Quality of Life and Glaucoma Medications

Do our prescriptions make a difference?

BY GEOFFREY T. EMERICK, MD

A Google search for *quality of life* returns over 21 million results. Asking colleagues, patients, and friends to define the term yields many different answers as well. The multitude of definitions reflects the variety of ways individuals think about quality of life and what affects it positively or negatively. We all see patients who have advanced glaucoma and who manage not to let their visual impairment or medications interfere with their enjoyment of life. Other patients without visual symptoms worry about each change in IOP and struggle with multiple side effects or the inconvenience of a once-daily eye drop.

Glaucoma medications may influence an individual's quality of life in several ways. The daily use of medications, in general, reminds patients of their medical condition. More specifically, the glaucoma drops may be expensive or frustratingly difficult to instill. Patients may have local or systemic side effects that affect their enjoyment of life. They may worry whether they are properly using their drops and may be concerned that their vision will worsen despite treatment. Patients' dosing schedules may interfere with their other activities.

Fortunately, recent and ongoing glaucoma research includes quality of life in addition to the usual measurements of IOP, optic nerve damage, and visual field changes. This article describes some instruments used to measure quality of life, reveals some studies' surprising results, and suggests how you can better understand your patients' quality of life.

QUALITY-OF-LIFE QUESTIONNAIRES

Most evaluations of patient-reported outcomes rely on the use of questionnaires. Numerous quality-of-life instruments have been described and evaluated for many diseases.[1] Health-related quality-of-life questionnaires can be categorized according to their level of specificity (ie, generic or overall health, disease-specific, or medication-specific). Common examples of generic, health-related quality-of-life instruments include the Medical Outcomes Study 36-Item Short Form Health Survey[2] and the Sickness Impact Profile.[3] Visual quality-of-life instruments assess visual functioning related to the performance of tasks. Examples include the National Eye Institute—Visual Function Questionnaire,[4] the Glaucoma Symptom Scale,[5] the Glaucoma Quality of Life—15,[6] and the Glaucoma Disability Index.[7] Medication-tolerability instruments include the Comparison of Ophthalmic Medication for Tolerability[8] and the Treatment Satisfaction Survey for Intraocular Pressure.[9]

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RESEARCH ON MEDICATIONS' EFFECT ON QUALITY OF LIFE

Collaborative Initial Glaucoma Treatment Study

Evidence of links between medications and quality of life is present in the Collaborative Initial Glaucoma Treatment Study, which was one of the first large clinical trials in glaucoma to include quality of life as a primary outcome measure.[10,11] The Collaborative Initial Glaucoma Treatment Study investigators enrolled 607 newly diagnosed patients with glaucoma, who were randomly assigned to either initial medical therapy or trabeculectomy. Patients completed a Visual Activities Questionnaire,[12] the Sickness Impact Profile, and a Symptom and Health Problem Checklist.[13] The inter-

views took, on average, 48 minutes to administer, which is time that, unfortunately, we do not have in the office. As with most other studies of quality of life, the correlations between quality-of-life measures and visual impairment were relatively weak. Interestingly, there have been few overall differences in the two treatments' impact on quality of life. Perhaps even more surprising, the patients treated with surgery reported more bothersome localized eye symptoms than those on drops. Many of the medical patients used prostaglandin analogues and may have experienced fewer side effects than anticipated. Not surprisingly, reported symptoms decreased in both groups over time, likely due to patients' adaptation to and coping with the symptoms, rather than a decline in the symptoms themselves. These results show that most patients can cope with various treatments, including surgery and drops.

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Other Studies

Few other studies directly address the effects of glaucoma medications on quality of life using standard instruments. Balkrishnan et al[14] assessed quality of life via surveys mailed to Medicare patients. They found that the difficulty in using eye drops was strongly associated with a decreased quality of life as reported on a 25-question version of the Visual Functioning Questionnaire.[4] Other factors, including the complexity of the drug regimen, were not associated with quality of life. Simmons et al[7] used the Glaucoma Disability Index to examine the quality of life of patients taking beta-blockers who additionally received brimonidine or latanoprost. Few differences in quality of life were found.

In most other studies, quality of life is indirectly mentioned in the reporting of side effects. Importantly, we are seeing a greater use of patients' self-reported ocular side effects as outcome measures. After all, it is the patient's perceptions, not the investigator's, that influence their life. As clinicians, we are left to assess the impact of these side effects on individual patients.

CONCLUSION

I emphasize individual life situations, life possibilities, and health perceptions as major determinants of quality of life. It is important to listen to our patients and understand any difficulties they are having with their treatment (eg, local and systemic side effects, financial burden). We can infer that using fewer medications, less often, with fewer side effects can only have a positive impact on our patients' quality of life. By using effective medications or other treatments, we hope to avoid functionally significant vision loss, which will almost certainly have a negative effect on quality of life.

Patients are, for the most part, adaptable to change, whether it is coping with a new diagnosis of glaucoma or dealing with the purchase, administration, and side effects of eye drops. Our choice of medications may or may not have much direct effect on patients' overall quality of life, but, by listening to their complaints, we can have an impact on their perceptions and attitudes, and that can make a world of difference. ❑

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