



AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

MICRONEEDLING OF SCARS: A PROSPECTIVE STUDY WITH LONG-TERM FOLLOW-UP

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Introduction: In recent years, microneedling has been increasingly used to treat a number of dermatologic conditions, including scars. The latest microneedling devices are motorized and have improved the ability to more precisely and effectively treat scars.

Objective: Through this prospective cohort study, we describe the results of microneedling on a consecutive series of 120 patients with a variety of scars. Clinical outcomes and adverse effects were evaluated over a 12-month period after treatment

Methods: 120 consecutive patients (SPT I-V) with facial and non-facial scars from a variety of etiologic sources (acne, trauma, surgery) were treated using a microneedling device. Treatments were delivered at monthly intervals by the same operator using a motorized microneedling device with 3mm needle depths. No additional treatments (topical or intralesional) were applied. Representative clinical photographs were obtained at baseline, prior to each treatment, and 1, 3, 6, and 12 months after treatment. Two assessors blinded to treatment protocol rated clinical improvement of scars on a 5-point scale (0= no change, 1= 1-25% improvement, 2= 26-50% improvement, 3=51-75% improvement, 4= 76-100% improvement). Side effects were monitored and tabulated.

Results: Patients received 1 to 5 consecutive monthly treatments. All scars improved at least 50% after an average of 2.5 treatments. Over 80% of patients had 50-75% improvement and 65% of patients demonstrated over 75% improvement. No significant differences were observed in clinical responses of facial scars versus non-facial scars. Similarly, no significant differences were seen between responses of atrophic acne scars and traumatic or surgical scars. Side effects were limited to transient erythema and edema. Rare purpura formation and herpes simplex reactivation were experienced. No scar worsening nor long-term adverse sequelae were observed.

Conclusion: The clinical results obtained in this study support the use of microneedling for a wide variety of scars with minimal risk of adverse effects.

