

A NEW COMBINED TREATMENT FOR FACIAL REJUVENATION USING AN OPTIMIZED PULSED LIGHT SOURCE FOLLOWED BY A FRACTIONAL LASER

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Background: This study compared facial rejuvenation with a combined treatment using an optimized pulsed light (OPL) source followed by a non-ablative, fractional 1540nm laser to treatment with the laser alone.

Study: 36 subjects were enrolled after providing signed, informed consent under IRB approved protocol. Group A (n¼10) received treatment with an Er:Glass laser at 1540 nm, 50 mJ/microbeam, 15ms combined in one treatment session with OPL operating at 500–670 & 870–1200 nm, 32 J/cm², 20ms (1540 and MaxGTM, Palomar Medical, Burlington, MA). Group B (n¼26) received treatment using only the 1540nm Er:Glass laser. Baseline and post-treatment clinical photographs were evaluated by three blinded scorers using the Fitzpatrick Wrinkle Score (FWS) and a 0 to 4 Pigment Improvement Score. Incidence and severity of side effects, and subject satisfaction were also recorded.

Results: Average FWS improved mildly in both groups, from 6.4 to 6.0 (0.4) in Group A, and 5.3 to 4.9 (0.4) for Group B. Pigment Improvement was higher in Group A with 96.3% of subjects demonstrating improvement with an average score of 2.1 indicating >50% improvement, vs. an average score of 1.2 in Group B. Pigment improvement was also noted sooner following treatment when the 1540 laser was combined with OPL. Side effects were similar in both groups and included mild to moderate erythema, edema and bronzing that resolved by one month.

Conclusion: Facial rejuvenation combining 1540nm laser and OPL was found to be a safe and effective treatment for photoaging that provides enhanced cosmetic results in a shorter time-course for pigment improvement than the 1540nm laser alone.