

Patients Unhappy With Presbyopia-Correcting IOLs

Tips and tricks on how to handle these individuals.

BY ERIC D. DONNENFELD, MD

Most patients who receive presbyopia-correcting IOLs are extremely happy. You can take several steps, however, to increase postoperative success dramatically. The first is to set realistic expectations preoperatively. Before surgery, I discuss patients' common concerns, such as glare, halo, their quality of vision, residual refractive error, and the possible need for enhancements. I cannot overemphasize how important it is to have these discussions. When you tell a patient he may have glare and halo after he receives a multifocal IOL, he expects that to happen. I tell him it is going to get better or we can treat it. When you do not tell patients about glare and halos, these visual disturbances become complications. The patient grows defensive, as do you, and they believe you did something wrong. My advice is to tell your patients before surgery about things that they can commonly expect postoperatively.

ADDRESSING THE CAUSES OF UNHAPPINESS

We can effectively correct six different reasons why patients are unhappy with their presbyopia-correcting IOL. Number one is the implantation of a monocular IOL. I do not expect patients to be fully functional until the second IOL is placed in their fellow eye. I warn them about this lack of utility preoperatively. Bilateral implantation is critical to the success of the procedure, as is providing an adequate neuroadaptive period.

Other causes of suboptimal results are minimal refractive error, posterior capsular opacities, ocular surface disease, cystoid macular edema (CME), and an off-center IOL. When I see a patient with a multifocal IOL, I go through the list of possible complications he may be experiencing. When I have exhausted that list, then I

know I am out of options. By that point, however, approximately 99% of patients are happy (I have only explanted one of 400 presbyopia-correcting IOLs). In fact, most patients are ecstatic about their results.

REFRACTIVE MYTHS

Small Refractive Errors

A refractive legend regarding presbyopia-correcting IOL patients is that they will tolerate small refractive errors; this could not be more wrong. Presbyopia-correcting IOL patients are incredibly sensitive to small refractive errors, and you have to be willing and able to handle them. My rule for astigmatism is as follows: if a patient has greater than or equal to 0.50 D but less than 1.50 D of cylinder, I perform limbal relaxing incisions (LRIs). Surgeons who choose to implant presbyopia-correcting IOLs need to know how to perform LRIs. For patients who have more than 1.50 D of cylinder, I will also debulk the astigmatism with an LRI and then treat the residual cylinder with PRK or LASIK or refer them for laser refractive surgery. If a cataract surgeon does not perform excimer laser photoablation, then the patient can be referred for laser refractive surgery.

LASIK

Another refractive legend is that surgeons who implant presbyopia-correcting IOLs need to learn to perform LASIK. I disagree. You should learn to perform PRK, which is not too difficult; you can learn the procedure in an afternoon. If you want to learn LASIK later, you can, but start with PRK. Surface ablation is less stressful for you and the patient and often produces better outcomes. The epithelium is less adherent in older, presbyopic patients, so there are fewer problems of epithelial sloughing and basement membrane disease.

Neither must you learn to perform customized ablations. Conventional ablations are probably better for 90% of

patients receiving presbyopia-correcting IOLs. I treat 95% of my patients who have LASIK or PRK with customized ablations. I almost always perform conventional correction on patients who received presbyopia-correcting IOLs, however, because the aberrometer will not recognize the multifocal IOL accurately. I mark the cornea, scrape off the a 9-mm-diameter area of epithelium, wipe the bed very gently with a Weck-Cel sponge (Medtronic Xomed Ophthalmics, Inc., Minneapolis, MN), and then perform the ablation. I place a bandage contact lens on the eye and follow the patient until his epithelium heals. His vision should improve in approximately 4 days. In about 2 months, his vision is optimized. A skill necessary for PRK is the postoperative management of patients to ensure the epithelium heals well.

Nomograms

You do not have to learn nomograms for PRK after implanting multifocal IOLs, because you are dealing with treatments of 1.00 D or less most of the time. If you are off by 0.10 D, it does not make a difference. I aim for +0.10 D. If I end up with +0.20 D, that is fine. If I get a plano result, that is also OK. Do not attempt any nomogram adjustments for the patient's age or humidity.

