



LASERS

EFFICACY AND SAFETY OF COMBINED FRACTIONAL MICRONEEDLE RADIOFREQUENCY AND CARBON DIOXIDE LASER ON INFLAMMATORY ACNE AND ACNE SCARS

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Background: Treatment of Acne scars remains a therapeutic challenge with broad range of treatment options. Especially for the atrophic scars, ablative fractional laser (AFL) has demonstrated its efficacy. In addition, microneedle radiofrequency (RF) systems can allow a more selective microthermal zone in the dermis without epidermal damage.

Objectives: The aim of this study was to analyze the efficacy and safety of combination treatment with microneedle RF and AFL in inflammatory acne and post-acne scars.

Materials and Methods: In this retrospective study, the patients with acne scar who were treated with microneedle RF and AFL at Severance Hospital, Yonsei University College of Medicine, Korea were selected. Data were collected regarding clinical responses at the first follow-up visit and later follow-up visits. Two blinded dermatologists separately rated participants' response based on standard digital photographs obtained at baseline and on follow-up visits after three sessions of treatment rated by 5-scale Scar Global Assessment Scale (0 = clear to 4 = severe), Acne Severity Grading and Investigator Global Assessment.

Results: Seventy patients with Fitzpatrick skin types II through IV and facial acne scarring were enrolled (mean age, 24 years; age range, 19-45 years). 43 patients had active inflammatory lesions and were taking systemic retinoid. The masked assessment score of 70 patients rated in Scar Global Assessment Scale were 3.14 ± 0.73 at baseline and decreased to 1.54 ± 0.61 after three treatment sessions. Notably, the patients with inflammatory lesions showed significant decrease in number of inflammatory nodules after the combined treatment. Moreover, the patients who were on systemic retinoid did not report any significant side effects after treatment. Investigator's Global Assessment and patient satisfaction levels showed clinical improvement in all patients.





Conclusion: The combination treatment with microneedle RF and AFL is safe and effective in treatment of inflammatory acne lesions and post-acne scars.

