Hundreds of people turned out for the APAO 2018 Gala Dinner, a regal event where the traditional met glitz and glamour. Staff ensured that guests were clear of the massive mechanized doors as they closed to provide an intimate evening environment.

Meanwhile, Prof. Dennis Lam entertained guests with a very personal story at the start of the evening. “This hall is very special to me,” he said. “Why? When I first stepped over here, I was the luckiest man in the world. That was in 2006, 12 years ago. My wedding banquet was held here.”

After a round of applause, he continued: “Yesterday, we had a meeting program called Meeting the Masters. One of the questions we posed was: Can you share with us the most important person you have met in your career. The answer for me is very simple: my wife.”

Beyond that personal tale, Prof. Lam shared that in 2008, the World Ophthalmology Congress (WOC) was held in Hong Kong. “That changed Hong Kong,” he shared. “Because of this meeting, Hong Kong became well connected to the world of ophthalmology. We consolidated our experience for organizing future APAO congresses. Hence, the APAO has become the most important ophthalmic meeting in this part of the world and beyond.”

Meanwhile, Prof. Lam shared that the scientific program is one of the most important components of any major congress. “I am privileged to organize the scientific program for this congress,” he said. “Thank you comes from the depth of my heart.”

Meanwhile, Prof. Clement Tham shared some exciting news for the night. “Let me congratulate and thank Malaysia for hosting our 2021 Congress,” he said. He also shared his appreciation to delegates for a successful APAO 2018. “Thank you very much once again for all your support and participation in APAO,” he said.
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How to Keep Cataract Patients Happy and Other Helpful Tips

by Hazlin Hassan

Have you ever wondered if you could have done better for your cataract patient? Renowned surgeons from around the region came together during yesterday’s Lunch Symposium on Refractive Surgery to give a helping hand and shared their top tips on how to optimize cataract refractive outcomes.

Dr. Paul Chan, from the John H. Panton Professor in the Department of Ophthalmology and Visual Sciences at the University of Illinois at Chicago, USA, presented on “A Vitreoretinal Surgeon’s Perspective on Cataract Surgery in Diabetic Patients.” He stressed on the importance of improving outcomes for patients with diabetic retinopathy amid a global epidemic of the condition, which is the leading cause of new blindness worldwide.

Some 415 million adults aged 20 to 79 have diabetes and over 93 million suffer from retinopathy, 60% of which are in Asia. The number of diabetes patients in the world is expected to rise to 642 million by 2040.

Diabetes patients are at greater risk of cataracts with cataracts becoming the leading cause of blindness in Asia, there is an increase in patients requiring cataract surgery. But patients with diabetic macular edema (DME) who undergo cataract surgery can experience transient worsening in edema, with increased levels of vascular endothelial growth factor (VEGF) noted 1 month following cataract surgery.

A surgeon’s objectives should be to improve vision and improve the view for retinal evaluation, minimize inflammation, prevent or reduce the development of post-surgical macular edema, prevent the progression of diabetic retinopathy and DME, and ensure easy access for future exams and interventions.

Preoperative considerations include determining potential visual benefit, proportion of vision loss caused by retinal pathology and history of prior retinal surgeries.

DME and proliferative diabetic retinopathy should be managed prior to cataract surgery. A good preoperative assessment is critical, as well as setting expectations with the patient.

Dr. Chandra Bala, from ‘Personal Eyes Sydney’ of Australia discussed “Refining Refractive Cataract Surgery with Surgical Planning Software.” He spoke on the use of Alcon’s ORA System on patients requiring cataract surgery.

ORA is an intraoperative aberrometer that provides real-time, reliable data and image guidance to ophthalmologists, so they can more accurately select the appropriate advanced intraocular lens power and placement during cataract surgery.

He shared with the delegates how the use of ORA in his practice had improved patient management.

Presenting data of the last 225 patients undergoing cataract surgery, he said there were no complications and there was subjective refraction at least 1 month after surgery.

Forty percent of the time, ORA and the pre-op plan agreed with each other. Forty percent of the time, Dr. Bala decided to go with ORA. Twenty percent of the time, he disagreed with ORA and went with his preop plan. There were ten cases where ORA suggested a lesser power lens be inserted, he noted. “And this is the clincher: in each and every one of those cases, ORA performed better. And to me that is the reason why this technology is worth it,” he said.

The final speaker, Dr. John Chang, from the Hong Kong Sanatorium and Hospital, shared his tips on “Optimizing Visual Outcomes with Advanced Technology Intraocular Lenses (IOLs).” Talking about the PanOptix (Alcon, Fort Worth, TX, USA) trifocal lenses, he briefed the audience about a study which looked at 44 eyes and showed very good results with improved vision.

“This lens is performing as good as LASIK,” he said, commenting on the favorable results. The halo and glare scores were very low, 0.81 for halo, 0.44 for glare, he noted. Overall satisfaction was very high, at 4.69.

