Refractive Correction and Glaucoma

The first in a two-part series focuses on refractive procedures for patients with glaucoma.

BY RICHARD A. LEWIS, MD

Our goal in treating patients with glaucoma is to preserve their visual acuity to the greatest extent possible. Historically, however, we have avoided discussing refractive correction with them and thus ignored a salient fact: our patients want to see well. They are excited about successful cataract surgery, not about achieving a decrease in their IOP. Despite little hard data on how to approach refractive correction in these individuals, the topic is worthy of discussion.

WHAT DO WE MEAN BY REFRACTIVE CORRECTION?

Refractive correction includes a wide range of treatment options. It is as commonplace as a prescription for glasses or contact lenses. It may also take the form of cataract surgery or refractive lens exchange with the implantation of a monofocal lens, a phakic IOL, an aspheric lens, or one of the new accommodating or multifocal IOLs. Additional surgical options include conductive keratoplasty, LASIK, Epi-LASIK, and PRK.

BENEFITS

The advantage of refractive correction is obvious: sharper vision. Although many glaucoma patients will be satisfied with spectacles or contact lenses, a lot of them wish for the clearer visual acuity that only surgical intervention can achieve. Moreover, certain occupations (eg, airline pilot) require better visual acuity than is possible with glasses or contact lenses in some cases.

Highly myopic patients with glaucoma who undergo cataract surgery or refractive lens exchange often have residual sphere or astigmatism postoperatively. LASIK may be an appropriate means of fine-tuning their visual outcome. Additionally, removing the crystalline lens from moderately-to-highly hyperopic eyes during cataract surgery or refractive lens exchange could actually help avoid angle-closure glaucoma as well as control IOP.

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Perhaps most important to consider is that, by discussing refractive correction with our patients, we are ensuring that they receive well-informed counsel about its compatibility with the management strategies for their glaucoma. Physicians who do not perform certain refractive procedures themselves can consider partnering with a refractive surgeon who will refer the patient back to them for continued management.

CONCERNS

Certainly, due to the risk of infection, contact lenses are not the best choice in patients who will soon undergo filtration surgery or who have a functioning bleb. The risk of an infected bleb, dysesthesia, and other ocular problems in patients wearing contact lenses after trabeculectomy warrants a discussion of alternative forms of refractive correction, including spectacles, excimer laser treatment, and cataract surgery. Of course, any surgical intervention also carries risks.

A possible objection to refractive surgery involving excimer laser ablation is that such procedures make interpreting the correct IOP challenging. Alternative devices such as the Pascal Dynamic Contour Tonometer (SMT Swiss Microtechnology AG, Port, Switzerland) do not solve the problem. The management of glaucoma

involves more than simply monitoring IOP, however. We also track the appearance of the optic nerve and perform visual field testing, neither of which is affected by laser ablation. Before and after refractive surgery, it is essential that patients with glaucoma undergo baseline visual field testing and imaging of their optic nerves. The new baseline is important for clinical follow-up. In certain circumstances, it can address the question of whether the refractive procedure contributed to visual loss.

CONCLUSION

To avoid the subject of refractive correction in patients with glaucoma is to ignore reality. Instead, we should recognize that they want to see well and take a proactive approach regarding their visual acuity. In doing so, we are ensuring the oversight of their total vision care by physicians well versed in glaucoma management, including establishing a new baseline IOP, visual field testing, and the assessment of the optic disc. Most important, however, is that these patients maintain a continuity of follow-up, something that may be lost in a busy refractive surgery practice. ❑

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