

New IOL offers greater spectacle independence over wider range

Early experience shows lens provides excellent vision at both intermediate and far

By Dr Lucio Buratto



The expectations of my patients have changed in recent years, with more now asking for independence from spectacles at all distances. However, I was not satisfied with the outcomes offered by multifocal, trifocal or traditional IOLs (with or without capsular tension rings).

Now, with the introduction of the next-generation RayOne EMV monofocal IOL (Rayner), I am able to offer many patients excellent vision at both intermediate and far distance, which satisfies much of their daily needs. The new IOL received a CE mark in June 2020.

The lens is designed to provide superior intermediate vision compared with standard monofocal IOLs and is the first and only IOL designed to enhance patient outcomes in a monovision setting; it can provide, on average, up to 2.25 D depth of focus when used with a 1.0 D offset. It is non-diffractive and dysphotopsia-free, with no zonal demarcation on the surface, and is designed to induce positive spherical aberration across a controlled aspheric surface.

There are no specific indications based on an individual's profession, and patient selection typically depends on surgeon preference. In practice, surgeons prefer—and it is recommended that—the closest negative to zero is targeted for the dominant eye with approximately 0.75–1.0 D offset in the non-dominant eye. With the extended depth of vision provided by this lens, the dominant eye is more forgiving of post-operative myopic shift than with aberration-free aspheric IOLs.

Patient experience

In a first-in-eye series, patients who were implanted with this lens and followed for 1 month after surgery reported a high degree of satisfaction with refractive outcomes; 70% reported spectacle independence at distance, intermediate and near vision. No halo, glare, starbursts or haze were observed.

In addition, all patients were dysphotopsia free, and none reported trouble negotiating steps, stairs

or kerbs due to changes in depth perception. Overall, no depth perception or contrast sensitivity issues were reported.

Surgeons participating in the study also responded with a great degree of satisfaction. They uniformly reported smooth lens transition with the preloaded injector (Figure 1), fine IOL control during insertion (Figure 2) and excellent stability and centration of the IOL in the capsular bag. All the participating surgeons reported reaching their targeted subjective refractive outcome.

No intraoperative or postoperative adverse effects were reported. One practice participating in the series administered a spectacle independence and visual functioning questionnaire to patients receiving the lens. All respondents reported no difficulty in reading medicine bottles, participating in sports, watching television or driving during the day or night.

The lens is compatible with a smartphone app that is associated with it and free-of-charge to Rayner customers. The app is a unique telehealth solution for collecting patient-reported outcomes data for the first 3 years after cataract surgery.

It is hoped that with this unique data-collection tool, we will be able to better evaluate clinical outcomes over time. Additional clinical studies are also planned to further contribute to the weight of evidence with this innovative technology.

Functional intermediate vision means that patients can read their mobile phone, use a computer, shop and enjoy a meal without the use of glasses. With the appropriate light, they can

Interested in
more content
like this?
Subscribe today!



IN SHORT

► **Patients desire spectacle independence at all distances. Early experience with a recently launched IOL suggests that it can satisfy their demands for extended depth of vision.**

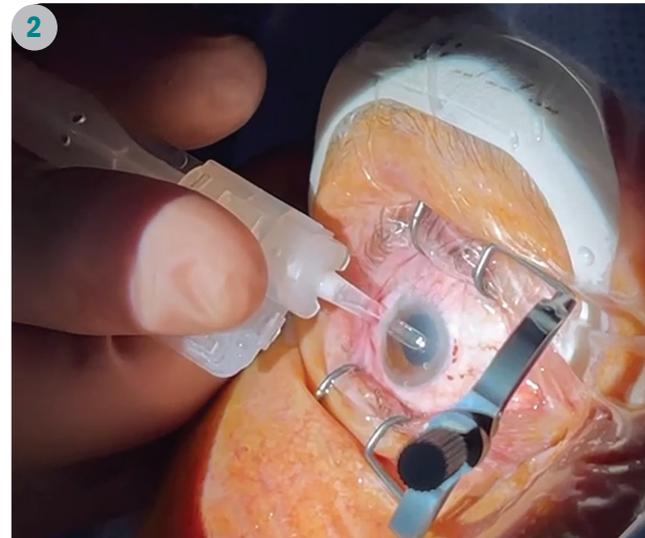


Figure 1. Simple ophthalmic viscosurgical device injection into IOL cartridge.

Figure 2. Handy IOL implantation through the preloaded injector.

(Images courtesy of Dr Lucio Buratto)

also read at near distance with the binocular use of both eyes, which is an important feature of this monofocal option.

I think that this lens will be an attractive option as many patients are asking for presbyopia correction and the previously available multifocal IOLs have not been able to achieve excellent vision results. This is sometimes because preoperative patient consultations have not fully identified the patient's expected outcomes, especially with respect to the need for a period of postoperative adaptation with most multifocal IOLs.

For this reason, the new lens may be attractive for many clinics in Italy, as it will likely meet many patients' expectations in terms of glasses independence and does not involve a period of adaptation after surgery. We have based the cost to patients on the price of the IOL and do not impose a premium charge for the implantation procedure itself.

I also explain to the patients of mine who are good candidates and considering the new lens that without the features that this particular lens provides, they will continue to replace glasses every few years for the rest of their lives, which

of course will add up to considerable costs over time.

Although my clinic is still in its initial phase of experience with this lens, my patients and I have been very happy with the outcomes we have seen, including greater spectacle independence with few reports of visual disturbances. Additional data from the patient-reported outcomes database and further clinical studies will allow us to increase our degree of confidence in this new option in the monofocal setting.

With the ability to provide quality of vision for sports, socialising, computer use and other daily activities, the outcomes already seen in initial experience will likely translate to a better quality of life as well.

LUCIO BURATTO, MD

E: iol.lasik@buratto.com

Dr Buratto is the director of the Centro Ambrosiano Oftalmico - Camo S.p.A. (Ophthalmic Microsurgery Centre) in Milan, Italy. He has no relevant financial disclosures.