS)

reatment of relance (n=65)

Randomized in error*

(n=24 [16 proactive and 8 reactive])

Experienced at least one relapse (n=210 FAS)

Adverse event (n=2); Lost to follow-up (n=12); Withdrawal by

(n=9); Patient not clear or almost clear (PGA<2) after

patient (n=30): Lack of efficacy (n=20): Patient did not achieve

treatment success after open-labellead-in phase (n=3): Other

Introduction

- Topical therapies are considered first-line treatment for psoriasis,¹ however maintaining long-term disease control is a challenge, with many patients untreated or undertreated.² Current topical psoriasis treatment relies on a reactive approach to disease flares, as opposed to a more long-term proactive approach.3
- Data supporting the efficacy and safety of calcipotriene 0.005% and betamethasone dipropionate 0.064% (Cal/BD) foam approved as a reactive treatment are available from trials of 4- and 12-weeks duration in patients with psoriasis vulgaris (plaque psoriasis).4.5.6.7
- Here, we report the efficacy of Cal/BD foam in long-term proactive management of psoriasis over 52 weeks (NCT02899962). Data from the open-label lead-in phase of this trial are presented in poster #16830

Materials and Methods

- Eligible patients for this Phase III, multicentre trial received once-daily Cal/BD foam during the 4-week open-label lead-in phase (Figure 1).
 - Patients with trunk and/or limb psoriasis, involving 2-30% of body surface area (BSA); physician's global assessment (PGA) of disease severity ≥'mild'; modified psoriasis area and severity index (m-PASI)≥2.
- Patients achieving success at the end of the open-label lead-in phase (PGA score 'clear'/'almost clear' IPGA <2] with ≥2-grade improvement from baseline of the open-label lead-in phase) were randomized 1:1 to twice-weekly Cal/BD foam or vehicle foam for 52 weeks (Figure 1).

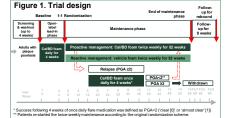
Double-blind treatment during the maintenance phase

- 'Proactive' management was treatment with Cal/BD foam twice-weekly for 52 weeks when in remission.
- 'Reactive' management was treatment with vehicle foam twice-weekly for 52 weeks when in remission.
- Relapse: PGA≥2 [either previously treated and/or new skin area]). Flare medication (as separate flare bottles) was Cal/BD foam once-daily for 4 weeks for both the proactive and reactive management groups (Figure 1).

Primary objective and endpoints

- To evaluate the efficacy of a twice-weekly proactive maintenance regimen with Cal/BD foam compared with reactive management with vehicle foam in the prevention of relapse in patients with psoriasis.
- Time to first relapse (defined as a PGA score of at least 'mild' [PGA≥21).

Trial design and treatments



Secondary objective and endpoints

- To evaluate the long-term efficacy (up to 52 weeks) of proactive management twice weekly as maintenance therapy compared with reactive management in patients with psoriasis.
 - Number of relapses.
- Proportion of days in remission (PGA<2).

Safety objective

 Safety objectives, endpoints and data are presented in poster #12797.

Results

Patient population

- 545 patients were randomized (safety analysis set [SAS]); 521 achieved treatment success in the open-label lead-in phase (proactive n=256; reactive n=265 [full analysis set (FAS)]). 251 (46.1%) patients completed the trial.
- Disease characteristics at randomization were similar between groups. Mean age of randomized patients was 52.2 years: 91% of patients were white and 68% male.
- 82% of randomized patients in each treatment group had a PGA score of 'moderate' at baseline of the open-label lead-in phase.

Time to first relapse

Table 1. Time to first relapse

	Proactive (N=256)	Reactive (N=265)
Median time to first relapse*	56 days	30 days
'Number of days from randomization until 50% of patients had experie	enced their first relapse.	

