Short-term outcomes of near-infrared photobiomodulation for permanent diabetic macular edema

Masoumeh Ahadi¹ and Afsaneh Ebrahimi²

¹Shahid Beheshti University of Medical Sciences and Health Services, Iran
²Omid Hospital, Iran

Purpose: To assess the efficacy of photo-biomodulation with near-infrared radiation for treatment of permanent macular edema in diabetic patients.

Methods: 12 eyes of 10 patients with permanent macular edema were included in this study. All patients underwent slit lamp examination and assessment of visual acuity, intraocular pressure and optical coherence tomography (SD-OCT). Photo-biomodulation was performed using portable device (Warp 10, Quantum device) and applied near to the eye for 300s daily for two months. Patients were re-assessed 1, 2, and 4 months after treatment.

Results: The mean visual acuity was 0.45±0.29 Snellen and the mean acuity at four months following treatment was 0.66±0.34, VA and increased by 1.85±1.2 Snellen lines (P<0.001). The mean central macula thickness was 537 µm primarily and decreased to 520 µm after treatment (P=0.015). No adverse events were observed, including blurred vision, inflammation and increased intraocular pressure or increased macular edema in any patient.

Conclusion: Photo-biomodulation resulted in a decrease in macular thickness and improvement in visual acuity in patients with permanent macular edema which they have no invasive and expensive treatment.

sepid01@yahoo.com