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Neovascular Ingrowth Site Photothrombosis in Choroidal Neovascularization Associated with Retinal Pigment Epithelial Detachment

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Purpose: To describe the clinical, angiographic and optical coherence tomography (OCT) findings of patients with choroidal neovascularization (CNV) associated with retinal pigment epithelial detachment (PED) who were treated by neovascular ingrowth site photothrombosis. Design: Interventional case reports. Methods: After identification of the CNV feeder vessels, two patients had focal photothrombosis of the neovascular ingrowth site using continuous 810 nm laser application after intravenous ICG injection, and were prospectively followed with fluorescein and indocyanine green angiography as well as OCT. Results: Both patients presented a =3-ETDRS-line increase in visual acuity by twelve months of follow-up. Fluorescein and ICG angiography demonstrated reduced lesion perfusion and regression of the PEDs; accordingly, OCT disclosed a decrease in retinal thickness and elevation from rapid fluid resorbsion. There was no significant complication related to the procedure. Conclusions: Photothrombosis using 810 nm light to direct laser energy continuously at the neovascular ingrowth site after intravenous ICG infusion is effective in restoring macular architecture and improving vision in patients with CNV complicated with PEDs. This method of treatment results in a substantial decrease in the perfusion of the lesion with resolution of the exudative manifestations.