Completed the trial (n=251 SAS [n=246 FAS]) The SAS included all patients exposed to Cal/BD foam or vehicle foam following randomization. The FAS included all randomized patients who had treatment success at randomizatio Figure 3. Time to first relapse Treatment group — Proactive — Reactive 更 1.0 ap 0.8 ē had 0.6 ğ E 0. Jav I 0.2 J obability o 0.0

Days after randomization

Number of patients with no relapse yet

Proactive 256 219 128 100 83 75 65 47 41 36 34 31 31 24 Reactive 265 198 73 40 32 25 17 15 11 8 8 7 6 5

Patients who did not achieve PGA<2 after 4 weeks of once-daily flare medication following relapse were withdrawn from the tria

28 56 84 112 140 168 196 224 252 280 308 336 364

 43% reduction in risk of experiencing a first relapse for patients in the proactive group compared to reactive group (hazard ratio. 0.57: 95% confidence interval [CI], 0.47-0.69; p<0.001).

Rate of relapse

ň

- Rate of relapse over 1 year was reduced by 46% in the proactive group compared to the reactive group (95% CI, 37-54%; p<0.001).
- Predicted number of relapses in 1 year was 4.0 in the proactive group and 7.5 in the reactive group.

Remission

Reactive management

(n=273 SAS [n=265 FAS])

Entered open-label lead-in phase (n=650)

Randomized into maintenance phase (n=545 SAS [n=521 FAS])

Proactive management

(n=272 SAS [n=256 FAS])

 Patients in the proactive group had 41 extra days in remission compared to patients in the reactive group (p<0.001), over 1 year (95% CI, 29-53 days).

Discontinued (n=105)

Other (n=10)

Discontinued (n=153 SAS)

Adverse event (n=2): Lost to follow-up (n=9)

Withdrawal by patient (n=11): Lack of efficacy (n=4):

Adverse event (n=1); Death (n=1); Lost to follow-up (n=14);

did not achieve treatment success after open-label lead-in

phase (n=2); Other (n=13); Patient not clear or almost clear

(PCAr2) after treatment of relance (n=70)

Withdrawal by patient (n=36); Lack of efficacy (n=16); Patient

Experienced at least one relapse (n=237 FAS)

open-label lead-in phase (n=68): Failed screening (n=1):

Patient did not achieve treatment success at end of

Safety results

 Proactive management was well tolerated over the 52-week trial period (data presented in poster #12797).

Conclusions

- Proactive management with Cal/BD foam was superior in prolonging time to first relapse, reducing number of relapses and increasing days in remission versus vehicle-controlled reactive management.
- The results of this trial are promising. They are the first to demonstrate that proactive management with fixed-dose Cal/BD foam could offer improved long-term control of psoriasis over conventional reactive treatment.

References

 Feldman, et al. Am Health Drugs Benefits. 2016:9;504–513; 2. Armstrong, et al. JAMA Dermatol. 2013;149;1180–1185; 3.
Bonnekoh, et al. EMJ Dermatol. 2017:5:36–43: 4. EMC. Enstilar Summary of Product Characteristics 2018: 5. FDA. Enstilar. Prescribing Information 2019; 6. Paul, et al. J Eur Acad Dermatol Venereol. 2017;31;119–126; 7. Koo, et al. J Dermatolog Treat 2016:27:120-127

Acknowledgements

The authors thank the investigators and patients who participated in this trial. The authors would like to thank Lauren Whyte, PhD, a freelance Medical Writer contracted by Ashfield Healthcare Communications, part of UDG Healthcare pic, for medical writing support, funded by LEO Pharma in accordance with Good Publications Practice (GPP3) guidelines (http://www.ismpp.org/gpp3)

Disclosures

All authors met the ICMUE authorship criteria and had full access to the relevant data. Neither honoraria nor payments were made for authorship. ML, J-PL, DT, RBW, CL have consulted for, conducted studies funded by, or received honoraria for services provided to LEO Pharma; ML, MHM are employees of LEO Pharma. Fixed-dose combination calcipotriene (Cal) 0.005%/betamethasone dipropionate (BD) 0.064% aerosol foam is approved for the treatment of psoriasis vulgaris (plaque psoriasis) for up to 4 weeks in adults (under the trade name Enstitar® in the US and Enstitar® or Enstitum® in the EU). Cal/BD foam is also approved in the US for adolescents 12–18 years.

Funding

This study was funded by LEO Pharma.