



LASERS

TREATMENT OF ATROPHIC ACNE SCARS USING RF MICRO-NEEDLING AND GALVANIC ENERGY

Matteo Tretti Clementoni⁽¹⁾ - Valerio Pedrelli⁽¹⁾ - Giovanna Zaccaria⁽¹⁾

Laserplast Srl Stp, Laserplast Srl Stp, Milano, Italy⁽¹⁾

Background and aim: Acne has a prevalence of over 90% among adolescents and may result in atrophic acne scars which may have a negative psychological impact on social life and relationships. Treatment of acne scars with radiofrequency has been shown to enhance collagen remodeling in the dermis by heating and remodeling/destroying the existing unevenly arranged collagen and promoting new collagen formation. In this study we evaluated the efficacy and safety of a novel device which combines the benefits of RF microneedling and galvanic energy to treat atrophic acne scars.

Materials and Methods: This was a prospective, open label study. 23 participants with mild to severe atrophic acne scars were enrolled. The participants underwent 3 to 4 treatments at 3-week intervals. Efficacy of treatment was evaluated 3 months after the last treatment using the ECCA acne scar grading system and by the Investigator global assessment (IGA) scale. Treatment safety and tolerance were also evaluated.

Results: Three months after the last treatment, significant improvement in atrophic acne scars was noted. ECCA scores decreased significantly from 78.85 ± 21.7 to 40 ± 17.3 ($p < 0.001$). According to the IGA, 65,2% (15/23) of participants had moderate improvements and 34,8% (8/23) had slight improvements. Immediate response effects included minimal discomfort during the treatment and transient erythema and edema. All treatments have been performed without any anesthesia and the pain was minimal with a mean 10-point VAS pain score of 1.92 ± 0.46 . No other adverse events were reported. Post-treatment downtime ranged from 0.5 to 2 days. Most patients (86,9%, 20/23) indicated that they were 'extremely satisfied' or 'satisfied' with the treatment. Patient self-assessments of the degree of improvement paralleled the physicians' evaluation.

Conclusion: Galvanic energy combined with RF micro-needling is an effective, tolerable and safe method for treating atrophic acne scars;

