

PRESBYOPIA CORRECTION:

Expanding the Market

A roundtable
discussion.*

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CURRENT LANDSCAPE

George O. Waring IV, MD, FACS: Globally, an estimated 1.8 billion individuals are affected by presbyopia.¹ The symptoms of this condition, which many of our patients say happens to them practically overnight, can be frustrating to patients and to us clinicians (see *Near Vision Frustrations* on the next page). Figuring out how best to help these patients can be exasperating.

There is, however, a huge opportunity in front of us to expand the presbyopia-correction market. The number of affected individuals is projected to grow exponentially in the next 10 years. The oldest members of the millennial generation—the largest generation in history with 72 million individuals versus 70 million baby boomers—are turning 40 this year.

We have all participated in clinical studies of presbyopia-correcting solutions. Research in this area has exploded in the past year, especially with the potential approval of certain eye drops for presbyopia correction (see *First Presbyopia Eye Drop Approved by the US FDA*, pg 55). According to data from Market Scope, the availability of this new presbyopia treatment modality could result in a 5% increase in the number of patients with presbyopia seen by eye doctors every year. I'm excited to learn from the panelists about their personal practice patterns for presbyopia correction and the opportunities they see in the modern management of presbyopia. So, the loaded question: Do you like treating presbyopia? Dr. Dell, let's start with you.

Steven J. Dell, MD: Absolutely. The data you reference are fascinating. The only presbyopia correction many individuals pursue is going to the drugstore and buying reading glasses. They don't even go to the eye doctor. This affects us as LASIK surgeons. As the fashionability of spectacles goes up, LASIK volume plummets. As the fashionability of spectacles goes down, our business explodes. If we could get more people

into doctors' offices talking about presbyopia, it could translate into more presbyopia-correcting surgery. I think it benefits us to see this pharmaceutical component of the market get established and grow.

Neda Shamie, MD: Treating patients with presbyopia is a value add in our practice. When you can maintain a relationship with these patients, they will stay with you for refractive lens exchange (RLE) or cataract surgery when you reiterate to them over time that you will work together to keep them out of glasses.

Stephen G. Slade, MD, FACS: I agree. You don't want to lose patients with presbyopia to your competitors or to ODs, but what presbyopia-correction surgeries are you going to treat them with? What do we have to offer beyond drops?

Dr. Shamie: I think that's exactly where we're stuck. For the true presbyopes, we have great options. It becomes trickier to recommend a specific surgical procedure for patients experiencing early signs of presbyopia.

Dr. Slade: I'm in favor of any sort of bridge procedure because I don't want to catch and release patients. LASIK is great for younger people, and combining cataract surgery with presbyopia correction is great for older people. But some of these patients don't return to your practice. Introducing eye drops for presbyopia correction could help to keep the younger LASIK patients in my practice until they need cataract surgery. I'd love to have that as a third option.

Dr. Dell: Exactly. Eye drops could get them in the door. The biggest source of presbyopia correction for most of us is the LASIK patients we treated 20 years ago. Their brain's registered, "Oh, I can get this issue fixed," and they remember that when it comes time to get their

next problem fixed. If they had a great experience with their LASIK procedure, they are already plugged into your practice and will return for their next treatment desire. I think the same thing will happen if they get plugged into the optometric system. Now, they're in the network. They're in our universe. Eventually, they're going to have RLE.

William F. Wiley, MD: Presbyopia drops will also increase the value proposition of LASIK and RLE. Monovision works for some patients, but for the 50-year-old who has a refractive error of -2.00 D in both eyes, a presbyopic drop could extend the value of those procedures. A lot of these patients right now are not interested in LASIK or RLE because they will need reading glasses. If, however, you can demonstrate with contact lenses and administering a presbyopia eye drop that they will see better at both distance and near, they may become interested in surgery.

Dr. Shamie: It's the same for the latent hyperope.

Dr. Wiley: For LASIK patients who come back years later and say, "My LASIK wore off. I'm wearing glasses now," you might not feel so pressured into doing a LASIK enhancement or an RLE.

Dr. Shamie: Presbyopia eye drops would be perfect for 40-year-olds who are a little presbyopic and are hesitant to undergo surgery. "Should I, or should I not? My friend had it done, and they have to use reading glasses." For those patients, I now confidently recommend LASIK. I say, "Don't worry about it. By the time you are truly presbyopic, there will be an eye drop available to help with your reading vision."

