



LASERS

EFFICACY OF PERCUTANEOUS COLLAGEN INDUCTION THERAPY VERSUS FRACTIONAL NON- ABLATIVE LASER TO TREAT ATROPHIC STRIAE: A RANDOMIZED STUDY

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Introduction: Striae distensae (SD), an unsightly condition characterized by epidermal atrophy, can affect the quality of life of women.

Objective: To compare the efficacy of a Neodymium: Yttrium-Aluminum-Perovskite (Nd:YAP) 1340nm non-ablative fractional laser (NAFL) and the microneedling (MN) technique to treat striae albae.

Materials and Methods: NAFL and MN were used to treat striae on the longitudinally divided abdominal surface of 20 women (5 sessions). Photographs and skin biopsies were obtained pre-treatment and after the third and fifth sessions. Patients and two independent evaluators assessed the clinical response using the Global Aesthetic Improvement Scale (GAIS). This research was approved by the Institutional Ethics Committee

Results: Patient-reported evaluation showed improvement of striae using both modalities with no statistically significant difference between the groups. Collagen and elastic fibers were significantly increased after the third and fifth treatments, without difference between the modalities ($p < 0.001$). Dermatology Life Quality Index (DLQI) scores collected at pre-treatment and after the third and fifth treatment sessions significantly better ($p < 0.001$), with average values of 8.4 (Standard error - SE ± 1.21), 3.18 (SE ± 0.55), and 2.64 (SE ± 0.60), respectively. The mean pain score using the Visual Analog Scale (VAS) in the MN vs. the NAFL group was 5.23 (SE ± 0.31) vs. 2.39 (SE ± 0.22), respectively ($p < 0.001$). The mean duration of adverse events in the NAFL vs. the MN group was 4.03 days (SE ± 0.45) and 3 days (SE ± 0.37), respectively ($p = 0.02$).

Conclusions: NAFL and MN are safe to treat SD, particularly in individuals classified as phototype III or IV (Fitzpatrick classification). MN is a useful non-technology dependent, cost-effective alternative therapy for striae albae.

