Evaluation of combined fractional radiofrequency and fractional laser treatment for acne scars in Asians.

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Abstract

BACKGROUND AND OBJECTIVES: Fractionated radiofrequency (RF) induces deep dermal heating and leaves the epidermis less affected. We studied the efficacy and safety of bipolar RF and fractional diode laser followed by fractional RF in Asians with acne scars.

MATERIALS AND METHODS: Twenty-four patients (skin types III and IV) with acne scars received up to five treatments of combined fractional 915-nm laser and bipolar RF using a Matrix IR applicator (Syneron Medical Ltd, Yokneam, Israel) with fluence ranging from 50 to 70 J/cm(2), RF at 70-100 J/cm(3), double passes followed by full-face bipolar fractional RF treatment using Matrix RF at energy ranging from 50 to 62 mJ/pin, at 4-week intervals. Changes in acne scars, skin texture, pore size, pigmentation irregularity, and complications were assessed up to 3 months post-treatment by standardized photographs obtained with Canfield Visia-CR system®. Subjective improvement and patient satisfaction were assessed by questionnaire.

RESULTS: Twenty patients (age 27.7 ± 8.4 years) completed the study. Modest but statistically significant improvement was noted in acne scars, with the mean grade decreased by 29% (P < 0.001), and 52% were rated with at least moderate objective global improvement at 3 months. Mean pain score was 2.6 on a scale of 0-4. There were also objective improvements in all secondary endpoints. Post-inflammatory hyperpigmentation (PIH) occurred mainly over bony areas in 6.5% of all treatments. Subjective improvement was moderate to significant for 36.8% of patients, and 63% reported being satisfied with the treatment results at 3 months despite considerable pain level.

CONCLUSION: Use of fractional laser with RF followed by fractional RF was shown to be safe and effective for acne scars with modest improvement and low PIH rate comparable to other resurfacing techniques in this Asian case series. Adequate pain control and reduced energy level when treating areas in close proximity to bone are advised. Lasers Surg. Med. 44: 622-630, 2012. © 2012 Wiley Periodicals, Inc.

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