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CHOROIDAL VASCULARITY INDEX IN CENTRAL AND BRANCH RETINAL VEIN OCCLUSION

Oral

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Purpose:

To evaluate choroidal vascularity change in eyes with central and branch retinal vein occlusion (RVO)

Methods:

In this retrospective cross-sectional study, we reviewed the records of 47 patients with recent-onset, naïve, unilateral retinal vein occlusion. Enhanced-depth optical coherence tomography scans were binarized using the ImageJ software; luminal area (LA) and total choroidal area (TCA) were measured. The choroidal vascularity index (CVI) was calculated as the proportion of LA to TCA. Depending on the pattern of macular edema, eyes were classified as having no macular edema (nME), cystoid macular edema (CME), cystoid macular edema with serous retinal detachment (mixed).

Results:

CVI, TCA and LA were greater in eyes with RVO than in fellow, unaffected eyes. No difference was found between central and branch RVO except for central macular thickness (CMT). When compared with controls, eyes with CME presented a significant increase in subfoveal choroidal thickness, CMT, TCA, LA and CVI; eyes with mixed macular edema had greater CMT and CVI than contralateral eyes; no significant differences in any of the considered parameters were observed in eyes with nME.

Conclusions:

The results suggest that RVO alters the vascularity of the choroid that varies according to the type of macular edema.

