

Comparison of Visual Field Tests in Glaucoma Patients with a Central Visual Field Defect

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Abstract : We compared the 24-2 and 10-2 visual fields (VFs) and investigate the degree of discrepancy between the two tests in glaucomatous eyes with central VF defects. In all, 99 eyes of 99 glaucoma patients who underwent both the 24-2 VF and 10-2 VF tests within 6 months were enrolled retrospectively. Glaucomatous eyes involving a central VF defect were divided into three groups based on the average total deviation (TD) of 12 central points in the 24-2 VF test (N = 33, in each group): group 1 (tercile with the highest TD), group 2 (intermediate TD), and group 3 (lowest TD). The TD difference was calculated by subtracting the average TD of the 10-2 VF test from the average TD of 12 central points in the 24-2 VF test. The absolute central TD difference in each quadrant was defined as the absolute value of the TD value obtained by subtracting the average TD of four central points in the 10-2 VF test from the innermost TD in the 24-2 VF test in each quadrant. The TD differences differed significantly between group 3 and groups 1 and 2 ($P < 0.001$). In the superonasal quadrant, the absolute central TD difference was significantly greater in group 2 than in group 1 ($P < 0.05$). In the superotemporal quadrant, the absolute central TD difference was significantly greater in group 3 than in groups 1 and 2 ($P < 0.001$). Our results indicate that the results of VF tests for different VFs can be inconsistent, depending on the degree of central defects and the VF quadrant.

Keywords : central visual field defect, glaucoma, 10-2 visual field, 24-2 visual field

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