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Service (sector) Retina and Vitreous N° CEP

Retinal Capillary Hemangioma Treatment by Indocyanine Green-mediated Photothrombosis

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Purpose: To describe the clinical, angiographic and optical coherence tomography (OCT) findings of one patient with a large retinal capillary hemangioma (RCH) who was treated by indocyanine green (ICG)-mediated photothrombosis. **Design:** Interventional case report. **Methods:** One patient was treated with a new laser-dye procedure that uses low-irradiance 810 nm laser and intravenous ICG, and prospectively evaluated with fluorescein and ICG angiography as well as OCT. **Results:** Vision improved from 20/125 to 20/32+1 by one year of follow-up. Fundus photography showed marked reduction of the RCH of approximately 3 disc diameters. Both fluorescein and ICG angiography demonstrated reduced tumor perfusion and narrowing of the lesion feeder and draining vessels as early as 5 days after ICG-mediated photothrombosis. OCT disclosed immediate decrease in retinal elevation and a complete resolution of subretinal fluid within 2 months of treatment. Minimal laser-induced effects were noted in the vicinity of the tumor. **Conclusion:** Photothrombosis using low-intensity 810 nm light to direct laser energy continuously at the tumor after intravenous ICG infusion, is effective in restoring macular architecture and improving vision in a patient with a large peripheral RCH, by means of substantial occlusion of the tumor vasculature and resolution of subretinal fluid.