

Hypotrophic scars and Keloids: Laser management

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INTRODUCTION

One of the most challenging conditions to treat in dermatology are scars (i.e. keloids, hypertrophic, post-acne and post-surgical scars). Laser therapy has been shown to be able to modify healing processes and scar tissue organization. Though, laser treatment has become a popular therapeutic modality, because of its positive outcomes associated with less pain and side effects. In our study we evaluated the efficacy and safety of laser treatments in two different kind of pathological scar lesions, both keloidal scar and hypotrophic scars.

METHODS

10 patients with post-surgical pathological scars were enrolled in the study at the department of Dermatology, University of Tor Vergata in Rome. Among them 5 were affected by keloids (group A) and 5 were affected by atrophic scars (group B). Group A was treated with Pulse Dye laser 595 nm. Group B was treated with Fractional CO₂ SMART XIDE² 10600 nm laser combined with bipolar radiofrequency applied consecutively. Each patient was evaluated through multispectral imaging before and after each laser application and underwent a one-year follow-up. Each session was performed every eight week for a total of 9 sessions.



FIG1 (A-B) pre- and post treatment, dye laser 595 nm



FIG3-4 (A-B) pre- and post treatment, Fractional CO₂ SMART XIDE² 10600 nm laser combined with bipolar radiofrequency

RESULTS

Mean age was 35,1 years old and male-to-female ratio was 1:2. Total treatment session was 9 for each group. At the final visit, after one-year follow-up, all patients shown a significant improvement both for the vascular and for the fibrotic component assessed with multispectral imaging.

CONCLUSIONS

Fractional resurfacing using CO₂ 10600 nm laser combined with bipolar radiofrequency, can significantly remodeling scars characterized by loss of tissue. Moreover Dye laser 595 nm has shown a significant efficacy in the treatment of keloidal and hypertrophic scars. Our study underlines the importance of a pre-operative evaluation of the scar with a multispectral technic to schedule the type of laser and the right frequency of the application needed.

REFERENCES

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