

LASERS

## A PROSPECTIVE STUDY OF THE SAFETY AND EFFICACY OF A FRACTIONAL RADIOFREQUENCY MICRONEEDLE SYSTEM FOR THE TREATMENT OF AGING NECK SKIN IN ASIANS

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**Introduction:** Demand for noninvasive procedure to correct the of the unattractive feature of an aging neck is increasing because of the popularity of aesthetic medicine. However, data on the safety and efficacy of noninvasive procedures for treatment of aging neck skin in the dark-skinned patients are limited.

**Objective:** This prospective, self-controlled study was conducted to evaluate the safety and efficacy of a fractional radiofrequency microneedle system for the treatment of aging neck skin in Asians.

**Materials and Methods:** Eighteen females (mean age of 53 years old) of skin type III and V with aging neck skin were enrolled. All subjects were treated on the three-monthly sessions with a fractional radiofrequency microneedle system (a power of 260 V and a pulse duration of 30 milliseconds) for two passes. Objective (measurement of skin color and roughness using 3D photography and skin elasticity analysis using cutometer) and subjective [evaluated using the Physician Global Aesthetic Improvement Scale (GAIS) by two blinded dermatologists] assessments were obtained at baseline and at 1, 3 and 6 months after the final treatment.

**Results:** At 3-month follow-up, in doctors' GAIS scoring, "very much improved" accounted for 5.5%, "much improved" accounted for 33%, "improved" accounted for 56%, and "no change" accounted for 5.5%. At 3-month follow-up, skin texture ( $P = .013$ ), and skin's total extensibility ( $P = .02$ ) have significantly improved, in comparison with the baseline. These positive outcomes were maintained up to the 6-month follow-up, according to the GAIS scores and the measurements of 3D photography and cutometer. Mild postinflammatory hyperpigmentation (PIH) was observed in 5% of the subjects. All PIH was temporary and resolved on an average of 4 weeks.

**Conclusions:** The fractional radiofrequency microneedle system is a safe therapeutic



alternative for the treatment of aging neck skin in dark-skinned individuals.