We're seeing more of these patients right now with the current pandemic. Frustrations with masking are causing them to finally come in, or they have the financial means for surgery now. Previously, these patients would probably be scared away if they were

told they'll need reading glasses in a few years. Now, however, they are more interested in the idea once they hear about the forthcoming availability of presbyopia drops. I am more confident offering LASIK to this population now knowing these are coming.

FURTHERING THE MISSION

Robert K. Maloney, MD: I love the idea of a product that gets people used to the thought that they shouldn't wear glasses at all. Right now, we have a product (ie, refractive surgery) for young people to get rid of their glasses, but we don't have a product for middle-aged patients. We've trained a whole generation of young people that they should never wear reading or distance glasses. An eye drop can further our mission. That's appealing.

There is a hyperopic shift that occurs between the ages of 50 and 60. Post-LASIK patients of this age often complain of worsening reading vision. Even if a presbyopia eye drop doesn't improve reading vision, it should moderate the hyperopic shift. If patients can tolerate drops for about 5 years, then we can do RLE.

Sheri Rowen, MD, FACS: A decrease in pupil aperture could help everybody we're talking about—LASIK patients who are becoming hyperopic and pseudophakic patients who desire an increased depth of focus.

Dr. Shamie: It's also good for cataract patients who do not elect a presbyopia-correcting IOL and are willing to wear reading glasses during the week but not on the weekends when they are active. The fact that the effects of the eye drops are temporary and can be used to modulate your lifestyle will be a real selling point.

Dr. Dell: How long does it take to work?

Dr. Waring: Within 15 minutes. Drops will be dosed once daily in the morning.

Dr. Dell: This could become a blockbuster product in ophthalmology and optometry. Patients win because they can see better, the companies win because of the large profit margin, and we win because it gives us additional revenue.

Dr. Rowen: Once companies can market presbyopia eye drops, it will hit home in a big way for many people. Let's hope the marketing campaigns include the language "ask your eye care provider" because that will be how people learn to access these drugs.

Dr. Dell: It could be a gateway for patients to get into your practice. Even if you can't sell the drops in your practice, you can bundle them with a near vision evaluation. It then brings patients in the door who might otherwise never be introduced to your practice.

Dr. Shamie: Once they're in, you can educate them on how the drops can be complementary to other procedures such as LASIK, for instance.

Dr. Maloney: I think the drops work as a complement to a refractive procedure, but it's going to be hard to persuade patients who come in for an eye drop on doing a procedure instead.

PRACTICE PATTERNS

Dr. Waring: Let's talk about plano presbyopes, whether they've had LASIK or not, who do make it back to your practice. What's your treatment of choice right now?

Dr. Wiley: These are tough patients. I'd recommend reading glasses. I'd say, "I'd love to do surgery, but it may not be the best option for you right now."

Dr. Rowen: In addition to reading glasses, monovision contact lenses, and LASIK, we can offer a lens-based procedure. I talk to these patients about multifocality, and sometimes I wind up implanting an extended depth of focus lens. I have also done contact lens trials in these patients to see how they do with bifocals or progressives. Patients appreciate that I don't jump in with something when it might not be the right thing for them, and they come back and are eager to try a nonsurgical procedure.

Dr. Shamie: True plano presbyopes with 20/15 or 20/20 at distance are tough patients to treat. I'd

NEAR VISION FRUSTRATIONS

Survey results from 1,000 US adults (age range, 40-55 years) with near vision issues*

- 53% Difficulty seeing things up close made them feel old
- ~33% Buying reading glasses to help with blurry near vision made them feel older than having graying hair
- ~50% Decreased or ceased hobbies or activities, including reading, sewing, knitting, and doing puzzles, because of difficulty seeing things clearly up close
- 84% Having blurry near vision made reading more frustrating than having a video call freeze

*Source: Wakefield Research. Study commissioned by Allergan, an AbbVie company

FIRST PRESBYOPIA EYE DROP APPROVED BY THE US FDA

In late October, Allergan announced the US FDA approval of Vuity (pilocarpine HCl ophthalmic solution 1.25%) for the treatment of presbyopia in adults. At press time, it is the first and only eye drop approved by the US FDA to treat presbyopia.

