Contact Lens Update
CLINICAL INSIGHTS BASED IN CURRENT RESEARCH

Treatment of Meibomian Gland Dysfunction (MGD) with Intense Pulse Light Therapy (IPL) with Low Level Light Therapy (LLLT) Versus LIlt Alone

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Treatment of Meibomian Gland Dysfunction (MGD) with Intense Pulse Light Therapy (IPL) with Low Level Light Therapy (LLLT) Versus LIlt Alone

Purpose: The purpose was to show the effects of IPL/LLLT versus LLLT in patients with severe MGD as adjunctive therapy for ocular surface disease prior to refractive cataract and refractive surgery.

Methods: The setting was two offices (cataract and refractive patients) with one surgeon participating. The author treated 526 eyes of 263 patients in a prospective study of IPL/LLLT versus LLLT for treatment of MGD. All patients were treatment failures with previous topical and systemic medications. All patients received complete eye exams with the primary focus on the subjective evaluation of the intervention using the Ocular Surface Disease Index (OSDI) and the objective evaluation of the intervention using Meibomian Gland Expression (MGE) and Tear Break Up Time (TBUT) prior to treatment and 1-3 months after treatment. The subjects were followed for up to one year.

Results: Prior to intervention (IPL/LLLT) the average OSDI score was 44.4. Post treatment it was 25.4. Prior to treatment average MGE was 3.63. Post treatment was 2.36. The MGE was defined on a 4-point scale with 4 being the inability to express meibum and 0 being normal. Initially the average TBUT was 3.78 seconds. Post treatment TBUT increased to 7.56 seconds. In the LLLT only group, significant improvements in the mean OSDI score ($p = 0.002$), MGD grading ($p < 0.001$), TBUT ($p < 0.001$) and both nasal and temporal LG staining ($p < 0.02$) were observed. An MGD grade reduction of >1 was observed in 72% of eyes (36/50). There were no adverse events. All patients noted improvement with the treatment.

Conclusions: The use of IPL/LLLT or LLLT alone for the treatment of MGD is beneficial in patients who have failed topical and/or systemic therapy.