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## Effectiveness of azelaic acid on acne

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**Background:** Acne is considered one of the most pervasive skin condition, affecting 9.4% of the world's population, making it the eighth most common disease globally. It has a huge effect on one's quality of life and self-esteem, due to the disease's effect on patient's appearance. There are many treatments present for acne but the battle of finding a better alternative is still ongoing.

**Objective:** The aim of this study is to compare the efficacy of azelaic acid (treatment B) and azelaic acid combined with hydra-facial (treatment A) on mild comedonal acne.

**Method:** It was a prospective, split-face clinical trial involving 12 patients suffering from mild comedonal acne. The treatment was performed every 2 weeks for 6 weeks. Treatment A was performed on left side and Treatment B was performed on right side of patient's face. The Hellgren-Vincent scale was used to assess acne severity. Numerical grading of comedonal acne was calculated before every treatment session, along with clinical photograph as evidence.

**Statistical analysis:** Data was analysed using SPSS version 20.0 (SPSS Inc.). Normality test was applied to the data. Data was normal. Then we applied paired sample T test to assess the difference in mean of Treatment A's and Treatment B's lesion count, keeping  $p < 0.005$ . Frequency was used to analyze patient's satisfaction level.

**Results:** The results were statistically significant ( $p < 0.05$ ) by paired sample t-test. There was a positive correlation between treatment A and treatment B's lesion count. There was a significant decrease in mean of treatment A's lesion count after last session.

**Conclusion:** Azelaic acid is very effective for mild comedonal acne and when combined with hydra-dermabrasion; it provides better and faster results. Hydra-dermabrasion or hydra-facial is being used as an aesthetic procedure but there is a huge research gap when it comes to its therapeutic uses. Hydra-dermabrasion when combined with therapeutic agents or serums like azelaic acid can improve their efficacy and impart better results. It improves patient's satisfaction level and gives quicker results than the agent alone.

### Recent Publications

1. Iraj F, Sadeghinia A, Shahmoradi Z, Siadat AH, Jooya A. Efficacy of topical azelaic acid gel in the treatment of mild-moderate acne vulgaris. *Indian J Dermatol Venereol Leprol* 2007; 73:94-96
2. Hashim PW, Chen T, Harper JC, Kircik LH. The Efficacy and Safety of Azelaic Acid 15% Foam in the Treatment of Facial Acne Vulgaris. *J Drugs Dermatol*. 2018 Jun 1;17(6):641-645. PMID: 29879251.
3. Chilicka, K., Rogowska, A.M., Szyguła, R. et al. A comparison of the effectiveness of azelaic and pyruvic acid peels in the treatment of female adult acne: a randomized controlled trial. *Sci Rep* 10, 12612 (2020).

### Biography

Sana Arshad, currently working as a clinical cosmetologist. She has graduated from The University of Faisalabad. He was the conference coordinator for international conference on dermal science. He was also working as a TA in the University of Faisalabad. A careful and sensitive skin care expert, clinical cosmetologist and researcher. Strong expertise in skin health through development of corrective method's controls and procedures. Research skills in dermatology, aesthetics, social sciences and academics. Strong interpersonal communication skills (oral & written).

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