Abstract N°: 1415

Zabalafin Hydrogel, A Novel Safe and Effective Topical Botanical Drug That Comprehensively Addresses The Four Demons of Atopic Dermatitis

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Introduction & Objectives:

The role of S. aureus in the etiology and exacerbation of atopic dermatitis (AD) is now well-characterized and recognized as one of the targets necessary for a comprehensive therapeutic approach. The ideal AD treatment should target the four “demons” of AD, namely inflammation, xerosis, pruritus, and colonization/infection with S. aureus. The continuum of multifactorial AD triggers (S. aureus, immunological, genetic, and environmental) cannot be satisfactorily resolved by the current single target/single therapeutic agents. These agents also have problems with adverse events and patient tolerability. A critical unmet need exists for a topical drug that provides comprehensive management of the four AD demons, including the progression of S. aureus from colonization to pathogenic colonization to infection, that is safe and effective for all ages. Zabalafin is a first-in-class, anti-pruritic, anti-inflammatory, anti-xerotic and S. aureus modulating complex single source topical botanical drug containing multiple compounds with multiple mechanisms of action, enabling the targeting of the four AD demons, with a low-risk side-effect profile.

Materials & Methods:

A recent Phase 2a trial assessed the safety and efficacy of 9.5% zabalafin hydrogel BID in mild/moderate AD that was colonized but not yet at infection stage, ie, the standard AD population (Cohort A double-blind ages 2-66) or in mild/moderate AD with AD at the infection stage (Cohort B open-label ages 3-63).

Results:

In Cohort A, zabalafin BID (n=19) was significantly better than vehicle (n=21) after 4 weeks (IGA 1-point decrease; p<.002) with no safety concerns. In Cohort B, 11 patients completed 8-weeks and 8 completed 12-weeks. Clinically relevant NRS reduction >4 occurred in 13/19 (68%) at EOT. Clinically relevant QoL improvement (POEM) of >6 occurred in 18/19 (95%) patients with EASI50 n=14, 74%; EASI75 n= 7, 37%; EASI100 n= 2, 10%. IGA clear/almost clear and >2 improvement were achieved in 4/8 (50%) at 12 weeks. For patients with S. aureus infection, 16/19 (84%) infections were cleared (bacteriology confirmation) and 6/6 (100%) with MRSA were cleared. SIRS showed an overall decrease and correlated with bacterial clearance. In support of safety, only 1 AE occurred for study drug (mild transient stinging with no interruption in treatment). Efficacy was demonstrated for all endpoints regardless of initial infection status, as evidenced by improvement in pruritus NRS, POEM QoL, IGA, EASI, S. aureus clearance, and SIRS.

Conclusion:

These findings demonstrate the potential for zabalafin as a singular comprehensive topical approach for AD management that targets the four demons of AD.