

2<sup>nd</sup> International Conference on

# Eye and Vision

September 26-28, 2016 Orlando, USA



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### Intense pulse light treatment for dry eye disease

**Aim:** Aim of this study is to determine the clinical benefits of intense-pulsed-light therapy for the treatment of dry-eye disease due to meibomian gland dysfunction.

**Method:** A retrospective non-comparative interventional case series was conducted on 91 patients presenting with severe dry eye syndrome (eligibility tear breakup time less than 10 seconds or patient referral). Treatment included intense-pulsed-light therapy and gland expression at a single outpatient clinic over a 30-month study period beginning from May 2009. 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 adequate improvement in dry eye syndrome symptoms by physician-judgment or patient-discontinuation.

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

**Conclusions:** While preliminary, study results of intense-pulsed-light therapy treatment for dry eye syndrome due to meibomian gland dysfunction are promising. A multi-site clinical trial with a larger sample, treatment comparison groups and randomized controlled trials is currently underway.

### Biography

Rolando Toyos is the Medical Director and Founder of Toyos Clinic. He completed his Bachelor's and Master's degrees from The University of California, Berkeley and Stanford University. Prior to Medical School, he was National High School Teacher of the Year. He completed his Medical degree at the University of Illinois where he was Class President and a James Scholar. He completed his Ophthalmology Residency at North-western University and Chicago Children's Hospital before starting Toyos Clinic. He has published several books and research articles, lecturing internationally on scientific topics such as his invention Intense Pulse Light for Dry Eye.

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