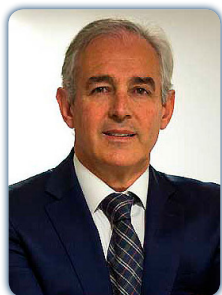


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Intense ultra-regulated pulsed light in the treatment of meibomian gland dysfunction

Lipid deficiency occurs in 76.7% of dry eye patients with a prevalence of meibomian gland dysfunction (MGD) in the majority of eyes. The treatments of MGD have been shown only short-term symptom relief. This suggests that we need more treatment options, one of which is intense pulsed light therapy (IPL). IPL treatment applies Xenon flash lamp to emitting wavelengths of light ranging from 400 to 1200 nm. The initial application of IPL for dry eye patients began in 2002 and from that, different authors have used this technology reporting good results. In our case, we have improved the IPL with a new system called Intense Ultra-Regulated Pulsed Light (IURPL, Thermaeye[®]) which generate short pulses with low energy. The aim of his study is to explore the safety and efficacy of intense ultra-regulated pulsed light (IURPL) in MGD eyes.

Methods & Methodology: This is a prospective and open label study. 184 eyes of 92 MGD patients were recruited and received 4 consecutive IURPL treatments on day 1, day 7, day 21, and day 45, with a follow up of 6 months. Symptoms were evaluated with OSDI score. Best corrected visual acuity, IOP, conjunctival injection, upper and lower tear meniscus height, TBUT, corneal staining, lid margin and meibomian gland assessments, and meibography were also recorded.

Results: Significant improvements were observed in single and total ocular surface symptom scores, TBUT, and conjunctival injection at all the visits after the initial IURPL treatment ($P < 0.03$). Compared to baseline, the signs of eyelid margin, meibomian gland secretion quality, and expressibility were significantly improved at every visit during 6 months after treatments. There was no regional and systemic threat observed in any patient.

Conclusion: Intense ultra-regulated pulsed light (IURPL) therapy is a safe and efficient treatment in relieving symptoms and signs of MGD eyes.

Biography

Dr. Carlos Verges graduated in Medicine and Surgery at the Faculty of Medicine, University of Barcelona in 1980 and moved to Boston (USA) to perform basic research in ophthalmology, completing a PhD in Biology at the Harvard University and his doctoral thesis about the mechanisms of tear secretion, which will be basic to understand the pathology of dry eye syndromes, and object of the National Research Award (1983). At present, he continues his clinical and medical activity in Área Oftalmológica Avanzada and his teaching and research activities in the Polytechnic University of Catalonia (UPC), as well as collaborating with other national and foreign universities. His area of interest is centered in the area of cataracts and the neurophysiological mechanisms of vision, especially those related to sports.

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