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Service (sector) Retina and Vitreous Nº CEP

Indocyanine Green-mediated Photothrombosis as a New Technique of Treatment for Persistent Central Serous Chorioretinopathy

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Purpose: To evaluate the potential benefit and complications of indocyanine green-mediated photothrombosis (IMP) in the management of patients with persistent central serous chorioretinopathy (CSC). Design: Interventional non-comparative case series. Methods: Eleven patients with CSC presenting with persistent subretinal fluid on optical coherence tomography (OCT), four months after initial presentation and with a decrease in visual acuity (VA) were submitted to a single IMP session with 2 mg/kg body weight ICG and application of 5.6 W/cm2 light at 810 nm. A continuing follow-up was provided with best-corrected ETDRS VA assessment, and angiographic and OCT documentation 72 hours before and at 2 days, 1 and 2 weeks, 1, 3, 6, and 12 months after treatment. Results: Pretreatment VA levels ranged from 20/32-1 to 20/100 (mean, 20/63+2 [logMAR equivalent, 0.460 ± 0.155]); post treatment levels ranged from 20/25-2 to 20/20 (mean, 20/20-2 [logMAR equivalent, 0.038 ± 0.048]). Ten out of eleven patients presented with VA levels of = 20/25, 2 weeks after treatment; the mean logMAR VA change of 0.345 at that time was statistically significant ($p<0.05$, Friedman test). OCT disclosed resolution of persistent subretinal fluid in all eyes. No recurrence was observed after 12 months of follow-up. Complications included transient retinal whitening in two patients, and associated occlusion of retinal capillaries in one. Conclusions: Photothrombosis using low-intensity 810 nm light to direct laser energy continuously at the active leakage sites after intravenous ICG infusion induced rapid VA recovery in patients with persistent CSC; accordingly, restoration of the macular architecture was evidenced on OCT, and no recurrence was noted 12 months after IMP.