

## VEHICLES MATTER



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It has been known for decades that the sequential topical use of the vitamin D<sub>3</sub> analog calcipotriene (Cal) and the corticosteroid betamethasone dipropionate (BD) has been shown to provide greater benefit than either monotherapy.<sup>1-3</sup> However, early on, the use of this combination was associated with patient inconvenience. More importantly, chemical instability of these two molecules when applied one after another makes calcipotriene not compatible with topical corticosteroids; therefore, patients had to apply the medications at different times.<sup>4</sup>

Innovation in formulation science allowed for the development of fixed combination topical formulations of Cal/BD for improved patient convenience and, presumably, adherence. Calcipotriene and betamethasone dipropionate aerosol foam 0.005%/0.064% is one of the more recent formulations to reach the market.

Recent findings are adding to our understanding of the clinical benefits of topical Cal/BD foam for psoriasis. An analysis of various topical therapies for psoriasis found that all assessed therapies reduced epidermal thickness and improved targeted Psoriasis Area and Severity Index (PASI) scores. However, Cal/BD foam was the only treatment shown to completely suppress CD8+ T-cell influx in the epidermis and dermis and to reduce CD8 + IFN- $\gamma$  + cell counts, and significantly reduce the number of IL-17 expressing, MPO+ neutrophils.<sup>5</sup> Microscopic evaluations showed that, compared to corticosteroid alone, Cal/BD foam was associated with significantly greater reductions in microscopic epidermal thickness by week 4, and there were fewer telangiectasias in combination-treated lesions than clobetasol-treated lesions.<sup>6</sup>

Vehicles matter, and in the case of Cal/BD foam, which showed superior efficacy to the ointment and topical suspension in head-to-head studies, the unique aerosol foam formulation is associated with clinical benefits, as described above and in the pages ahead, as well as practical benefits, such as increased adherence.<sup>7</sup> The versatility of the topical formulation has been demonstrated across patient groups, including in skin of color, for specific presentations, such as palmoplantar psoriasis, and in combination with systemic therapies, such as apremilast.<sup>8-10</sup>

Whether used alone for mild-to-moderate-to-severe psoriasis or as an adjunct to systemic treatment for moderate-to-severe disease, Cal/BD foam represents a formulation advancement that may benefit a number of patients in the dermatology clinic.

Remember, “vehicles matter!”

## DISCLOSURE

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