

EDITORIAL

Editorial: fixed-dose combination calcipotriol/ betamethasone dipropionate foam in the treatment of patients with psoriasis

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The introduction of calcipotriol (calcipotriene in the United States; Cal) in 1988 led to major excitement in dermatology.¹ Until then, the only topical non-corticosteroids in widespread use were anthralin and tar, which were incredibly messy and undesirable to patients. Salicylic acid was also used topically in many over-the-counter preparations. Over the ensuing years, Cal largely replaced anthralin and tar as an effective, cosmetically elegant preparation in ointment, cream and solution vehicles. But it was clear that this and other vitamin D analogues were not as effective as our strongest topical corticosteroids. Studies in which Cal was used daily in the morning in conjunction with the super-potent corticosteroid, halobetasol ointment applied in the evening for two weeks, showed clearly that the combination of both ingredients was superior in efficacy to twice daily treatment with either monotherapy alone.²

Because Cal was unstable when mixed with topical corticosteroids or other preparations that function at low pH, it was difficult to create a combination product or to mix the products together and still maintain the integrity of the Cal.³ The combination of betamethasone dipropionate (BD) and Cal in an ointment vehicle using an anhydrous base eliminated the incompatibility of the two ingredients by removing the acid effects of a low pH vehicle, and that combination ointment became a staple of psoriasis therapy for years after its introduction. The demonstration that Cal/BD foam was superior to the gel and ointment formulations further refined this commonly used psoriasis therapy.^{4,5}

The purpose of this supplement is to provide a resource compiling key articles on Cal/BD aerosol foam.

In the supplement, the rationale for the superior efficacy of Cal/BD foam is explained; the evaporation of volatile propellants upon application of the foam results in a supersaturated solution that increases penetration of both active ingredients into the skin (Article 1).⁶ Data showing the superiority of Cal/BD foam over its individual components and Cal/BD ointment and gel formulations are presented (Article 2).⁷ In addition, data demonstrating that the Cal/BD foam works quickly to improve itch and itch-related sleep loss as well as quality of life compared with vehicle foam and Cal/BD gel are reviewed (Article 3).⁸

Like the clinical studies that have been reported, data from three real-world studies are discussed in the supplement showing similar improvements in patient-reported outcomes, such as itch, and confirmation of the safety profile of Cal/BD foam established in clinical trials (Article 4).⁹

The next, and perhaps most important question relates to the chronicity of psoriasis; what do we know about long-term use of a combination product that contains a strong topical corticosteroid in a chronic disease? We know that long-term use of topical corticosteroids can result in numerous side effects including atrophy, formation of striae, telangiectasia, hypothalamic pituitary adrenal (HPA) axis suppression and a long list of other adverse effects. If one would ask dermatologists about their practices concerning long-term use of corticosteroids, everyone would have a different approach. Some would use topical corticosteroids intermittently, allowing for periodic breaks; others would use strong corticosteroids until clearance is achieved and then switch to weaker corticosteroids. Still others would use regimens such as weekend therapy¹⁰ or come up with their own regimens like two weeks on and two weeks off. The PSO-LONG study reported in this supplement therefore represents a major breakthrough in the long-term topical management of psoriasis. Cal/BD foam was applied once-daily for four weeks and then twice a week compared with vehicle foam. The maintenance regimen of twice-weekly application of Cal/BD foam for 12 months resulted in longer time to first relapse, fewer relapses and more days in remission compared with vehicle foam. Furthermore, most importantly, the maintenance regimen was well tolerated and had a favourable safety profile, without the feared complications of corticosteroids that we see when patients apply strong steroids daily for prolonged periods of time (Article 5).¹¹

In summary, this supplement contains key articles highlighting studies leading to our current understanding of Cal/BD foam, and we hope readers will find it useful and interesting.

Conflicts of interest

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