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Service (sector) GlaucomaNº CEP

Influence of Blue Light Spectrum Filter on Short-Wavelength and Standard Automated Perimetries

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Purpose: To evaluate the influence of a blue light spectrum filter (BLSF), similar in light spectrum transmittance to the intraocular lens Acrysof Natural® on standard automated perimetry (SAP) and short-wavelength automated perimetry (SWAP).

Methods: Twenty eyes of twenty healthy individuals underwent a random sequence of four Humphrey visual field tests: SAP and SWAP with and without a BLSF. All patients had intraocular pressure lower than 21 mmHg, normal fundus biomicroscopy, and no lens opacity. Foveal threshold (FT), mean deviation (MD), and pattern standard deviation (PSD) indexes obtained from the visual field tests were analyzed.

Results: Reductions in the MD (mean, 3.31 dB; $p < 0.001$) and in the FT (mean, 2.85 dB; $p < 0.001$) for SWAP with the use of the BLSF in comparison to SWAP without the use of the BLSF were observed. All other parameters did not show statistically significant differences in SWAP and SAP tests.

Conclusion: It was observed reductions in MD and FT in the SWAP test with the use of the BLSF. Studies are necessary to determine the influence of intraocular lens with short-wavelength light filter after cataract extraction on SWAP.