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Impact of long-term topical treatment on patient outcomes in patients with psoriasis

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Introduction & Objectives: The aim of the study was to evaluate the efficacy of long-term (>12 weeks) topical treatments in reducing the severity of psoriasis.

Materials & Methods: We conducted a systematic literature search for English-language peer-reviewed articles in PubMed, Web of Science, Medline, and CINAHL from 1994 to 2023. We assessed percentage reduction in mean psoriasis severity and improvement in quality of life from baseline to final study visit.

Results: Eighteen studies conducted in Western Europe, North America, and Asia were included. The study designs included prospective studies, single- and multicenter randomized controlled trials, and retrospective observational studies. Participants included both adults and children with mild-to-severe psoriasis. Severity of psoriasis was measured using different psoriasis severity scores (PSS), including the Psoriasis Area Severity Index (PASI), Lattice System Physician's Global Assessment (LS-PGA), Psoriasis Global Assessment (PGA), and Body Surface Area (BSA).

Topical calcipotriol used for 26–52 weeks led to up to 67% reduction in mean PSS. Tacalcitol ointment used over 26–78 weeks led to up to 75% reduction in mean PSS. Calcipotriol/betamethasone dipropionate (various formulations) used for up to 56 weeks reduced mean PSS by up to 64%. Proactive maintenance therapy following disease clearance was associated with reduced recurrence rates (Fig. 1). Only four studies reported quality-of-life outcomes, showing improvements of up to 78%. Additional adherence support further improved the efficacy of topical drugs. Most studies were of medium quality and reported no severe adverse events.

Few studies reported SD, and original data were often unavailable due to study age, limiting quantitative synthesis. Results were therefore summarized narratively and graphed without SD. Low baseline disease severity may have inflated percentage changes.

Conclusion: Long-term use of topical treatments provides clinically meaningful improvements in psoriasis severity and quality of life. Proactive therapy reduces relapse rates, and adherence support enhances outcomes. Topical agents containing corticosteroids and/or vitamin D analogues are effective and well tolerated for extended use in patients with mild-to-severe psoriasis.

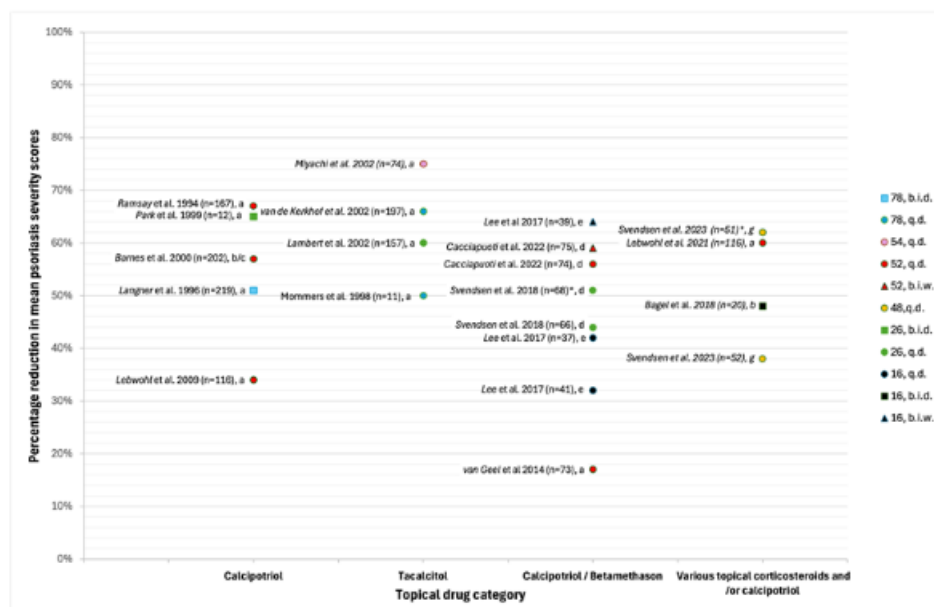


Figure 1: Percentage reduction in mean psoriasis severity scores, following different long-term topical treatments in 1867 mild-to-severe psoriasis cases. The 21 plotted points reflect split datasets originating from 16 studies, due to multiple clinical endpoints reported per study. The various topical drug categories are grouped on the X-axis as calcipotriol, tacalcitol, calcipotriol/betamethasone and different topical corticosteroids. The Y-axis indicates percentage reduction in mean psoriasis severity scores (PASI (14), PGA (2), LS-PGA (4) and BSA (2)) from baseline to final visit. Symbol shape reflects application frequency: ● = once daily (q.d.), ■ = twice daily (b.i.d.), ▲ = twice weekly (b.i.w.). Color indicates treatment duration in weeks: black = 16 weeks, green = 26 weeks, yellow = 48 weeks, red = 52 weeks, pink = 54 weeks, blue = 78 weeks. Mean PSS reductions ranged from 17% to 75%, with the greatest effects observed for tacalcitol and calcipotriol monotherapy. n = included cases. a = ungventum, b = solution, c = cream, d = foam, e = gel, f = lotion and g = various formulations.

