Association of Quality of Life and Visual Function in Glaucoma with Tests of Structure and Function

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Précis:

In addition to standard automated perimetry tests, contrast sensitivity testing and macular analyses may predict changes in the quality of life in patients at different stages of glaucoma.

Purpose:

To examine the relationship between functional and structural tests of visual function and the 25-item National Eye Institute-Visual Function Questionnaire (NEI-VFQ-25) and the 36-item Short Form Health Survey (SF-36) in patients with different stages of glaucoma.

Materials and Methods:

Standard automated perimetry tests, optical coherence tomography scans, and contrast sensitivity (CS) testing were prospectively performed in 160 patients with glaucoma. The Hoddap–Parrish–Anderson staging system was used for glaucoma staging. Health-related quality of life questionnaires (NEI-VFQ-25, SF-36) were also administered to all patients.

Results:

The study group comprised 29 patients with suspected glaucoma, 104 with mild glaucoma, 15 with moderate glaucoma, and 12 with severe glaucoma. The mean total score of the NEI-VFQ-25 was 88.8±8.2. The SF-36 did not show a significant correlation with the data on functional and structural tests of visual function, whereas the NEI-VFQ-25 showed a low to moderate correlation (r=0.212–−0.492). Vision parameters can explain up to 18.6% of the total score of the NEI-VFQ-25. CS was the only function significantly correlated with glaucoma suspects, while in the early stages, VA was the strongest correlated function with the NEI-VFQ-25 total score (*P*=0.003 and r=0.551; *P*=0.001 and r=0.343, respectively). The impact of the visual field on vision-related quality of life increased in the advanced stages (*P*=0.013, r=0.688). The macular retinal ganglion cell plus inner plexiform layer thickness remained associated with NEI-VFQ-25 at all stages of glaucoma (r=0.335–0.802). The NEI-VFQ-25 total score and most of the subscales were correlated with the physical and mental component summary scores of the SF-36 (r=0.159–0.587).

Conclusion:

VA correlated the most with quality of life in glaucoma patients, as measured with the NEI-VFQ-25 to assess quality of life in glaucoma. The impact of visual functions on quality of life varies at different stages of glaucoma.