( ) R1 ( ) R2 ( ) R3 ( ) PG0 ( ) PG1 (X) Estagiário ( ) Tecnólogo ( )
PIBIC Last Name - Calucci First Name - Daniela Middle -

Service (sector) Retina and Vitreous Nº CEP

Immediate Indocyanine Green Angiography and Optical Coherence Tomography Evaluation After Photodynamic Therapy of Subfoveal Choroidal Neovascularization

Daniela Calucci, COMT;1 Rogério A. Costa, MD;1 Michel E. Farah, MD;1 José A. Cardillo, MD;1 George A. Williams, MD.2 1 IPEPO – Instituto da Visão, Department of Ophthalmology, Federal University of São Paulo, Brazil. 2 Beaumont Eye Institute, Associated Retinal Consultants, Royal Oak, Michigan, United States of America.

Purpose: To better understand the mechanisms of action of photodynamic therapy (PDT) with verteporfin for the treatment of subfoveal choroidal neovascularization (CNV), we evaluated the retinal and choroidal response immediately after treatment with serial optical coherence tomography (OCT) and indocyanine green angiography (ICGA). Design: Prospective, non-comparative case series. Methods: PDT was performed in nine eyes of nine consecutive patients who presented with subfoveal CNV due to age related macular degeneration (AMD). Serial evaluation with OCT as well as ICGA was performed at twenty minute intervals for the first two hours, then at 1 week, 1 and 3 months. Results: In the first two hours after PDT, OCT demonstrated an increase in the thickness of the retina in the treatment area due to fluid leakage from the neovascular complex as confirmed by ICG angiography. At one week, a marked reduction of intraretinal/subretinal fluid was observed in all patients. Neovascular complex non-perfusion by ICG was associated with some degree of choroidal hypoperfusion in the treatment area. Return of the foveal contour by OCT was optimal after 1 month of the treatment. At three months reperfusion on ICGA and recurrent intraretinal/subretinal fluid on OCT was observed. Conclusion: Serial OCT and ICGA evaluation following PDT suggests that the initial successful CNV non-perfusion as demonstrated by fluorescein angiography at 1 week occurs by means of selective PDT damage to the lesion and/or reduced choroidal blood flow in the treatment area, thereby decreasing intraretinal/subretinal fluid and facilitating restoration of the retinal architecture.