ABSTRACT BOOK ABSTRACTS



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LASERS

## OBJECTIVE EVALUATION OF THE EFFICACY OF A NON-ABLATIVE, FRACTIONAL 1565 NM LASER FOR THE TREATMENT OF DELIBERATE SELF-HARM SCARS

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Background and Objective: Scars resulting from deliberate self-harm (DSH) represent therapeutically challenging forms of scarring due to their highly variable patterns. With no official guidelines available, next to medical needling and various topical creams current therapeutic regimes mostly rely on surgical techniques, which may be frequently cosmetically unpleasing. In this pilot study, we aimed to evaluate the effectiveness and safety of a non-ablative fractional Er:glass 1565 nm laser, as a potential new, minimal-invasive approach for the improvement of DSH scars.

Methods: 16 Caucasians suffering from mature DSH scars on forearms, wrists and thighs were included in this prospective clinical study. Patients received three treatments using a non-ablative, fractional 1565nm Er:glass laser every four weeks, employing two passes (300µbeams/cm2,40mJ, onto the scar; 150µbeams/cm2, 50mJ, overall area). Measurements included questionnaires (DLQI, POSAS, EQ-5D-3L), digital photography, and three-dimensional analysis using PRIMOS and VECTRA software at baseline, one month and six months after the last treatment.

Results: PRIMOS objective measurements showed highly significant changes in scar surface, as Sv demonstrated a reduction of atrophic lesions by 36.0% at 6 months follow-up (FU), Sp showing a decrease in scar height by 42,7% at 6 months FU, resulting in an overall diminished skin irregularity with Smax dropping from 678.3µm at baseline to 441.6µm throughout the course of the study. (p=<0.001 respectively) Improvement in objective measurements was supported by significant changes in subjective clinical evaluation of scar parameters and showed a strong correlation with enhanced life quality of treated patients. Procedures were well-tolerated, with no lasting negative side effects and little to no down-time.

Conclusion: The use of a fractional, non-ablative 1565nm Er:glass laser represents a promising and safe approach for the therapy of DSH scars. Although these scars will never fully resolve, their appearance can be significantly improved to a cosmetically and socially





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more acceptable appearance.



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