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

A COMPARATIVE STUDY OF EFFICACY OF PYRUIC ACID 50% AND SALICYLIC ACID 30% IN INFLAMMATORY ACNE.

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BACKGROUND: Acne vulgaris is a chronic inflammatory disease of the pilosebaceous follicles and one of the most common skin diseases. The peeling method has been recently found to be effective for acne treatment. Pyruvic acid is an alpha-ketoacid, a chemical group that has properties of both acids and ketones. It has antimicrobial and keratolytic property. Salicylic acid beta-hydroxy acid which has keratolytic and antilipid property.

OBJECTIVE: To compare the efficacy of pyruvic acid 50% and salicylic acid 30% peeling in inflammatory acne vulgaris.

METHODS: In a prospective single-blinded clinical trial, 50 patients with acne were randomly assigned into two groups. The patients were informed about the nature of the study and written consent was obtained from the patients. The patients, who fulfilled the inclusion criteria were divided randomly into two groups of 25 each.
GROUP A – 30% Salicylic Acid
GROUP B – 50% Pyruvicic Acid
In both groups, acne severity index (ASI) was calculated before and at week 2, 4, 6, and 8 of the treatment. Patient satisfaction was assessed at the end of the treatment. Side effects were recorded using a checklist.

RESULTS AND CONCLUSION: In inflammatory acne, the mean improvement was 65% and 73.3% with salicylic acid and pyruvic acid peel respectively. Pyruvic acid is found to be of higher efficacy than salicylic acid, suggesting the anti-bacterial and anti-inflammatory action of pyruvic acid, however, the difference was not statistically significant ($p>0.05$).
Overall, the mean improvement in total score of acne was 60.1% and 63.3% with salicylic acid and pyruvic acid peel respectively. Both Pyruvic acid and salicylic acid peels are safe, promising, simple, cost-effective treatment in acne vulgaris resistant to routine modalities of treatment.