

Comparison of fractional carbon dioxide laser and fractional microneedle radiofrequency in the treatment of atrophic acne scars in skin of color

Ritika Shanmugam

Dr Dixit Clinics, India

Introduction & Objectives: Scarring is one of the most common and difficult to treat sequelae of acne. Acne scars have a negative impact on the quality of life of those affected. The objective of this study was to compare the effects, number of treatments required and side effects of fractional CO₂ laser and fractional Microneedle Radiofrequency (MnRF) in treatment of acne scars.

Materials & Methods: Twenty (20) patients with acne scars and were included in the study, 10 in each group. Patients in each group underwent 4 sessions of either CO₂ laser or MnRF one month apart. The therapeutic response to treatment was assessed at each follow up visit and then finally 4 months after the last treatment. Response to treatment was labelled as 'excellent' if there was >50% improvement in scar appearance and texture, while 25-50% response and <25% improvement were labelled as 'good' and 'poor' respectively. Overall satisfaction of the patients and any adverse reactions to the treatment were noted.

Results: A significant improvement in acne scars was seen in all the patients, with 90% reporting excellent results in both cohorts. The downtime of MnRF treatment was negligible (<24 hours) whereas it was an average of 4 days with CO₂ laser. Post-inflammatory hyperpigmentation and persistent erythema were the most common complication, both observed in one patient from the CO₂ group.

Conclusion: Both Mnrf and CO₂ lasers are equally effective in treatment of acne scars, however, patients prefer MnRF due less downtime. Cost of MnRF may be higher to patient due to the consumables involved.

shanmugamritika@gmail.com