NON-EXUDATIVE TOMOGRAPHIC MORPHOMETRIC CHANGES IN PATIENTS WITH NEOVASCULAR AGE-RELATED MACULAR DEGENERATION

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PURPOSE: To analyze the implications of non-exudative signs in the optical coherence tomography (OCT) in neovascular age-related macular degeneration (AMD). METHODS: Retrospective observational study of naïve neovascular AMD patients managed with intravitreal ranibizumab, and followed for at least 12 months. The number of intravitreal injections administered, the best corrected visual acuity (BCVA) evolution, and the central subfield thickness (CST) throughout the follow-up period were recorded. A detailed qualitative assessment of the OCT scans was also performed including the presence of onion sign, outer retinal pseudoswelling, intraretinal degenerative pseudocysts, subretinal clefts, outer retinal tubulations (ORT) and geographic atrophy (GA). The association of these changes with BCVA changes and the particular tomographic type of neovascular lesion were analyzed. RESULTS: A total number of 175 eyes of 157 patients (83 women; mean age 79.7±6.3 years) were included. Type 1 choroidal neovascularization (CNV) was found in 87 eyes (49.7%), type 2 CNV in 79 eyes (45.1%), and type 3 CNV in 14 eyes (8.0%). The onion sign was observed in 18 eyes (10.3%), and was preferably observed in type 3 CNV. Subretinal clefts were found in 13 eyes (7.4%) and associated with type 1 CNV. Pseudocysts were observed in 63 eyes (36.0%), whereas ORT were observed in 44 eyes (25.1%); both signs were most frequently associated with type 2 CNV. The outer pseudoswelling was evidenced in 53 eyes (30.3%), related or not to areas of GA that were found in 41 eyes (23.4%), and associated with type 2 and 3 CNV. BCVA significantly improved in patients showing the onion sign, subretinal clefts and pseudoswelling, whereas eyes with pseudocyst, ORT and GA did not show a significant improvement of the BCVA. CONCLUSIONS: The visual outcome in patients with neovascular AMD is directly related to the type of lesion and the presence of exudative signs. The present study suggest that the presence of non-exudative signs may also have a significant prognostic value in patients with neovascular AMD. FINANCIAL DISCLOSURE: No.