Vuity is an optimized formulation of pilocarpine delivered with pHast technology, which reportedly allows Vuity to rapidly adjust to the physiologic pH of the tear film. Vuity uses the eye's own ability to reduce pupil size, improving near vision without affecting distance vision. This daily, prescription eye drop works as quickly as 15 minutes after instillation, and the effect lasts up to 6 hours, as measured on day 30, to improve near and intermediate vision without affecting distance vision, according to the company.

The US FDA approval of Vuity was based on data from two pivotal phase 3 clinical studies, GEMINI 1 and GEMINI 2, which evaluated the efficacy, safety, and tolerability of the agent for the treatment of presbyopia in 750 patients aged 40 to 55 years old. In both studies, Vuity met the study's primary endpoint, which was a statistically significant improvement in near vision in mesopic conditions without a loss of distance vision versus the vehicle (placebo) on day 30 at hour 3. No serious adverse events were observed in participants receiving Vuity in either the GEMINI 1 or the GEMINI 2 study. The adverse events occurring at a frequency of more than 5% were headache and eye redness.

probably talk to them about monovision, do a contact lens trial, and consider LASIK if it's minor monovision. If they have lenticular changes and their visual acuity is less than 20/20, then I prefer a lens-based procedure. Now, I tell some of these patients that there's no real new option for them at present but that a drop is coming. I tell them, "Let's put you on the list."

Dr. Dell: More typically, patients come in, and they see 20/30 or 20/40 at distance. They may have a low refractive error. Maybe they're not even wearing spectacles, but they're squinting to see. In these cases, I offer RLE with no hesitation. Sometimes, I'll do the nondominant eye to see how they like it. If they like it, then I do the other eye.

Dr. Slade: Patients like this require a lot of chair time. We offer LASIK or PRK monovision for select patients. We, however, are moving more to lens-based procedures. Trifocal IOLs and the Light Adjustable Lens (RxLAL) are just so good. I would love to be able to offer a true accommodating IOL, but I do not see one in the immediate future. Drops to keep them in the practice will be a huge asset.

Dr. Maloney: For the plano presbyope who is not postrefractive surgery status, I'll do monovision LASIK.

Dr. Dell: I would much rather put a hyperopic patient on eye drops until they're ready for an RLE.

Dr. Waring: I'm amazed that everyone seems to have a slightly different approach, from no surgery to laser to lens-based. I have moved completely to lens-based procedures for presbyopia. I'm even doing it for prepresbyopes now.

Dr. Shamie: When you think about the opportunity for gateway treatments such as presbyopia-correcting drops, there's an obvious need to fill the gap for middle-aged presbyopic patients.

THE FUTURE OF PRESBYOPIA CORRECTION

Dr. Waring: Let's predict the future. What are we going to be doing differently in 10 years for presbyopia in our practices?

Dr. Rowen: I would hope that we will be implanting accommodating lenses.

Dr. Dell: I think some patients will be on pharmaceuticals. We'll be doing a lot of RLE procedures, and I hope that we'll finally have a way to address floaters nonsurgically because the vitreous is becoming one of the weakest links of the optical chain.

Dr. Shamie: I hope we will have more customized treatments for patients and lenses that can be adjusted according to the refractive outcome and the patient's needs.

Dr. Slade: I think I'll be doing more lens-based surgery. I would hope that, in 10 years, we will have a surgical simulator that helps us to show patients how a variety of lenses would function for them. I don't think we will be doing accommodating IOLs. Lastly, I'd love to have a pharmaceutical as a bridge method to keep patients in the practice or in the network's practice.

Dr. Maloney: I agree with Dr. Slade. I don't see accommodating lenses being approved in the next 10 years. My biggest issues with lens-based surgery are negative dysphotopsias and refractive inaccuracy. I think both of those are going to be better in 10 years, so I predict I will do more lens-based surgery in older people in the future. What I was doing 10 years ago isn't radically different from what I'm doing now, and I predict the same for the next 10 years. Our field changes incrementally.

Dr. Waring: Presbyopia treatments have great potential to expand the market. It's encouraging to hear the diversity of how we're dealing with this condition. We have a lot of tools in our armamentarium, and we all hope that presbyopia eye drops will be another we can rely on in the future. ■

1. Fricke TR, Tahhan N, Resnikoff S, Papas E, et al. Global prevalence of presbyopia and vision impairment from uncorrected presbyopia. *Ophthalmology*. 2018;125(10):1-8.