INTRODUCTION

Psoriasis is a systemic immune-mediated, chronic-occlusive dermal inflammatory disease with a global prevalence of ~125 million. It presents as recurrent episodes of hyperkeratotic, erythematous plaques and silvery-coated scales on the skin. Mental illness exists as a major comorbidity. This condition’s pathology involves an inflammatory skin response. It presents with recurrent episodes of hyperkeratotic, erythematous plaques and silvery-coated scales on the skin. Mental illness also exists as a major comorbidity.

OBJECTIVE AND METHODS

Objective: This preclinical study assesses the efficacy of topically applied Brilaroxazine (Brilaroxazine Formulation) in 2% Imiquimod-induced psoriatic mouse model.

METHODS:

Animals and Groups

Psoriasis induction involved 5% imiquimod application to the animals’ shaved backs (3 cm x 3 cm area) on the morning of Days 1-11. The animals were sacrificed on Day 12, where investigators collected skin tissue from the test area, performed histology, and obtained blood for enzyme-linked immunosorbent assay (ELISA) for cytokines.

Assessments

1) Psoriasis Area and Severity Index (PASI) scores (Days 1-12), 2) histology for Baker’s score based on Hematoxylin and Eosin (H&E) stained tissue (Day 12), and 3) serum cytokine levels (TNF-α, IL-6, IL-8, IFN-γ). The Imiquimod-induced Psoriasis Mouse Model (BALB/c) was used.

Procedures

Psoriasis induction involved 5% imiquimod application to the animals’ shaved backs (3 cm x 3 cm area) on the morning of Days 1-11. The animals were sacrificed on Day 12, where investigators collected skin tissue from the test area, performed histology, and obtained blood for enzyme-linked immunosorbent assay (ELISA) for cytokines.

RESULTS

The preclinical study demonstrated the efficacy of Brilaroxazine (Brilaroxazine Formulation) in 2% Imiquimod-induced psoriatic mouse model (BALB/c). Preclinical work indicates that it influences pro-inflammatory and pro-fibrotic cytokines and reduces inflammation. A new liposomal-gel (lipogel) formulation offers a novel topical option for treating psoriasis.

CONCLUSION

The evaluation of Brilaroxazine lipogel formulation activity using an Imiquimod-induced psoriatic mouse model (BALB/c) provides an initial proof-of-concept (PoC) for the Brilaroxazine Formulation’s activity in multiple positive signals—PASI, histology, and cytokines. It also supports D and 5-HT receptors as viable targets for psoriasis treatment.

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