



STRATEGIES FOR RETAINING PATIENTS WITH PRESBYOPIA

It all comes down to informed consent.



BY ARTHUR B. CUMMINGS, MB CHB, FCS(SA), MMED(OPHTH), FRCS(EDIN)

In my mind, clinicians who do not educate their refractive surgery patients on presbyopia at the time of their initial surgical consultation miss the opportunity to build a lasting relationship that will potentially extend to the patients' future presbyopia-correction needs. I ensure that patients undergoing laser vision correction (LVC) with a target of emmetropia know that they can expect to enjoy good distance vision for a long time—I hope for a lifetime or until cataracts develop. I also tell them, however, that in their mid-40s they will likely start to require reading glasses. In this subtle way, I introduce the concept of presbyopia to patients seeking LVC.

At the time of the consultation, I mention to patients that the thickness of their corneas permits future presbyopia treatment. I explain that the surgery is performed in the peripheral cornea and that they should be candidates for a blended vision approach.

I view the LVC consultation as an

opportunity to make patients aware of presbyopia while the condition is in their distant future. When they develop presbyopia, they are less likely to think that their LASIK procedure failed or wore off and more likely to understand that they are experiencing a normal aging process. They are thus also more likely to return to my clinic to discuss their options for presbyopia correction.

FOCUS ON THE PATIENT MINDSET

The presbyopia market is expanding; it represents the fastest-growing patient demographic in my practice. Many individuals with presbyopia have already undergone refractive surgery, and the experience reduced their fear of ocular surgery. They have enjoyed the benefits of LVC and feel little to no hesitation about paying for improved vision. Further, they also often have more disposable income in middle age than when they were younger, positioning them to act on their desire for improved vision. An essential part of

caring for and educating this population is understanding their mindset.

► **Aesthetics.** Many refractive surgeons, myself included, get upset when vision correction surgery is referred to as *cosmetic surgery*. We know that vision correction surgery changes lives and empowers patients—it is so much more than a cosmetic procedure. Cosmesis and aesthetics, however, are factors in patients' decisions to undergo treatment for presbyopia. Few visual clues suggest middle age more than reading glasses and grey hair. For many individuals, the prospect of getting rid of their reading glasses motivates them, even subconsciously, to undergo surgery.

► **Safety.** It has been well documented that wearing varifocal glasses while walking increases people's risk of falling and injuring themselves.¹⁻⁵ The cost of these injuries (typically to the hip, knee, or head) is a staggering \$50 billion annually in the United States, and that figure is expected to increase.⁶ To put this into perspective, the entire

US surgical ophthalmology industry accounts for approximately \$6.3 billion annually.⁷ If presbyopia treatment can free patients from varifocal glasses, it can increase their safety. This is information worth sharing with them.

► **A pharmacologic option.** Presbyopia drops are not yet available in Europe, where I practice, but the first of these products (pilocarpine HCL ophthalmic solution [Vuity, Allergan]) is available in the United States. I am conducting a personal trial of 0.5% pilocarpine (Spersacarpin, OmniVision) for presbyopia, an off-label use of this topical glaucoma medication.

I underwent blended vision using LASIK more than 10 years ago with a target of emmetropia in my distance eye and -1.50 D in my reading eye. Over time, my refraction has drifted by 0.50 D in each eye, to 0.50 D in the distance eye and -1.00 D in the reading eye. Reading small print has become more difficult in certain circumstances. Administering 0.5% pilocarpine in both eyes has improved my vision at distance and near and given me insight into how presbyopia drops can fit into my offerings. I believe that the marketing and use of these products will increase public awareness of both presbyopia and the ability to treat the condition without spectacles. Some patients will continue with pharmacologic treatment, but I expect that many will want a more permanent solution, which will drive them through the doors of refractive surgery clinics.

INDIVIDUALIZE YOUR APPROACH

The surgical options available to patients with presbyopia are expanding. They include laser treatment (eg, blended vision) and an array of IOLs, whether the same or different technologies are implanted in the patient's eyes. The use of synthetic intrastromal corneal inlays has waned, but I expect a resurgence in the popularity of this form of correction when allograft corneal inlays become available.

