A Patient-Centered Counseling Framework

Explain dysfunctional lens syndrome, set expectations for presbyopia-correcting lens optics, and troubleshoot early dissatisfaction.

BY JASON E. STAHL, MD

When I counsel patients on refractive lens exchange (RLE), I describe it as a four-in-one procedure. With today's advanced technologies, we surgeons can correct patients' distance vision, we can correct their near vision, we can prevent cataracts so they will not need cataract surgery later, and we can stabilize what I consider the unstable part of the optical system—the crystalline lens. I explain that we are treating dysfunctional lens syndrome not only to improve patients' vision today but for the rest of their lives, and I describe RLE as the ultimate antiaging procedure.

Twenty-five years ago, it was difficult to explain to patients with presbyopia why a lens-based approach might be preferable to corneal refractive surgery. That gap largely reflected what was lacking: a dysfunctional lens syndrome framework, advanced lens implants, and diagnostics that could show patients what was changing in the crystalline lens and why a lens-based approach might be a better long-term strategy than LASIK in the presbyopic age group.

A SHARED FRAMEWORK: DYSFUNCTIONAL LENS SYNDROME

The term *dysfunctional lens syndrome* (DLS) helped bridge the aforementioned gap by framing aging of the crystalline lens as a spectrum rather than a binary cataract/no cataract diagnosis.

The DLS model breaks down as follows:

- Stage No. 1 is presbyopia—a loss of accommodation and "zoom";
- Stage No. 2 reflects the progressive degradation of optical quality, including early lenticular opacification and an increasing magnitude of higher-order aberrations that can reduce contrast sensitivity, dampen brightness, and alter color perception; and
- Stage No. 3 is a visually significant cataract that interferes with the activities of daily living.[1]

MAKING LENTICULAR CHANGES VISIBLE: OBJECTIVE DIAGNOSTICS

Objective diagnostics further improved patient education. For example, lens densitometry based on the Scheimpflug principle (eg, Pentacam HR densitometry [Oculus Optikgeräte]) helps to demonstrate light scatter and correlate the findings with those of a slit-lamp examination and the patient's clinical symptoms. In select patients, this information supports the rationale for a lens-based strategy rather than laser vision correction alone.

This distinction matters because many patients still use LASIK as a catchall term for vision correction. Unless they have done their research, most patients visit an ophthalmology practice thinking, "It's time for me to have my LASIK," now that they are presbyopic. As a result, much of RLE counseling is education—explaining their focusing issues, whether they have a refractive error, and the extent of age-related dysfunctional changes to the crystalline lens. The goal is to help them understand why a lens-based approach might be better for them than LASIK, particularly for long-term stability in the presbyopic age group.

PATIENT SELECTION AND COUNSELING

Patients who come in expecting LASIK may be surprised when RLE enters the discussion. I explain that RLE is basically the same procedure they would have if they were 75 years old and needed cataract surgery but that it is performed earlier to achieve their refractive goals.

I then describe what to expect on the day of surgery and during recovery. I tell them that, in most cases, the procedure takes less than 10 minutes and that we simply administer topical numbing drops and a little bit of diazepam, just as with LASIK, which helps calm most patients.

A consistent theme in counseling is education—reinforcing how the technology works, the range of vision we are trying to achieve, and the potential quality-of-vision issues, particularly at night.

IMPLANT STRATEGY

When addressing vision correction options, the conversation is based on ocular health. If the patient has healthy eyes from the cornea to the retina, I recommend what we call a *custom match*—using certain technology with its advantages in one eye and a different lens with different advantages in the other eye. The brain puts the information received from each eye together through cortical summation, which can provide an excellent overall range of vision. I do not walk patients through a menu of specific IOL models. Once I understand their wants and needs, I make a recommendation based on my experience.

Balancing Range of Vision With Image Quality

Any optical design that splits or redistributes light—whether a multifocal or an extended depth of focus IOL—can involve trade-offs in contrast sensitivity and dysphotopsias. A practical way to balance range with quality is to implant a multifocal (often a trifocal) IOL in one eye and an extended depth of focus or monofocal IOL in the fellow eye.

During counseling, I show defocus curves and explain how pairing technologies can help fill gaps in range of vision better than with a single approach while moderating night-vision symptoms for select patients.

Implanting multifocal IOLs bilaterally can provide recipients with strong near vision, but a meaningful subset of patients—particularly those with a history of laser vision correction—do not tolerate the associated trade-offs in image quality. Even patients who have no history of corneal surgery may be bothered by halos and glare, especially at night. I explain that I would rather preserve comfortable low-light function for them, even if that means they must depend somewhat on low-powered (eg, +1.00 D) readers for fine-detail near tasks.

Experience With Mix-and-Match Over Time

I have used a mix-and-match strategy since approximately 2005. Earlier in my experience, this sometimes meant pairing a multifocal IOL in one eye with an accommodating IOL in the fellow eye (eg, AcrySof IQ ReStor multifocal IOL [Alcon] and Crystalens accommodating IOL [Bausch + Lomb]). With the broader implant options currently available, the same principle applies: complementary optics can improve binocular function in appropriately selected patients.

Some surgeons worry that mixing optics will confuse patients or limit the ability of their brains to adapt, but that has not been my experience when realistic expectations are set preoperatively and modifiable contributors to dissatisfaction are addressed early.

NEURAL ADAPTATION AND TROUBLESHOOTING DISSATISFACTION

Patients' visual function continues to improve over time as neural adaptation progresses. When someone is dissatisfied during the first 1 to 3 months after surgery, it can be tempting to assume their brains will not adapt and to move quickly toward explanting the IOL.

In my experience, most patients do well if they are given enough time and encouragement and they have realistic expectations for how the technology works, their expected range of vision, and the possibility that they will experience quality-of-vision issues, particularly at night. Since my practice began implementing custom match, my patients have not struggled with long-term nighttime issues such as glare and halo.

Immediately Sequential Bilateral Surgery in Select Candidates

Another process improvement that has helped select candidates is the option of immediately sequential bilateral RLE and refractive cataract surgery. This approach can reduce the number of surgical and postoperative visits and may simplify their binocular recovery and neural adaptation when established safety protocols that treat surgery on each eye as a separate procedure are used. ■

1. Waring GO IV, Rocha KM. Characterization of the dysfunctional lens syndrome and a review of the literature. *Curr Ophthalmol Rep*. 2018;6(4):249-255.

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