



DERMATOLOGICAL SURGERY

TREATMENT OF ACNE SCARS ON DARKER SKIN TYPES USING A NON-INSULATED SMOOTH MOTION, ELECTRONICALLY CONTROLLED RADIOFREQUENCY MICRONEEDLES TREATMENT SYSTEM

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Background: Severe scarring caused by acne is associated with substantial physical and psychological distress, both in adolescents and adults. Nowadays many people are looking for scars improvement with minimum downtime. A novel minimally invasive technology for treating acne scars use radiofrequency (RF) emitting microneedles for both mechanical disruption of fibrotic strands and heat-mediated collagen remodeling.

Objective: The objective of this study is to improve acne scars and skin texture and to evaluate the safety and efficacy using a novel technology of smooth RF microneedling.

Study Design & Methods: 50 patients (20-55 years), skin type III-IV with acne scars were enrolled in the study. Each patient had 4-5 treatment sessions at 2-3 months intervals using a multisource RF treatment platform with a microneedle RF applicator, after 40-60 minutes of topical anesthesia. Efficacy was evaluated by the Goodman and Barron's Global Qualitative Acne Scarring System. Power range was 15-25W, pulse width 110-140msec and needles depth 2.0-3.0mm.

Results: All the patients completed a series of 4-5 treatments. No bleeding points or any adverse events such as burns, scarring. PIH was reported in some cases, but was transient. Post-treatment erythema was observed immediately after the treatment and lasted up to 10 hours after the treatment. Improvement of at least 1 acne scar grade was observed 1 and 3 months post treatment sessions.

Conclusions: The presented study results show that the RF microneedle treatment provides a highly effective minimally invasive treatment for acne scars and skin texture improvement for skin types III to V, with a short downtime and high subjective satisfaction rates.

