



ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

A RANDOMISED, DOUBLE BLIND, COMPARATIVE CLINICAL TRIAL ASSESSING THE EFFECTIVENESS AND SAFETY OF DAPSONE 5% VERSUS CLINDAMYCIN 1% IN THE TREATMENT OF MILD TO MODERATE ACNE VULGARIS

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Introduction: Antibiotics play a pivotal role in treatment of acne. Clindamycin inhibits bacterial protein synthesis, suppresses complement derived neutrophil chemotaxis. Topical Dapsone (4,4'-diaminodiphenylsulfone) was recently approved for the treatment of acne, has dual therapeutic activity by demonstrating antimicrobial and anti-inflammatory properties.

Objectives: To compare the effectiveness and safety of topical dapsone 5% gel and clindamycin 1% gel in the treatment of acne vulgaris.

Materials and Methods: Unicentric, double-blind, parallel-group (1:1, Group A=dapsone 5%, Group B=clindamycin 1%) randomized trial (CTRI/2017/08/009582) was done on acne vulgaris patients (global acne assessment scale mild to moderate) of either gender, 12-40 years age, excluding severe acne, pregnant, breast-feeding, G6PD deficient individuals. Patients were treated for 3 months, followed up at 4, 8, 12 weeks. Patients were blinded by painting the tubes in opaque-white and physician blinding was achieved by having separate dispensing and assessing physicians. Calculated sample size was 56 (effect size of 1, SD 1.25, 80% power, 0.05 Type 1 error, 10% dropout rate), analyzed by modified-intention-to-treat analysis.

Results: The study groups (dapsone=28, clindamycin=23) were comparable at baseline with respect to age, sex and acne grading ($P>0.05$). The effectiveness parameters, namely number of inflammatory and non-inflammatory lesions, diameter of largest lesion and acne global assessment scale were also comparable at baseline ($P>0.05$, Mann Whitney test), all of them reduced significantly ($P<0.001$, Friedman's ANOVA) in both treatment groups from





1st follow-up visit ($P < 0.05$, post-hoc Dunn's). At end of treatment visit, number of inflammatory lesions were significantly less ($P = 0.023$, Mann Whitney) and diameter of largest lesions and acne global assessment scale were near-significantly less ($P = 0.053$, 0.085 respectively) with clindamycin than dapsone. No adverse event was reported.

Conclusion: Both clindamycin and dapsone were effective and safe for the treatment of mild-to-moderate acne. In spite of anti-inflammatory effects of dapsone, clinical response with reduction of inflammation was more with clindamycin

