

Determining Factors in Intensifying Glaucoma Management

Take the whole patient into account.

BY KELLY W. MUIR, MD, MHSc

The cover series of this edition of *Glaucoma Today* highlights useful strategies by which to determine if a patient is experiencing glaucomatous progression. When all of the arrows point in the same direction, the wealth of information provided by various diagnostic tests gives us confidence in our clinical decisions. Glaucoma and the people who suffer from it are complex, however, and we physicians must often make decisions when our informational arrows point up, down, and sideways.

THE WHOLE PICTURE

A core skill of every glaucoma doctor is the clinical assessment of the optic nerve. Whether we describe it in lengthy prose or in detailed drawings, we love to expound upon the status of the nerve. When asked to describe masked optic nerve photographs, however, even experienced glaucoma subspecialists demonstrate only modest interobserver agreement.¹ Intraobserver agreement is probably better,² but imaging usually supplements our clinical assessment of the optic nerve—for good reason! Spectral-domain optical coherence tomography (OCT) may demonstrate changes years before visual field defects are detected,³ but the sequence of earliest detectable change (OCT vs visual field) may vary depending on the imaging device and the stage of disease.⁴ Accordingly, in clinical practice, the determination of progression often depends not solely on the result of one test but on the company it keeps.

DOES PROGRESSION DEMAND THE ESCALATION OF THERAPY?

Do we always intensify therapy in the face of suspected glaucomatous progression? Do we sometimes escalate therapy when we have little evidence of

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progression? Even with the best testing available, all of us have faced cases in which we have little confidence in our ability to detect disease progression reliably. Examples include the developmentally disabled patient whose examination is limited without anesthesia and the patient with multiple ocular comorbidities such as retinitis pigmentosa or severe proliferative diabetic retinopathy. Likewise, each of us has faced a patient whose glaucoma we strongly suspect to be worsening but for whom we doubt escalating therapy is warranted. It is in these challenging situations that the risk-benefit assessment of more aggressive glaucoma management becomes exceedingly important.

THE WHOLE PATIENT

The American Academy of Ophthalmology's Preferred Practice Patterns for glaucoma remind us that a primary goal of treatment is to maintain patients' quality of life (QOL). Greater amounts of visual field loss from glaucoma are associated with worse vision-related QOL,⁵ but glaucoma treatment may also negatively affect a patient's overall QOL.^{6,7} The risk to QOL from starting to use one eye drop or of adding a second may be small, but the decision to escalate therapy is more complex when fewer conservative options remain.

Given the excellent QOL outcomes after cataract surgery even in individuals with advanced glaucoma,⁸ recommending phacoemulsification alone for patients needing only a minimal reduction in IOP often has a very favorable risk-benefit ratio. Performing concurrent trabeculectomy alters the risk-benefit analysis. Further complicating the scenario, most glaucoma patients are older and may have comorbid illness limiting their life expectancy. Such decisions would be easier if we had a crystal ball with which to see into the future, but of course, we can never know how long our patients will need their vision. Coleman and colleagues nicely demonstrated the effect of life expectancy adjustment on the risk of developing glaucoma in patients with ocular hypertension.⁹

Although we cannot predict the future, electronic health records increase our understanding of patients' overall health status such that we can make better-informed recommendations regarding the urgency of surgical intervention. Research observing patient-provider communication suggests that we do not engage in collaborative decision making with patients very often.¹⁰ Seeking out patients' medical history and discussing with them their options in light of their overall health and priorities is time-consuming but worthwhile. It is our patients, after all, who have to live with the consequences of our clinical decisions, whether the choice is to escalate therapy aggressively or not. ■

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