

Elevating Surgeon and Patient Satisfaction with Cataract Innovations

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Prin ROJANAPONGPUN, MD
 Thailand

patient is not the same as that of the last decade. These days, patients are requesting more. They are multi-tasking, living a modern lifestyle, and desiring spectacle freedom.

Dr. Rojanapongpun stressed the importance of a multimodal approach when planning for cataract surgery. By understanding a patient’s challenges and needs, surgeons can customize their intraocular lens (IOL) selection and adapt visual care to fit the patient’s lifestyle.

In one patient case study, Dr. Rojanapongpun introduced an elderly female who wished to be spectacle free because she struggled with reading near, had neck and eye discomfort while wearing spectacles, and required good near vision due to her family business of stone-cutting. Additionally, she needed to drive every night.

After Dr. Rojanapongpun customized the IOL to this patient’s needs, she was very happy after the surgery, stating that she felt like she had the eyesight of a 15 year-old.

However, Dr. Rojanapongpun cautions that surgeons must also compromise in each patient situation. “We need to fine-tune their needs and priorities,” he said. “Patients will have to give up something to gain something. Discuss a compromise with the patient.” Perhaps one patient prioritizes better contrast sensitivity over spectacle independence or vice versa. He recommends that surgeons individualize each case and work with the patient to achieve a good balance of happiness in the outcome of the surgery.

In one case of a 71 year-old female, the patient worried about glares and halos due to driving at night, but did not want to wear spectacles. She also was performing a lot of work using near vision. After discussion, Dr. Rojanapongpun used a mix and match approaching and selected the TECNIS Eyhance™ IOL for the right eye and the TECNIS Synergy™ IOL for the left eye.

In the end, this patient achieved great visual acuity (20/20 uncorrected distance visual acuity for both eyes, 20/25 uncorrected intermediate visual acuity for

The Johnson & Johnson lunch symposium held at the APACRS 2023 Singapore on Friday June 9 gathered three cataract experts who shared their experiences with having true ease and total control over their cataract surgery procedures.



Customized IOL Selection to Meet Patient Needs

Prin ROJANAPONGPUN, MD
 Thailand

Placing a focus on the patient experience is one of the most important aspects in providing exceptional care and improving patient outcomes. These days, “our patient is changing,” Prin Rojanapongpun, MD (Thailand) said. “They have different needs and lifestyles.” Thus, it is important to individualize treatment and consider all the details pertinent to their care. “At the end, it’s about whether the patient is happy or not.”

In today’s modern day lifestyle, multifocality, or multi-distance function, becomes a high priority. The current cataract

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both eyes, and 20/32 uncorrected near visual acuity at 33 cm for both eyes) and was very happy with her results. Her combined defocus curve at 1 month after surgery showed that although the distance-corrected defocus curve for the eye implanted with the Eyhance™ IOL dropped off at near vision, the eye implanted with the Synergy™ IOL maintained good near visual acuity. Combining the two IOLs allowed for the patient's defocus curve to keep good near visual acuity.

Another benefit of the TECNIS Synergy™ IOL that Dr. Rojanapongpun appreciates is its bio-polymer material. With a legacy of 20 years, the TECNIS™ bio-polymer material has no glistening, no surface discoloration, a low refractive index, a consistent A-constant, and reduced capsule contraction. Additionally, the lens merges the diffractive and extended depth of focus (EDOF) properties with chromatic aberration correction, which helps widen the range of focus and maintain a high quality of vision.

In the Asian population, there are other challenges surgeons have to think about. Because

the script of Asian languages is so complex and small, this population of patients needs stronger near vision and good intermediate vision. Dr. Rojanapongpun believes that the TECNIS Synergy™ IOL fulfills this unique need of the Asian population. Synergy™ provides the widest range of continuous vision with high-quality near vision. At the same time, this IOL provides superior contrast during the day and night. The TECNIS Synergy™ IOL is the most advanced IOL yet, going beyond trifocal technology.

“Getting a happy patient takes passionate practice, communication skills, and a depth of knowledge and experience,” Dr. Rojanapongpun said. By making a goal-based decision with the patient, surgeons will be more equipped to produce outcomes and satisfy patients' needs. Perhaps some patients require perfect clarity or complete spectacle freedom. Some patients may want an outcome that lies in between visual clarity and spectacle freedom. Thus, it is crucial for surgeons to have the discussion with the patient to meet their needs.

