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COMPARATIVE STUDY BETWEEN THE EFFECTIVENESS OF TCA 50% AND 95% IN THE TREATMENT OF POST ACNE SCARS

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Statement of the Problem: Acne vulgaris is a chronic inflammatory disease of the pilosebaceous follicles, characterized by comedones, papule, pustules, cysts, nodules and often scars. Depending on the severity and extent of involvement, treatment varies from the application of topical medications to systemic therapy with antibiotics or retinoids. The primary endpoint of current acne therapy is to decrease sebaceous gland activity, reverse hyper keratinizations minimize P.acnes overgrowth, and correct hormonal imbalances with the goal of preventing scarring. Acne scars are divided into icepick scars, rolling scars and boxcar scars. Our interest in the treatment of acne scars is growing and many measures for treatment became popular. For the atrophic scars, there are chemical peels, skin fillers, dermabrasion, punch elevation, submission and finally lasers. Concerning focal trichloroacetic acid (TCA) peeling, the chemical reconstruction of skin scars cross method was described for the treatment of atrophic scars using a sharpened wooden applicator to deeply deliver trichloroacetic acid (TCA) in higher concentration.

Methodology: In our study, 20 patients with atrophic acne scarring were included and treated with a cross method to deeply deliver TCA in two concentrations 50% and 95%. Then biopsies were taken to compare the efficacy of both concentrations on collagen deposition. Using gloved hand the skin was carefully cleansed with 70% alcohol and acetone soaked gauze to remove the cutaneous oils. A concentration of 50% TCA on one side of the face and 95% on the other side was dropped within atrophic scars and the scar was pricked with a wooden applicator to facilitate deeper penetration. The areas showing insignificant frosting were recoated and special attention was drawn to the pain and erythema. Three sessions

were done with four weeks interval between each. Immediate post peel washing to the skin with water was mandatory. A steroid-antibiotic cream twice daily was applied for the first week and a sunscreen with SPF>30 regularly. The patients were instructed to avoid sun exposure, irritating soaps, crust picking. The skin biopsies were performed before treatment and eight weeks after the treatment.

Findings: Comparing the effects of different TCA concentrations, the number of collagen fibers and collagen remodeling was markedly improved on the side of the cheek treated with TCA 95%.

Conclusion: We have found that the high TCA concentration led to much more myofibroblast proliferation that causes the active production of extracellular matrix components including collagen. However, high TCA concentration may lead to more aggressive complications as hyperpigmentation. We believe that acne scars cannot be treated by a single modality. The focal application of TCA is advantageous because they can reach deeply pitted areas and do not damage adjacent skin.

Biography

Reham Labib has completed her Graduation at Ain Shams University, Faculty of Medicine 2001; and Master's degree in Dermatology at Ain Shams University. She has more than 15 years of experience in Dermatology with special interest in Cosmetic and Aesthetic Medicine. In addition to her clinical practice, she is a highly skilled Physician in treating patients with all types of laser and energy based devices. She is a senior member and shareholder in the organization of one clinic specialized centers of laser and skin care clinics in East Cairo.

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