► **Blended vision with LVC.** Patients in their mid-40s who have chosen to

“It has been well documented that wearing varifocal glasses while walking increases people's risk of falling and injuring themselves. The cost of these injuries (typically to the hip, knee, or head) is a staggering \$50 billion annually in the United States, and that figure is expected to increase. ... If presbyopia treatment can free patients from varifocal glasses, it can increase their safety. This is information worth sharing with them.”



undergo blended vision with LASIK should be informed of their potential future need for surgery on the eye targeted for near. For those with good distance vision, their desired result can often be achieved by treating only one eye by means of blended vision or an allograft corneal inlay.

► **Lens-based surgery.** If IOL surgery is a patient's best option, it is important to explain that the procedure renders the eye absolutely presbyopic. Even a 60-year-old person has residual accommodation, whereas a rigid IOL has none.

Some surgeons implant a trifocal IOL in the nondominant eye only, and this strategy has worked well for me. Other surgeons implant trifocal IOLs bilaterally for an emmetropic patient with presbyopia. I tend to avoid this approach because I find the gain in near vision does not outweigh the risks and cost of the procedures.

Perhaps the most important point regarding presbyopia correction is that no single solution is right for everyone. Patients' age, needs, ocular anatomy, and refractive prescription influence the decision on which procedure is most appropriate. I have been using the Vivior Visual Behavior Monitor (Vivior) for several years and find the technology provides invaluable assistance when deciding between different IOLs, mix-and-match options, or refractive targets for a blended vision approach.

CONCLUSION

Presbyopia management is a growing sector in refractive surgery. Retaining and satisfying patients with presbyopia comes

down to informed consent and delighting them with the prospects of spectacle independence, a more aesthetic appeal, and a lower risk of injury associated with varifocal glasses use. The segment of the population that seeks refractive correction can afford surgery more easily than their younger counterparts. It therefore is in our best interest to educate them on the disease and its management even before they require treatment.

Whatever presbyopia treatment they receive, patients should have reasonable expectations regarding its longevity. We surgeons provide excellent care by helping them to address their visual needs for a lifetime. ■

1. Lord SR, Dayhew J, Howland A. Multifocal glasses impair edge-contrast sensitivity and depth perception and increase the risk of falls in older people. *J Am Geriatr Soc.* 2002;50(11):1760-1766.

2. Parkkari J, Kannus P, Palvanen M, et al. Majority of hip fractures occur as a result of a fall and impact on the greater trochanter of the femur: a prospective controlled hip fracture study with 206 consecutive patients. *Calcif Tissue Int.* 1999;65:183-187.

3. Scott V, Pearce M, Pengelly C. Technical report: hospitalizations due to falls among Canadians age 65 and over: an analysis of data from the discharge abstract database as presented in: Report on Seniors' Falls in Canada (Section 2.2). Accessed January 27, 2020. www.phac-aspc.gc.ca/seniors-aines/alt-formats/pdf/publications/pro/injury-blessure/seniors_falls/technical-report-hospitalizations_e.pdf

4. Falls facts and figures. Regional Geriatric Program of Eastern Ontario. Accessed January 27, 2020. www.rgpeo.com/media/57625/falls_facts_and_figures_oct_29.pdf

5. Falls are leading cause of injury and death in older Americans [press release]. Centers for Disease Control and Prevention. September 22, 2016. Accessed January 27, 2020. www.cdc.gov/media/releases/2016/p0922-older-adult-falls.html

6. Falls prevention facts. National Council on Aging. Accessed January 27, 2020. <https://www.ncoa.org/news/resources-for-reporters/get-the-facts/falls-prevention-facts>

7. Statista website. Value of U.S. ophthalmology market from 2009 to 2014 (in billion U.S. dollars). Accessed February 24, 2020. <https://www.statista.com/statistics/445654/us-ophthalmology-market-size>

ARTHUR B. CUMMINGS, MB CHB, FCS(SA), MMED(OPHTH), FRCS(EDIN)

- Consultant Ophthalmologist, Wellington Eye Clinic, Dublin, Ireland
- Chief Medical Editor, *CRST Europe*
- Member, *CRST International Advisory Board*
- abc@wellingtoneyeclinic.com
- Financial disclosure: Board of Directors (Alcon); Medical advisory board (Alcon, Vivior, WaveLight)