Achieving Success With Premium IOLs

Ergonomics, surgical technique, and the lens selected can drive down your premium IOL enhancement rates and send your satisfaction rates soaring.

BY KEITH A. WALTER, MD

Selecting appropriate candidates, educating them about IOL options, and managing their expectations are all an important part of achieving success with premium IOLs. Many surgeons, however, struggle to get beyond this advice to what really affects their premium IOL conversion rates: outcomes. This article offers four outcomes-centered strategies for triumph with premium IOLs.

No. 1. PREOPERATIVE PLANNING FOR ASTIGMATISM

Surgeons must not ignore preexisting or surgically induced astigmatism, because it can have a huge impact on visual outcomes with a multifocal IOL. I am comfortable addressing up to 2.00 D of corneal astigmatism with my incision and limbal relaxing incisions (LRIs). For greater amounts of cylinder, I usually encourage the patient to consider a toric IOL. At higher levels of astigmatism, a multifocal lens is still an option, but patients must be counseled carefully about their likely need for laser enhancement and the accompanying delay in reaching their final visual outcome.

Surgeons need to be mindful of the axis of astigmatism in every case, whether LRIs are planned or not. Those who habitually make their incisions in the same spot (ie, temporally) can turn a minor amount of with-the-rule astigmatism into visually significant astigmatism. Making the entry wound on the steep axis is a better approach.

No. 2. TIGHT CONTROL OF SURGICAL VARIABLES

Success in cataract surgery in general and especially with premium IOLs lies in performing every step precisely and predictably. I pay close attention to my ergonomic setup to ensure that the conditions are optimal for performing surgery.

I always check the bed's height to ensure that I can freely operate the foot pedals underneath. I want the patient's head to be stable and in a neutral position. If the head is tilted, it can be difficult for me to create a perfectly round capsulorhexis, and a tucked-in chin can make for awkward hand positioning over the brow. Paying close attention to the ergonomics not only helps me to be comfortable and relaxed during surgery, but it also helps me to operate the same way each time.

	n	Distance - corrected	FDA clinical trial VA	n	Uncorrected	FDA clinical trial VA
Distance	86	0.00 ± 0.07 (20/20)	-0.04 (20/18)	98	0.06 ± 0.113 (20/23)	0.04 (20/22)
Intermediate	86	0.15 ± 0.175 (20/28)	NA	96	0.18 ± 0.160 (20/30)	NA
Near	87	0.03 ± 0.097 (20/21)	0.06 (20/23)	96	0.05 ± 0.117 (20/22)	0.06 (20/23)

Figure 1. Tecnis Multifocal IOL registry trial mean binocular visual acuities.[1]

With premium IOLs, a 5.5-mm capsulorhexis that is perfectly round and centered over the visual axis is important. Femtosecond lasers may help achieve this consistency, but with conventional phacoemulsification, I find that Healon5 (Abbott Medical Optics Inc.) is an essential tool. This viscous ophthalmic viscoelastic device allows me to make a well-controlled capsulorhexis that never tears radially.

No. 3. LENS SELECTION

My personal choice of lens has evolved with experience. I started out using the Acrysof IQ Restor IOL +4.0 D (Alcon Laboratories, Inc.), then the +3.0 D. Although my patients were not unhappy with these lenses, their enthusiasm was subdued; it was almost like I had to talk them into being really happy.

