Observational Study

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ASSOCIATION BETWEEN THE VITREOMACULAR INTERFACE AND OPTICAL COHERENCE TOMOGRAPHY CHARACTERISTICS IN WET AGE-RELATED MACULAR DEGENERATION

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Abstract

Purpose: To study the effect of the vitreomacular interface on various wet age-related macular degeneration (AMD) characteristics including the size and type of choroidal neovascularization (CNV), choroidal thickness, and activity of the CNV.

Methods: This was a retrospective observational cross-sectional study. The study included 43 patients (51 eyes) with treatment-naive age-related macular degeneration. Twenty-six patients with wet AMD in one eye and dry AMD in the other eye were included in a paired-eye analysis. Patients underwent optical coherence tomography examination using Heidelberg Spectralis (spectral domain optical coherence tomography) at presentation to determine the type of CNV and the vitreomacular status. In addition, various parameters were measured including the choroidal thickness and horizontal width and vertical height measurements of the CNV.

Results: There was no correlation between the height, width, activity or type of the CNV, and the presence or absence of vitreomacular adhesion. The mean choroidal thickness (using enhanced depth imaging) in cases with vitreomacular adhesion was 272.57 μ m compared with 197.32 μ m in cases with no vitreomacular adhesion, a statistically significant difference (P = 0.003). In the paired-eye study (21 patients), there was no significant difference between the eyes with wet AMD and dry AMD with regard to vitreomacular status or the choroidal thickness. In a subgroup analysis, patients with Type 1 CNV had a significantly higher percentage of vitreomacular adhesion compared with the other eye with dry AMD (P = 0.034).

Conclusion: In conclusion, the vitreomacular interface does seem to be associated with an increased choroidal thickness in cases of wet AMD. Furthermore, the association between the vitreomacular interface and wet AMD is more significant for Type 1 CNV.