DEEP IMPACT

How being diagnosed with glaucoma and coping with the disease affect patients' quality of life.

BY GEOFFREY T. EMERICK, MD

The initial diagnosis, subsequent treatment, and clinical course of glaucoma profoundly affect our patients' quality of life (QOL). As clinicians, it is our job to mitigate that impact. What we say and do can lighten the burden of the disease. Regardless of how we treat glaucoma, evidence suggests that we most positively influence QOL by successfully slowing or halting vision loss.

WHAT IS QOL?

QOL is a broad concept that includes a person's perception of well-being. In medicine, we focus on health-related QOL, and in ophthalmology, we concentrate more specifically on vision-related QOL. In research settings and increasingly in clinical practice, surveys are used to measure patients' perceptions of their condition and treatment. Many researchers use the National Eye Institute Visual Functioning Questionnaire (NEI VFQ-25), which includes questions on general health and vision, difficulty with activities, and responses to vision problems.

QOL IN GLAUCOMA RESEARCH

Glaucoma researchers quickly recognized the importance of including QOL outcomes along with traditional measures such as IOP, visual fields, and disc photographs. QOL surveys were incorporated into clinical trials beginning with the Collaborative Initial Glaucoma Treatment Study (CIGTS), and they have been a part of major research such as the Ocular Hypertension Treatment Study (OHTS), Early Manifest Glaucoma Trial (EMGT), and Tube Versus Trabeculectomy (TVT) study. Most of this research showed that QOL is more closely correlated with visual function than with treatment modality. Simply put, it matters less to patients whether they are treated with medications, lasers, or surgery than that they maintain vision.

Researchers determined early on that glaucomatous progression in the form of binocular visual field impairment[1] and a worse field in the better-seeing eye[2] is associated with a declining QOL by NEI VFQ-25 scores. Later studies found even stronger associations with central and inferior field defects.[3] Loss detected with 10-2 visual field tests, which may not be seen on 24-2 testing, is also a predictor of a disproportionately low QOL.[4]

Longitudinal studies have found that baseline severity along with the magnitude and rate of change in binocular visual fields is associated with a longitudinal change in QOL.[5] It makes sense that patients with a severe visual field defect will experience a greater decline in functional ability with further field loss than will those who start out with mild defects. Also, patients suffering a more rapid rate of field loss will experience a worse decline in NEI VFQ-25 scores. This may be because those experiencing a rapid decline have less time to adapt to the change in vision. Not surprisingly, structural changes, including

AT A GLANCE

- Quality of life suffers when glaucoma progresses.
- Patients care more about maintaining vision than about how their glaucoma is treated.
- Clinicians should look for medication side effects, ask about costs, and suggest strategies by which to improve visual functioning.

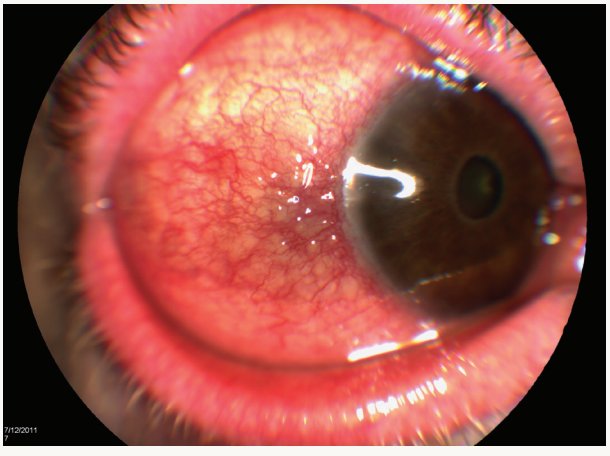

Figure 1. Brimonidine toxicity.

> "QOL is a broad concept that includes a person's perception of well-being."

progressive retinal nerve fiber layer thinning, are also associated with a worsening QOL.[6]

LIMITATIONS OF THE NEI VFQ-25

Although shown to be a valid, efficient, and reliable way to measure QOL, the NEI VFQ-25 may not fully reflect the test subject's concerns. Mogil et al explored this idea by administering a different questionnaire to patients with glaucoma.[7] The investigators found that patients' most common concerns were blurry vision (32%), reading small print (34%), medical costs (25%), and ocular dryness (32%). Glare was a concern for 15% of patients in the study.

Mogil and colleagues' findings will be immediately recognizable to all of us caring for patients with glaucoma, and we can often address these concerns through simple measures. Blurred vision, ocular itching, and ocular irritation from drop toxicity or allergy may respond to a switch in medications or a reduction through laser trabeculoplasty or surgery (Figure 1). Exposure to benzalkonium chloride can be decreased through the use of fixed-combination, alternatively preserved, or preservative-free medications. A patient's difficulty reading small print can be addressed with adequate magnification and the use of e-readers, which have built-in lighting, high contrast, and an adjustable font size. We can decrease the cost of treatment by prescribing lower-priced medications or reducing their number through surgery. Glare can be decreased with brown, amber, or yellow lenses (Figure 2); lighter tints can be used indoors, where overhead fluorescent lights can be especially bothersome.

Figure 2. Amber and yellow fitover lenses.

WATCH IT NOW

In this episode of Glaucoma Today Journal Club released in November 2014, Pradeep Yammanuru Ramulu, MD, PhD, discusses using quantifiable measurements to assess glaucoma patients' quality of life. Dr. Ramulu is now chief of the Glaucoma Division as well as an associate professor of ophthalmology at The John Hopkins Wilmer Eye Institute.

CONCLUSION

Multiple studies have presented strong evidence that structural and functional loss from glaucoma is associated with measurable declines in QOL. Patients who present with severe disease by visual field criteria need especially close attention. As physicians, we should recognize the impact that glaucoma has on our patients' lives and address their concerns. We should also continue to focus our efforts on preserving visual function. How we attain that goal is far less important than our reaching it always in partnership with the patient. ■

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