

# Correlations Between Subjective Evaluation of Quality of Life, Visual Field Loss, and Performance in Simulated Activities of Daily Living in Glaucoma Patients

Line Azoulay-Sebban (1) , Zhanlin Zhao (2,3) , Ariel Zenouda (1) , Marco Lombardi (1,4) , Emmanuel Gutman (1) , Emmanuelle Brasnu (4) , Pascale Hamard (4) , José-Alain Sahel (4,5) , Christophe Baudouin (4,5,6,7) , Antoine Labbé (4,5,6,7)

1 Streetlab, Institut de la Vision.

2 Department of Ophthalmology, Ninth People's Hospital, Shanghai JiaoTong University School of Medicine.

3 Shanghai Key Laboratory of Orbital Diseases and Ocular Oncology, Shanghai, China.

4 Quinze-Vingts National Ophthalmology Hospital, IHU FOReSIGHT, INSERM-DOS CIC 1423.

5 INSERM, U968; UPMC PARIS 06 University, UMR\_S968, Institut de la Vision; CNRS, UMR 7210; Quinze-Vingts National Ophthalmology Hospital, INSERM-DHOS CIC 503.

6 Department of Ophthalmology III, Quinze-Vingts National Ophthalmology Hospital, IHU FOReSIGHT.

7 Department of Ophthalmology, Ambroise Paré Hospital, AP-HP, Paris Saclay University, Paris, France.

**PRECIS:** Glaucoma patients displayed alterations in their quality of life (QoL) and their ability to perform activities of daily living. The visual field (VF) of the worse eye might serve as a good marker for QoL evaluation.

**PURPOSE:** The purpose of this study was to explore the correlations between VF defects, performance in simulated activities of daily living, and subjective evaluation of QoL in glaucoma patients.

**METHODS:** Thirty-two patients with glaucoma and 10 age-matched control subjects were included. All participants answered a QoL questionnaire and underwent an assessment of visual function including monocular and binocular best-corrected visual acuity, binocular contrast sensitivity test (LogCS) , and monocular and binocular VF. All subjects also carried out a series of simulated activities of daily living in a controlled environment.

**RESULTS:** Glaucoma patients had lower QoL scores compared with controls for the composite score, near and distance activities, social functioning, mental health, role difficulties, dependency, and color vision. With regard to performance in the simulated mobility task, the number of mobility incidents was higher for glaucoma patients than for control subjects. For the reaching and grasping tasks, the overall movement duration for small objects was significantly longer in glaucoma patients compared with controls. The VF mean deviation of the worse eye was correlated with most of the QoL subscores. Mobility incidents as well as the reaching and grasping task parameters were not significantly correlated with QoL scores.

**CONCLUSIONS:** Glaucoma patients showed an alteration of performance in simulated daily living activities, associated with a decreased QoL. There was no clear correlation between alterations in QoL and ability to perform activities of daily living. The QoL related to vision was mostly correlated to the visual function of the worse eye.

