



LASERS

THE CLINICAL EFFICACY OF NON-ABLATIVE ERBIUM: YAG 2940NM COMBINED WITH 1064NM LASER THERAPY FOR PERIORBITAL REJUVENATION

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Background: There is a growing demand for periorbital rejuvenation through noninvasive procedures. Although there are many options to treat periorbital dark circles, sagging and lower eyelid bags, the effects were still unsatisfied.

Objective To evaluate the efficacy and safety of intraocular treatment with Erbium: YAG laser using a non-ablative mode combined with super-long pulsed 1064nm laser to promote periorbital rejuvenation

Method: From July 2017 to October 2018, a total of 30 patients were enrolled and randomized into two groups. In one group, one facial side was treated with 1064nm laser, the other side was treated with 2940nm laser in combination with 1064nm laser combination procedure. In another group, one facial side was treated with 2940nm laser only, the other side was also combination procedure. All patients were treated three times at one month interval. Efficacy and safety were assessed by clinical grading, VISIA, CK, 3D and self-assessment at 3 months' follow-up.

Results: The 1064nm laser alone treatment showed significant improvements on indexes of skin texture, brown spots, elasticity, melanin and the volume of fat bags as compared to the baseline ($p < 0.05$). The 2940nm laser alone showed significant improvements on indexes of wrinkle, texture, elasticity and the volume of fat bags as compared to the baseline ($p < 0.05$). Treatment of 2940 nm in combination with 1064 nm laser showed significant improvements on indexes of wrinkle, texture, brown spots, elasticity, melanin and the volume of fat bags as compared to the baseline ($p < 0.05$) and compared to the treatment with 1064 nm or 2940 nm laser alone ($p < 0.05$). No adverse events were observed during the study.

Conclusions: Combination of 2940nm and 1064nm laser treatment is more efficacious for periorbital rejuvenation as compared to 2940nm or 1064nm laser alone. This combined therapy is recommended for further clinical evaluations and practices.

