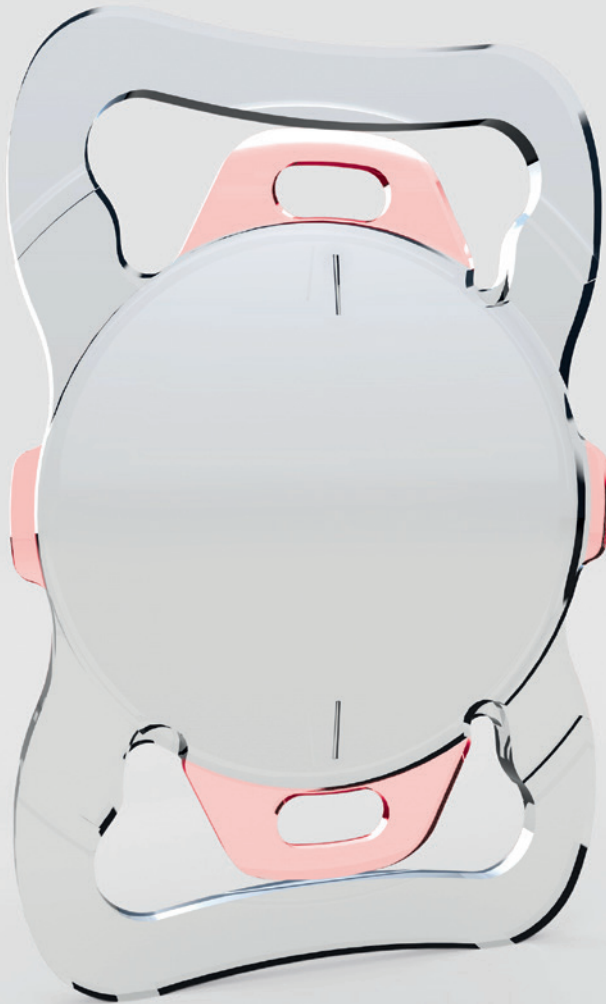


Bringing on the New Breed of IOLs

by Matt Herman



In a lunch symposium hosted by Teleon Surgical BV (Spankeren, The Netherlands) on Day 2 of the 34th Annual Meeting of the Asia-Pacific Association of Cataract & Refractive Surgeons (APACRS 2022), experts delved into the next innovative level of intraocular lenses (IOLs) and why this seismic shift needs to happen now.

Another day of APACRS 2022 in Seoul, South Korea, another lunch symposium, right? Not exactly. Something immediately seemed amiss – in a good way – as almost every single seat in the house filled up in Grand Ballroom 105 for the Teleon-hosted symposium *Next Level Visual Outcomes: Technologies & Techniques to Meet Patients' Growing Expectations*.

In a conference depopulated by difficulties with visas and entry into the country in these early post-lockdown days here in South Korea, how could it come to pass that people were actually **STANDING** while eating their lunch to catch the action? As speaker after speaker passed off the mic, the answer became clear: the innovative next level of IOLs led by Teleon's rhexis fixated FEMTIS IOL Family is upon us, and everyone wants in.

The writing is on the wall for manual capsulotomy

In the opening presentation, Dr. Sheetal Brar (India) all but sounded the death knell for manual capsulotomy in her talk *High Precision Cataract Surgery – Options and Advantages*. Manual capsulotomy vs. femtosecond laser-assisted cataract surgery (FLACS) is a topic well-known to have ruffled more than a few ophthalmic feathers in the past, but those days are over, argued Dr. Brar, and it's time to get with the program.

The debate over whether FLACS has better outcomes is still unsettled, with even Dr. Brar admitting there not being a preponderance of evidence supporting FLACS. But what has tipped the scales towards automated capsulotomies are the incredible outcomes of rhexis fixated IOLs. Led by Teleon's FEMTIS IOL Family, cutting edge IOLs are far more sensitive to alignment, position, and centration. And without the consistency and precision offered by FLACS platforms, the new wave of IOLs like diffractive multifocal and extended depth-of-focus (EDoF) lenses and their strides in intermediate vision and spectacle independence would be just another case of putting the cart before the horse.

In the end, regardless of misgivings about things like radial tears and incomplete capsulotomies, Dr. Brar thinks there are enough reasons now to get on the FLACS wagon due to the superiority of IOLs like FEMTIS. But what exactly makes these IOLs so good?

