

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
PIBIC Last Name - Moura First Name - Frederico Middle - Castelo

Service (sector) Neuro-Ophthalmology - HCFMUSP N° CEP

EVALUATION OF RETINAL NERVE FIBER LAYER AND MACULAR THICKNESS MEASUREMENTS FOR DETECTION OF BAND ATROPHY OF THE OPTIC NERVE USING OPTICAL COHERENCE TOMOGRAPHY

Authors: Frederico Castelo Moura, Mário Luiz Ribeiro Monteiro –

FMUSP **PURPOSE:** To compare the ability of optical coherence tomography retinal nerve fiber layer (RNFL) and macular thickness parameters to differentiate between eyes with band atrophy of the optic nerve and eyes from normal controls.

METHODS: Twenty-one eyes from 17 consecutive patients with band atrophy (BA) of the optic nerve and permanent temporal hemianopia due to chiasmal compression, and 21 eyes from an age- and sex-matched control group of 17 healthy individuals were studied prospectively. All patients were submitted to an ophthalmic examination including perimetry and evaluation of macular and RNFL thickness using optical coherence tomography. Mean macular and RNFL thickness around the optic disc was compared between the two groups.

RESULTS: The peripapillary RNFL thickness (mean \pm SD) of eyes with band atrophy was significantly smaller in eyes with band atrophy when compared with normal controls in the superior, temporal, inferior and nasal quadrants as well as in the total RNFL average measurement. Analysis of macular thickness including macular volume, temporal, superior, nasal and inferior inner and outer segment was also significantly smaller in eyes with band atrophy when compared to normal controls. Area under the ROC curve indicated that both RNFL and macular thickness parameters showed good capacity of differentiation of eyes with BA and normal eyes.

CONCLUSIONS: OCT RNFL thickness and macular parameters were able to differentiate eyes with BA from normal eyes with every studied parameter. RNFL showed better sensitivity in identifying eyes with BA although macular thickness parameters also showed sensitivity and should be studied in patients with milder forms of visual loss.