



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

## **ABLATIVE FRACTIONAL CO<sub>2</sub> LASER FOR TREATMENT OF ICEPICK, BOXCAR, ROLLING AND HYPERTROPHIC ACNE SCARS: A COMPARATIVE ANALYTICAL STUDY.**

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**Introduction:** Acne scarring is a challenging problem that affect 95% of patients with acne vulgaris, with devastating impact on patients quality of life. Data comparing the responses of different subtypes of acne scars to fractional laser resurfacing are limited.

**Material and Methods:** Twenty patients, Fitzpatrick phototype (II- V) with facial atrophic acne scars (icepick, boxcar and rolling) as well as hypertrophic acne scars were treated with four sessions of ablative fractional CO<sub>2</sub> laser at 4 weeks intervals and were followed up six months after the last session. Comparisons done by numerical quantification of each scar subtype individually using Echelle d'évaluation clinique des cicatrices d'acné (ECCA) scores and by comparing digital photographs pre and posttreatment. Safety was assessed at each follow-up visit. Satisfaction of the patients was graded on a quartile scale.

**Results:** The total ECCA score significantly reduced at 6 months follow up as compared to the preprocedural score (P value 0.0001). The magnitude of reduction for each scar type were 75% for rolling, 66% for boxcar and 40% for icepick at 6 months follow up visit. Interestingly, the hypertrophic scars reported significant improvement 70%. There was no significant correlation between the improvement and age, duration of post acne scars nor skin phototype. Safety assessment revealed that pain, scaling and crusting were encountered in all patients. Post treatment erythema, edema, activation of acne and hyperpigmentation were reported in 73%, 52%, 20% and 15% of treatment sessions respectively. All side effects were not correlated with phototype. 85% of patients graded themselves to have >50% improvement.

**Conclusion:** Rolling atrophic and hypertrophic acne scars respond the best to ablative fractional CO<sub>2</sub> laser. However it's effective for different types of acne scars and safe for most skin phototypes with acceptable and transient side effects.