FEMTIS and its staying power

IOL explantation, that age-old foe of cataract surgeons around the world, is still kicking around. It needs to be minimized no more than ever as IOL technology comes of age and patient expenses mount with the adoption of new technology. In his presentation *Fixation of IOL-OPTIC in FS-Laser Capsulotomy: Is this the future of modern IOL-fixation?* Prof. Dr. Gerd Auffarth (Germany) discussed the new generation of IOLs and how clever new design innovations in the Teleon FEMTIS IOL Family can help.

IOL decentration is one of the main causes of IOL explantation and thereby many unnecessary stints on the surgeon's table. The future is here, though, and Prof. Dr. Auffarth knows that the solution lies with FLACS and the advanced IOL platform of Teleon FEMTIS.

According to a study performed by Prof. Dr. Auffarth, FEMTIS is unrivaled in its ability to stay put after implantation, meaning less chances of explantations. "Everything we measured [like rotation, decentration, and tilt] was like 3x less with the FEMTIS IOL," he said. "There's absolutely no movement at all. It is completely stable over time ... there's no lens available that has better rotational stability," he continued, and then cited additional literature that showed the same.

Before concluding his talk, Prof. Dr. Auffarth pointed to a key additional advantage. There were no dysphotopsias with FEMTIS, an incredible result that he attributes to the capsulotomy rim and FEMTIS IOLs forming an ideal unit.

Asymmetric refractive optics technology, king of the IOL hill

So the Teleon FEMTIS IOL Family stays in place. That's all well and good, but does it actually perform when it comes to visual outcomes? According to Dr. Patrick

Versace's presentation, *Asymmetric refractive optics give better visual quality than diffractive lens designs for EDOF and MF IOLs. How do they work?*, that answer is a resounding yes.

Dr. Patrick Versace (Australia) went into detail about different types of lens designs. Though many existing lens types give good vision, they all have their drawbacks in the game of checks and balances that is IOL design.

Diffractive lens designs give great vision but there are major issues with halos, and there are a variety of other types of lenses that seem to cheat the game of checks and balances, but don't. Multifocal lenses that use clever "tricks" like spherical aberration or chromatic aberration to make gains in some areas end up falling short in others, sometimes even sacrificing the visual range, quality, and acuity that patients flock to premium lenses for in the first place.

Enter Teleon FEMTIS IOL's asymmetric, segmental, pure refractive multifocal lenses with 1.5, 2.0 or 3.0 diopters near addition that seems to have shattered the paradigm. "Being pure refractive lenses, we have better quality of vision," Dr. Versace explained. "The benefit of this lens is that even though it looks like a bifocal, there are two refractive elements there," he continued. The results of this platform, which is quickly gaining traction in the IOL world, speak for themselves. The FEMTIS offers superb distance visual acuity (DVA), with minimal dysphotopsias, and incredible quality of vision while maintaining a highly functional range of vision. And ultimately, it offers much sought after spectacle independence: 60% of FEMTIS wearers Dr. Versace studied never wear spectacles, with the other 40% sometimes wearing spectacles for reading in the group with patients receiving

the EDOF 1.5 diopter addition.

More data crowns FEMTIS next-level IOL royalty

In the final talk of the symposium, and with the scrape of empty plates being cleared away, Dr. Jung Wan Kim (South Korea) presented data on 300 FEMTIS IOL implantations. "There are many kinds of multifocal IOLs, and in my opinion, long-term stability of the IOL position and visual acuity are the keys of a successful outcome," he said.

We already know that FEMTIS is unrivaled in stability because of its four additional haptics (which Prof. Dr. Auffarth discussed), but what about visual acuity? In the first study, Dr. Kim compared FEMTIS MF 30 with the RayOne trifocal IOL (Rayner, Sussex, United Kingdom). Results indicate that the FEMTIS far outperformed the RayOne at near vision, with only a slight dip in intermediate vision for both monocular and binocular defocus curves. FEMTIS also showed less glare and halo than RayOne in a questionnaire, with significant advantages over RayOne in patient indications of satisfaction with starburst phenomena.

Summary

In the end, the four speakers and their illuminating presentations confirmed with a host of data what a packed house at APACRS 2022 already suspected. Next-level IOLs are here, and Teleon's FEMTIS IOL Family stands at the front of the pack with its unrivaled in situ stability, its innovative asymmetric optic technology, and its ability to deliver multifocal visual acuity with none of the drawbacks in visual quality. 📊

