

Achieving the Goals of Refractive Surgery

Correction always involves a compromise.

BY LEE T. NORDAN, MD



Approaching or achieving a goal requires defining it. Although defining the goals of refractive surgery may be difficult, the process is useful because these goals can be variable and individualized. Common aims include:

- correcting the patient's visual acuity to 20/20 or better, while preserving binocularity and not decreasing contrast sensitivity during either daytime or nighttime;
- correcting presbyopia, without compromising the patient's distance visual acuity;
- correcting anisometropia;
- providing the patient with adequate distance and near functional vision while both of his eyes are open; and
- providing the patient with adequate uncorrected distance vision.

In many cases, some compromise with respect to "perfect, normal visual function" will be necessary in order to achieve the refractive goal. This necessary compromise is what makes informed consent so important. The patient must have realistic expectations regarding his planned surgery.

KERATOREFRACTIVE VERSUS IOL SURGERY

Surgeons, too, must weigh the pros and cons of refractive procedures for various patients. For example, in my estimation, keratorefractive surgery is an excellent choice for correcting up to -4.00 D of myopia and +2.00 D of hyperopia, because the amount of aberrations induced is minimal and the quality of vision remains high. This surgical modality is useful but certainly not as successful for high myopia, high hyperopia, and presbyopia, because these patients' postoperative loss of contrast sensitivity is more noticeable.

The limitations of keratorefractive surgery have prompted surgeons to evaluate the role of IOLs for correcting ametropia. Although this surgical modality poses the risk of intraocular complications, most ophthalmic surgeons feel comfortable with cataract/IOL surgery, and the possi-

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bility of correcting presbyopia with a lens implant is a strong temptation for even the most conservative surgeons. I believe that the majority of surgeons would agree that correcting presbyopia with monovision is too limited an option to be considered a universally acceptable model, although this technique has aided many patients. Because IOLs can preserve binocularity for distance and near vision, the issue is one of compromise. In exchange for good reading vision, how much contrast sensitivity loss or lack of add will a patient accept? As patients age and their refractions change, keratorefractive surgery will allow necessary fine-tuning.

CHANGING ATTITUDES

Young ophthalmologists today are completing their training with refractive surgery experience, and, more importantly, they consider refractive surgery to be a routine treatment for patients' problems. The confluence of refractive surgery and cataract surgery is upon us, and the next 5 years should produce some exciting options for correcting refractive error and presbyopia. Risks deemed to be of great significance in the past now seem more acceptable as a result of changes in attitude and technology. With any form of refractive surgery, however, compromise will always be essential. The important questions are a compromise of what and how much? ■

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