

Session/Poster#

Presenter

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Assessment of Suppression of Cutaneous Allergic Responses and Pruritus by Topical Minocycline

Rationale: Minocycline has pleiotropic anti-inflammatory effects. We report preliminary results from evaluation of topical minocycline application on allergic skin responses and associated itch.

Methods: Adults with allergic rhinitis and/or asthma, (n=8, 7 women, 1 man, 55.8 yrs - 11.8) underwent baseline allergen skin prick testing (SPT)(Dermapik method) with two previously identified personal allergens, histamine, and saline controls at four test sites: bilateral upper and lower arms. Verbal itch rating scores (0:none, 1:low, 2:moderate, 3:severe) and clear adhesive tape tracings of induration were performed by a blinded researcher at: 1. baseline (20 min after SPT), 2. after randomized 30 min placement of thin layer of minocycline cream in emollient (0%, 1%, 2%, or 3%) over each site, and 3. at 60 min (30 minutes after removal of topical cream). Mean wheal diameters (mm) were determined. Student's T tests were used to analyze data.

Results: 30 min. of minocycline 2% decreased 1. histamine induced swelling (2%: 60.1 mm - 6.8 vs. 0%: 62.6 mm -6.2, p=0.02) and itch scores (2% - 1.0 - 1.07 vs. Baseline 2.25 - 0.71, P=0.002; 0% - 1.11 - 0.99 vs. Baseline 1.88 - 0.83, P=0.05). 30 min minocycline 1% and 3% also decreased itch (P=0.015, P=0.011, respectively). At 60 min. there was a decrease in allergen-induced induration with minocycline 2% (60.3 mm - 9.7) vs. minocycline 0% (65.3 mm -7.3)(P=0.014) and minocycline 3% (63.2 mm- 11.4) vs. minocycline 0% (65.3 mm -7.3)(P=0.06)

Conclusion: Topical minocycline may inhibit histamine and allergen-induced cutaneous skin responses including associated itch.