Posterior Capsulotomy

I perform many more YAG laser procedures on patients who receive presbyopia-correcting IOLs than I have ever done in the past, because their eyes are incredibly sensitive. The loss of contrast sensitivity and the glare created by a multifocal IOL is made worse by any capsular opacity. I perform a large capsulotomy on these eyes. Once I open the posterior capsule, I perform an IOL exchange. For patients who are very unhappy with a presbyopia-correcting IOL, I explain, "If I open the posterior capsule, I will probably make your vision better, but, if I break it, you buy it." Once the posterior capsule is open, you have exposed the patient to a whole other level of complications, so I will

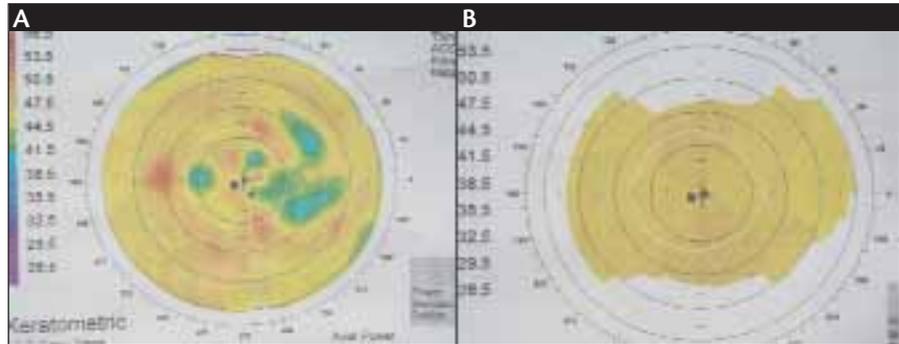


Figure 1. Topography before and after the use of topical cyclosporine 0.05% is shown.

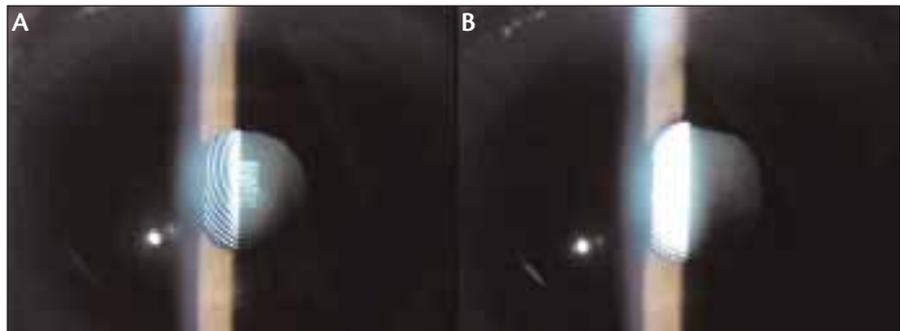


Figure 2. The IOL is not centered under the pupil (A), so the author performed an argon laser iridoplasty. The eye had this appearance after the procedure (B).

not remove a presbyopia-correcting IOL after a YAG capsulotomy. I inform patients of this policy prior to their capsulotomy.

CME

CME is incredibly important and common. Patients who have conventional cataract surgery with no risk factors and no capsular breakage have up to a 70% chance of developing macular thickening visible on ocular coherence tomography (OCT)¹ and a 12% chance of having visually significant CME if topical NSAIDs are not used perioperatively.² I prescribe Acular LS (Allergan, Inc., Irvine, CA) q.i.d. for 3 days preoperatively, and the therapy is continued for 3 to 4 weeks postoperatively. This treatment regimen is becoming the standard. Many studies in the literature state that you must use an NSAID.^{2,3}

The loss of contrast sensitivity associated with a multifocal IOL is worsened by CME.³ Once the normal architecture of the retina is lost, visual quality is degraded for life. Snellen visual acuity will improve, but contrast sensitivity will be permanently reduced.

The best way to look for CME after cataract surgery is with OCT. In addition, OCT is a very effective preoperative screening tool for foveal membranes, which will reduce quality of vision after cataract surgery.

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REFRACTIVE SURGERY IOLs

Dry Eye

Dry eye disease is common in older patients. Even a mild breakdown of the corneal epithelium reduces the tear film's ability to smooth out the ocular surface (Figure 1). A study my colleagues and I performing shows that eyes treated with cyclosporine had significantly improved mesopic and scotopic contrast sensitivity compared with eyes that received only an artificial tear. A more regular tear film and ocular surface improve quality of vision.

Centration of the Lens

If all other options have been exhausted, I look for the centration of the IOL beneath the pupil. The pupil and the center of the capsular bag often do not coincide, so the lens will appear to be decentered (Figure 2). In such cases, I perform an argon laser iridoplasty. I place four spots in the iris' midperiphery in the direction I want to pull the pupil. I use a power of 500 mW and a spot size of 500 μ m in diameter for a duration of 0.5 seconds. I perform the argon laser iridoplasty when a patient complains of glare and halos and when I am going to perform an excimer laser enhancement. I want to center the IOL on the pupil so my ablation is not off the visual axis or off the center of the lens.

CONCLUSION

There are many ways to improve the vision of patients with multifocal IOLs. Look at organic problems before saying that neuroadaptation is going to resolve all of your patient's visual complications. With attention to residual refractive error, the ocular surface, CME, the posterior capsule, and pupillary centration over the IOL, you can satisfy most patients who are unhappy after receiving presbyopia-correcting IOLs. ■

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