

**INTENSE PULSED LIGHT TREATMENT FOR DRY EYE DISEASE  
DUE TO MEIBOMIAN GLAND DYSFUNCTION;  
A 3-YEAR RETROSPECTIVE STUDY**

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Photomedicine and Laser Surgery.- 2015.- Vol.33, №1.- P.41-46

**Objectives.** The purpose of this study was to determine the clinical benefits of intense-pulsed-light therapy for the treatment of dry-eye disease caused by meibomian gland dysfunction (MGD). MGD is the leading cause of evaporative dry eye disease. It is currently treated with a range of methods that have been shown to be only somewhat effective, leading to the need for advanced treatment options.

**Methods.** A retrospective noncomparative interventional case series was conducted with 91 patients presenting with severe dry eye syndrome. Treatment included intense-pulsed-light therapy and gland expression at a single outpatient clinic over a 30-month study. Pre/post tear breakup time data were available for a subset of 78 patients. For all patients, a specially developed technique for the treatment of dry eye syndrome was applied as a series of monthly treatments until there was adequate improvement in dry eye syndrome symptoms by physician judgment, or until patient discontinuation.

**Results.** Primary outcomes included change in tear breakup time, self-reported patient satisfaction, and adverse events. Physician-judged improvement in dry eye tear breakup time was found for 68 of 78 patients (87%) with seven treatment visits and four maintenance visits on average (medians), and 93% of patients reported post-treatment satisfaction with degree of dry eye syndrome symptoms. Adverse events, most typically redness or swelling, were found for 13% of patients. No serious adverse events were found.

**Conclusions.** Although preliminary, study results of intense-pulsed-light therapy treatment for dry eye syndrome caused by meibomian gland dysfunction are promising. A multisite clinical trial with a larger sample, treatment comparison groups, and randomized controlled trials is currently underway.