About 18 months ago, I began implanting Tecnis Multifocal IOLs (Abbott Medical Optics Inc.) and noticed a significant difference in my patients' level of satisfaction after surgery. I do not see any difference compared with the Restor in the rate of night vision symptoms like glare

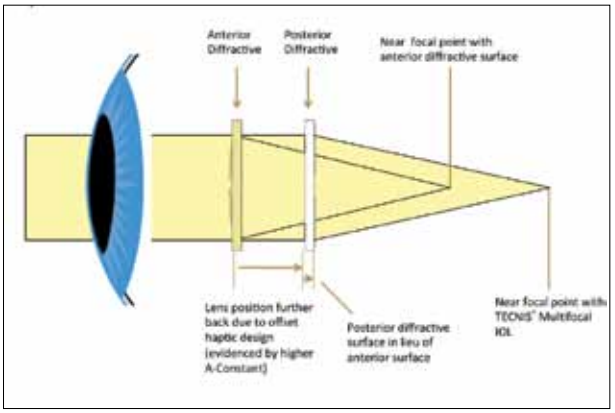

Figure 2. The effect of a lens' design on the near focal point: a comparison of two 4.00 D near-add multifocal IOLs (data on file with Abbott Medical Optics Inc.).

and halos (about 10% with all three multifocals), but my patients are ecstatic about their outcomes. They seem to have a better quality of vision overall, and specifically, they can read better in dim light. More importantly, my enhancement rate has dropped from about 20% with the AcrySof IQ Restor to less than 2% with the Tecnis Multifocal lens, as described later. According to real-world registry data, other surgeons are getting results that are just as good as or better than those in the clinical trial (Figure 1).

I believe that both the lens' material and design factors play into this change in enhancement rate. The material is free of glistenings, which reduce low-contrast acuity.[2] In addition, the clear optic blocks ultraviolet rays and allows the blue light that makes up about 30% of visible light to be transmitted to the retina.[3] More light enhances the quality of vision, especially after the first eye's surgery.

The fully aspheric anterior surface of the Tecnis makes it more tolerant of small amounts of residual refractive error,[4] reducing the need for enhancements. I think this is a better approach than putting the multifocal rings on the front surface of the IOL, where they disrupt the aspheric surface and are farther from the nodal point of the visual axis (Figure 2). The smaller apodized area of the AcrySof Restor means that patients lose some near effect when the pupil dilates beyond the rings in dim light. This may also be why poor centration or residual astigmatism seem to have a more negative impact on patients' vision with this IOL versus the Tecnis Multifocal lens.

No. 4. MAXIMIZE EARLY POSTOPERATIVE VISION

That "wow" factor that I like to see postoperatively hinges on patients' vision on day 1, not their final outcomes at 6 months. For this reason, I changed my approach to minimizing inflammation. I have patients use the nonsteroidal agent bromfenac (Prolensa; Bausch + Lomb) for 2 days preoperatively and once daily for 30 days postoperatively to prevent macular edema. I also use a soft-shell viscoelastic technique with Healon Endocoat (Abbott Medical Optics Inc.) to protect the endothelium and prevent corneal edema.

I now use methyl paraben-free lidocaine during surgery for more effective hydrodissection. In addition to its anesthetic effects, the lidocaine's slight toxicity to the lens epithelial cells and cortical fibers helps to clean the capsule. This can decrease the need for an Nd:YAG capsulotomy—or at least delay it until after the patient has fully adapted to the multifocal IOL's optics. In this way, if the patient is not 100% satisfied postoperatively, I know that the problem is the IOL's power or multifocal optics rather than capsular opacity. An early secondary cataract complicates decision making, because once a capsulotomy is performed, a lens exchange becomes much riskier.

CASE EXAMPLE

A 79-year-old patient of mine who has bilateral Tecnis Multifocal lenses is thrilled with the outcome of her surgery. She drives at night and functions beautifully without spectacles for the first time since elementary school. Not only is she the envy of her bridge club for her "youthful vision," but she also feels like she got a better deal than her presbyopic daughter who had LASIK around the same time, because the daughter needs reading glasses.

Many people say that young cataract patients are the best candidates for premium lenses. I find that healthy, mobile adults who are well into their 70s and 80s truly benefit from and appreciate having multifocal vision.

I have always been a believer in premium IOL technology. The strategies I have outlined for improving outcomes through precise surgery, lenses that reduce enhancements, and the effective management of inflammation and astigmatism have allowed multifocal IOLs to become very successful in my practice. ■

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