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Thailand



Using TECNIS Synergy™: Continuous Range of Vision PCIOL vs. Trifocal

Hiroko BISSEN-MIJAJIMA, MD, Japan

Hiroko Bissen-Miyajima, MD (Japan) brought her experience of using the TECNIS Synergy™ IOL to share with attendees. Presbyopia-correcting IOLs (PC IOLs) have been developing over the last 20 years with most of the technological changes being made due to patient needs. The TECNIS Synergy™ IOL is a mixture of two lenses: a diffractive bifocal IOL and an EDOF IOL. While the EDOF IOL provides good distance and intermediate vision along with good contrast sensitivity, patients may still need reading spectacles. The combination of the EDOF IOL with the diffractive bifocal IOL provides the near vision that the EDOF IOL alone lacks. “Synergy™ has the optical benefit of both IOLs,” Dr. Bissen-Miyajima said.

The TECNIS Synergy™ IOL gives patients continuous vision from distance to near and provides superior image contrast in all lighting conditions by modifying chromatic aberrations. Furthermore, patients may experience less dysphotopsia through violet light filtration technology.

For a patient who has healthy eyes, Dr. Bissen-Miyajima usually implants Synergy™. However, if a patient presents with ocular comorbidities such as glaucoma or previously

During the panel discussion, an audience member asked whether mixing and matching the TECNIS Eyhance™ and Synergy™ IOLs was an issue for the patient regarding contrast. Dr. Rojanapongpun replied that the patient did not complain about contrast and color differences. “After a while, they may forget about it. It could be neuroadaptation,” he said. If the patient did come back and complain, what would he do? “I would try to persuade the patient not to do anything if overall the surgery has been successful in terms of visual outcomes. But if it's really a problem, do I have to do an IOL exchange for both eyes? Yes; there are very few cases that I have to do an exchange. Ultimately, it depends not on the number. It depends on the happy patient.”

Clinical Experience

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underwent laser-assisted in situ keratomileusis (LASIK) surgery, she will implant EDOF IOLs.

A prospective study that Dr. Bissen-Miyajima conducted looked at 54 eyes of 27 patients (mean age of 66.7 years) with a bilateral implantation of the TECNIS Synergy™ IOL. Outcome measures included binocular visual acuities at various distances, defocus curve, contrast sensitivity, and patient satisfaction through a questionnaire.

The results of this prospective study showed that visual acuity from 5 m to 30 cm was better than 20/25. "This is quite a promising lens," Dr. Bissen-Miyajima remarked. The defocus curve was very smooth compared to the curve of other bifocal IOLs, and patients achieved better than 20/20 vision with a wide range of additional power. In terms of binocular contrast sensitivity at distance vision, photopic contrast sensitivities were within normal range; for binocular contrast sensitivity at intermediate and near vision,

photopic contrast sensitivities were "comparable to monofocal lenses," she said.

Patient satisfaction was also at a high. One hundred percent (100%) of patients were satisfied with their near and intermediate vision while 90% of patients were satisfied with their distance vision. "Achieving 100% satisfaction for a patient receiving PC IOLs is challenging. Even with trifocal or bifocal IOLs we can achieve 90% satisfaction, but with Synergy™, all patients were satisfied," Dr. Bissen-Miyajima said.

In a separate prospective randomized comparative study by Dick et al¹ that Dr. Bissen-Miyajima presented, 95 patients with bilateral implantation of Synergy™ were compared to 52 patients with bilateral implantation of PanOptix® Trifocal IOL. The study, conducted at 12 sites in Germany, Spain, Philippines, New Zealand, and Singapore, compared 3-month visual outcome measures. The results

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Hiroko BISSEN-MIYAJIMA, MD
Japan

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TECNIS® Toric II

Georgia CLEARY, MBBS, PhD, FRCOphth, Australia

"When I teach and train, my priorities are patient safety, low complication rates, and surgeon safety and comfort," Georgia Cleary MBBS, PhD, FRCOphth, FRANZCO (Australia) said as she began her presentation. Dr. Cleary's practice received the VERITAS™ Vision System in May of this year after trialing the system in 2022, and she has received great feedback from both surgeons and trainees at the Royal Victorian Eye and Ear Hospital.

