Is the crystalens right for your practice?

An experienced surgeon offers tips on patient selection, patient counseling and target vision.

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Now that the Centers for Medicare and Medicaid Services has ruled to allow Medicare beneficiaries access to presbyopia-correcting IOLs, many practices are considering adding the eyeonics crystalens to their surgical offerings.

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The crystalens has the potential to benefit nearly every surgeon. For those performing primarily cataract surgery, the crystalens becomes an "upgrade" option for younger, more active patients who want the best vision money can buy. For practices performing LASIK, it offers a valuable alternative for hyperopes who are beyond the range of monovision laser correction and for older patients with the beginnings of lens opacity. In either case, practices that can successfully implement the crystalens can enjoy patients who rave about their surgical results and a pleasing new source of profit.

Satisfying patients with the crystalens, though, depends on a willingness to meet more stringent patient expectations than we face with conventional cataract surgery. Whether to begin using the lens and how to implement it may depend on a number of factors unique to each practitioner, and a bit of honest introspection is worthwhile before starting.

As with most new procedures, the essential elements of success with the crystalens are proper patient selection, counseling to establish realistic expectations, accurate surgical outcomes and careful postoperative surveillance for rare but difficult complications that are specific to this procedure.

Choosing your first patients

In choosing your first patients for crystalens surgery, consider personality first. Those with a positive outlook and a flexible disposition have the easiest time during the first few weeks or months when accommodation may be slow to develop. They will also be easiest to work with in the rare event that their postoperative spherical equivalent refraction is off and further procedures are necessary, such as IOL exchange, "piggybacking" or excimer laser adjustment.

Monovision soft contact lens wearers usually make a good choice for these first cases because they tend to be highly visually adaptable. However, in the near term, these patients will be giving up their unaided near vision, so it may be worthwhile to target a bit more myopia in the nondominant eye (–0.75 D instead of –0.5 D).

Achieving accurate outcomes is also easier in patients who have never had refractive surgery and those who have little or no keratometric astigmatism. Patients with little or no keratometric astigmatism have one less variable to control because they will not require limbal relaxing incisions (LRIs) at the time of surgery. Also, hyperopes are good choices for early cases because with any lens implant they generally enjoy an immediate, significant improvement in both uncorrected distance and near vision.

In your early experience with the crystalens, try to avoid young patients with emmetropia or mixed astigmatism who have minimal lens opacity and highly demanding or precise personalities.

Patient counseling is key

In counseling patients, be enthusiastic and positive about results. Try not to oversell the benefits of "near, far and everything in-between without glasses." Patients must understand that their new accommodation skills may take a few months to develop and that many patients may continue to need part-time corrective lenses for prolonged reading or night-driving. Those who have hobbies that require fine detail vision at close range, such as needlepoint or tying fly-fishing lures, need to understand that readers will still be necessary for these activities.

It is also helpful to prepare patients for the mild degree of anisometropia that results from a target refraction of plano in the dominant eye and –0.5 D of myopia in the nondominant eye. A good way to explain this is to say that one eye will give them "near, intermediate and a little bit of far vision" while the other will give "far, intermediate and a little bit of near vision." Most patients have no difficulty adapting to this "minimal monovision," but this little bit of explanation seems to help them prepare.

Finally, patients need to know that rare refractive surprises do occur with the crystalens, and these may require further surgery such as LASIK or lens exchange to achieve the desired result. Whether you and your surgical facility choose to charge for these unanticipated procedures, your policy should be clear in advance so there is less explaining to do later on.

Targeting perfect vision

The hinged design of the crystalens differs significantly from conventional IOLs. This difference allows accommodation to occur, but it can also allow occasional refractive surprises. Conventional IOLs consistently find their way to a position in the center of the postoperative, constricting capsular bag. The final position of the crystalens and its resulting effective power depend on the initial surgical placement of the lens and on other forces that may bend or flatten its hinges, such as an unusually large or small capsule diameter, asymmetric fibrosis and accommodation.

To avoid refractive surprises with the crystalens, use the same approach you would with any lens: Be consistent in the way preoperative measurements are made, do things consistently in the same way, and follow your results carefully.

A good test of your readiness for the crystalens is the consistency of your surgical outcomes using conventional IOLs. With accurate preoperative measurements, most surgeons using conventional implants should be achieving postoperative refractions within about 0.25 D of attempted correction. Without this degree of accuracy in conventional implants, it may be difficult to achieve consistent results with the less-forgiving crystalens.

Reliable axial length measurements are best achieved with immersion ultrasound biometry or optical biometry with the IOLMaster (Carl Zeiss Meditec). Manual keratometry readings should always be performed by the same technician and will add further consistency.

Astigmatism control

Controlling postoperative astigmatism is essential. Our practice routinely recommends LRIs at the time of lens implantation to all patients who have 0.75 D or more of preoperative corneal astigmatism. A number of established LRI nomograms are available, and it is important to have experience and accurate results with at least one technique. Some practices charge a separate fee for doing LRIs when needed. Others may include it as part of the crystalens fee.

Enjoy the results

For the practice that is well-prepared to raise the bar on refractive outcomes and patient counseling, the crystalens can be a rewarding new dimension in refractive lens surgery with patients who tend to be grateful for the new vision they receive. OSN

For Your Information:

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