



LASERS

EFFICACY AND SAFETY OF NON-THERMAL RF PLASMA VERSUS LONG PULSE ND:YAG LASER IN THE HAND REJUVENATION

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Introduction: Natural processes and chronic ultraviolet light exposure play an important role in aging of the hands and cause textural and pigmentary changes, skin laxity and wrinkles. There are different therapeutic modalities for the reversal of these changes. Plasma skin regeneration (PSR) is a new modality to achieve aforementioned purpose.

Objectives: To evaluate the efficacy and safety of non-thermal RF plasma in the hand rejuvenation compared with long pulse Nd:YAG laser.

Materials and Methods: The study included 20 patients with Fitzpatrick skin types II, III and IV and in age range of 35-70 years old. In each patient, one hand was randomly selected for twelve weekly treatment with non-thermal RF plasma and the other hand for three monthly treatment with long pulse Nd:YAG laser. The assessments including clinical evaluation of skin texture, pigmentation and wrinkle severity (determined by an independent dermatologist), measurement of skin biomechanical properties (using a sensitive biometrologic device), patients' satisfaction and potential side effects have been documented at the baseline, 4 weeks after each treatment, and 12 weeks after the final treatment session.

Results: Although both modalities reduced skin pigmentary changes and wrinkles, significant reduction especially in pigmentary changes was observed in the plasma treated hands compared to the laser treated areas. Skin biomechanical properties also improved significantly after the plasma treatment compared to the laser treatment. There was no serious side effect after both modalities.

Conclusion: Our findings showed that both non-thermal RF plasma and long pulse Nd:YAG laser resulted in considerable clinical effects on the hand rejuvenation, but treatment with





non-thermal RF plasma seems to be more effective and less uncomfortable. The study is expected to continue on more patients.