Dr. Cleary walked through two surgical videos and provided her thoughts on her initial experience with the VERITAS™ Vision System. In one case, the patient had high myopia, a prior LASIK surgery, and a deep anterior chamber. The trainee surgeon worked through the case carefully, even though a significant reverse pupillary block occurred which deepened the anterior chamber. The trainee was able to lift up the iris and get the anterior chamber back into its normal configuration. "This is a case that could have gone horribly wrong with a training surgeon," Dr. Cleary said, "but this was a nice case that I supervised with the new machine very recently out of the box."

showed that a significantly higher portion of patients implanted with Synergy™ achieved $\geq 20/25$ visual acuity at 33 cm. "Results from both studies showed that Synergy™ provides great visual acuity and a smooth defocus curve with high patient satisfaction. Additionally, the Synergy™ lens, compared to trifocal IOLs, provides better distance corrected near visual acuity and performs better under unfavorable conditions." Dr. Bissen-Miyajima said.

Real World Evidence with VERITAS™ Vision System and

Dr. Cleary's initial observations thus far with the VERITAS™ Vision System is that it gives great anterior chamber stability, is adaptable with complex

cases, and is highly suitable for trainees to use.

Dr. Cleary has also had the opportunity to use the VERITAS Swivel handpiece in a wetlab environment. She notes that the updated handpiece is shorter, lighter, and all-around less bulky. The distal portion of the handpiece also swivels, “so if you’re placing it into the eye, if you like to turn the tip over or maneuver it during phacoemulsification, you don’t have to move the entire handpiece around,” she said. Additionally, the tubing of the handpiece is angulated downwards which provides a much better ergonomic experience for the surgeon.

“We’re learning more about thinking about our posture [during surgical procedures]. A longer and heavier handpiece will be sticking into your chest or abdomen. With the shorter handpiece and the tubing that drapes downwards, I’m really looking forward to seeing the ergonomic feel at the operating table,” Dr. Cleary said.

“ At day 1 and at 3 weeks after surgery, TECNIS Toric II IOL had a median rotation of 1 degree compared to the TECNIS Toric IOL with a median rotation of 4 degrees. At week 3, TECNIS Toric II had 0 degree median rotation. ”

Georgia CLEARY, MBBS, PhD, FRCOphth
Australia

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Moving on to IOLs, Dr. Cleary discussed her experience using the TECNIS® Toric II IOL, which is an adaptation of its predecessor, the TECNIS® Toric IOL. The haptics of the Toric II IOL have been frosted to increase the toric stability. “This is important to me as a surgeon in Australia where we use a lot of toric IOLs,” Dr. Cleary said.

Dr. Cleary stated that she implants toric IOLs in her patients at the Royal Victorian Eye and Ear Hospital if keratometric astigmatism is 1.5 diopters or more. However, in her private practice, she has no restriction on the toric lens she uses. “I will choose the lens implant for my patient that gives the

lowest predicted post-operative astigmatism. I’m not looking at what the K value is, but I’m taking it into account,” she said. In 2023, 68% of the IOLs she implanted have been toric IOLs. “I want a lens that is stable in the eye.”

A surgeon needs to consider various aspects when choosing a lens for a patient. How the IOL loads, implants, and aligns are important considerations along with intraoperative performance and refractive outcomes. Long term stability and biocompatibility are also important.

In Dr. Cleary’s real world experience, she compared two patient groups implanted with either the TECNIS® Toric II IOL or the TECNIS® Toric IOL. Reviewing the results at day 1 and at 3 weeks after surgery, Dr. Cleary found that the TECNIS® Toric II IOL had a median rotation of 1 degree compared to the TECNIS® Toric IOL with a median rotation of 4 degrees with results being statistically significant. At week 3, the TECNIS® Toric II IOL had a median rotation of 0 degrees compared to the TECNIS® Toric IOL with

a median rotation of 6 degrees. Finally, 94.5% of eyes implanted with the TECNIS® Toric II IOL had less than 5 degrees of rotation.

All in all, Dr. Cleary found excellent intraoperative handling abilities of the TECNIS® Toric II IOL, a very low degree of postoperative rotation, and zero cases returning to the operating theater for IOL repositioning.

References:

1. Dick HB, Ang RE, Corbett D, et al. Comparison of 3-month visual outcomes of a new multifocal intraocular lens vs a trifocal intraocular lens. J Cataract Refract Surg. 2022;48(11):1270-1276.