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### **Correlations between Intraocular Pressure Reduction and Visual Function Changes in Glaucoma**

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**Purpose:** To evaluate the correlation between intraocular pressure (IOP) reductions and visual function exam alterations in primary open-angle glaucoma. **Methods:** Thirty patients (30 eyes) were prospectively enrolled in this study. Patients were included if they presented a best-corrected visual acuity of 20/100 or better, IOP > 21 mmHg, cup-to-disc ratio > 0.5, no significant media opacity or other ocular disease, and no use of antiglaucoma medication at the time of enrollment. After inclusion, the patients received one of three antiglaucoma drugs (timolol 0.5%, brimonidine 0.2% or travoprost 0.004%) in one randomly selected eye. The patients underwent Goldmann applanation tonometry, visual acuity and contrast sensitivity tests, visual quality perception (visual analogue scale), and standard automated perimetry before and after 4 weeks of glaucoma treatment. **Results:** Twenty-seven patients completed the study. Before treatment, the median IOP, visual acuity (log MAR), contrast sensitivity, visual quality perception and MD index were, respectively, 23 mmHg, 0.3, 19, 7 and -5.53 dB. After treatment, the medians of these exams were, respectively, 18 mmHg, 0.2, 19, 8 and -4.93 dB. Except IOP ( $P < 0.001$ ), there were no significant changes in the exams before and after treatment. There were no significant correlations between changes in IOP and visual function tests in glaucoma. There were significant correlations between changes in the contrast sensitivity and changes in both visual acuity ( $r = 0.39$ ,  $P = 0.04$ ) and visual quality perception ( $r = 0.44$ ,  $P = 0.02$ ). **Conclusions:** No significant correlations were found between reduction in IOP and visual function alterations in glaucoma.