ANALYSIS OF THE MACULAR GANGLION CELL LAYER OF PATIENTS WITH VASCULAR LESIONS OF THE POSTERIOR VISUAL PATHWAY.

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Introduction:
Although previously thought that a lesion posterior to the lateral geniculate body did not result in optic atrophy, newer studies (especially concerning the analysis of the retinal nerve fiber layer thickness) have been hypothesizing the occurrence of a transneural retrograde degeneration (TRD). The purpose of this study was to determine if TRD consequent to vascular lesions in the posterior visual pathway could be detected by analysis of the macular retinal ganglion cell layer (GCL).

Methods:
Data from 12 patients with posterior visual pathway lesions from vascular etiology were analyzed. All patients were submitted to a complete ophthalmological evaluation. In addition, OCTOPUS® automated static perimetry and Heidelberg Spectral Domain® optical coherence tomography (OCT) analysis was made.

Results:
Macular GCL thicknesses were reduced in the temporal quadrants in the ipsilateral eye and in the nasal quadrants in the contralateral eye and the difference between homonym hemiretinas was found to be statistically significant (p<0.05). There was an association between thinning of the GLC and visual fields defect.

Conclusions:
TRD may play a role in the physiopathology of lesions of the posterior visual pathway. Macular GCL analysis may be used in the evaluation of these patients, with OCT being a potential newer method in these patients follow-up.