In conclusion, he said that the lenses appear to have continuous range of focus, minimal halo and glare, and high patient satisfaction. His tips for multifocal IOLs, included understanding the patients’ current visual status, understanding their expectations regarding the surgery, their visual requirements, the characteristics of different multifocal IOLs, and the importance of choosing the right multifocal IOL for each patient.

He explained that it was crucial to manage the patients’ expectations, where over 60% will have halo and glare initially but over 90% will improve over 2-3 years. Patients will also not be completely spectacle-free after surgery, and will still need glasses for intense work and night driving. There is also a risk of waxy vision that may require IOL exchange, and he noted that exchange surgery may carry more risk.

“It is important to choose the right patient and the right lens and to know their expectations. It is also very important to underpromise and overdeliver,” he added.
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New Generations of IOLs Offer New Possibilities in Cataract

by Joanna Lee

There have been more options for cataract patients with new generations of intraocular lenses (IOLs). Patients have a choice of monofocals, multifocals and extended depth of focus (EDOF) as well as accommodating lenses.

For Dr. Robert Ang, his experience with trifocals, in particular with Physiol Finevision (Liege, Belgium), LISA Trifocal (Carl ZEISS Meditec, Jena, Germany) and PanOptix trifocals (Alcon, Fort Worth, TX, USA) yielded high rates of spectacle independence. He also found that a near-emmetropic outcome is needed to bring out the best performance of the trifocal lenses. There is also long term refraction with low complaints of glares and halos. For patients with slight myopia, he suggested to aim for 0 or a slight plus to adjust the outcome and to minimise glares. He also found that the vision of his patients seem stable. At the same time, he also found that posterior capsular opacification (PCO) occurrence and YAG rates seem to be higher in LISA Trifocals.

Better outcomes with newer generation IOLs could not be achieved without measurements. Dr. Fam Bor Han said posterior corneal astigmatism must be taken into consideration. If not, there will be over-correction of WTR astigmatism while ATR astigmatism will be under-corrected if posterior corneal astigmatism is ignored. Using the newer toric IOL formulas, namely the Barrett and EVO formulas, these issues would be taken care of.

In a comparative study of 3 IOL platforms (AcrySof, AT TORBI and Tecnis), Dr. Lee Mun Wai discovered overall good outcomes and predictable visual and refractive outcomes with all three IOLs. He also found AcrySof (Alcon, Fort Worth, TX, USA) to be most stable while the AT TORBI (Carl ZEISS Meditec, Jena, Germany) tends to undercorrect. They also possess good rotational stability overall with significant and predictable reduction in astigmatism.

In his sharing of how to optimise the outcomes of toric IOLs, Dr. Tetsuro Oshika said that one should remember to distinguish between regular and irregular astigmatism and to treat with-the-rule (WTR) and against-the-rule (ATR) astigmatism differently. It is also important to instruct patients not to walk around but to stay at rest for 1 hour after surgery, as Dr. Tetsuro Oshika advised. This is due to the fact that some lenses are slower to unfold. He also said that repositioning surgery is best performed between 1 to 3 weeks after surgery. This was an outcome from his team’s study which found a relationship between the timing of repositioning surgery and surgical outcome.

Dr. Yassine Daoud’s sharing of clinical pearls based on five cases involving his patients may well remind practitioners that at the heart of new advancements, judicious use of new technologies is still needed. One important point mentioned is to always be careful to select the patients to determine if the patient is the best to upgrade lenses on in the first place as it may not quite suit their vision needs based on their occupations or even personalities.

Another technical pearl is to remember to treat dry eye disease before and after cataract extraction with intraocular lens placement (CEIOL). It is important to know the limits of the technology. Another point was never to overpromise but to underpromise and over-deliver, as one of his disappointed patients had been told that she’ll never need glasses anymore but suffered from worse vision post-surgery. Managing patients’ expectations before and after surgery is as equally important as focus.

Prof. Charles McGhee suggested the gala dinner was not only a great social event, but also symbolic.

“Tonight is a celebration of the success of the meeting, but also a great night to network with colleagues old and new and celebrate APAO and the success it brings to ophthalmology and prevent blindness in Asia-Pacific,” he said.

Dr. Jeffrey Pong cemented the evening by underscoring the journey of APAO.

“The last few days have been a tremendous journey for all of us,” he said. “We have received a lot of positive feedback on the content and structure. And this morning, we had the APAO charity run with more than 200 participants. We were able to collect financial donation of over $100,000.”

For anyone staying a few more days in Hong Kong, Dr. Pong recommended the Flower Market, the nightly symphony of lights and the local shopping spree activities.

Meanwhile, Prof. Jimmy Lai shared something interesting about the Gala Dinner environment.

“New friends, old friends, competitors: everybody is here,” he said. “I hope to see you again at the next APAO meeting in Bangkok.”

Blind musicians from the joint Shantou International Eye Center in China contributed to the evening’s entertainment, while kids playing large drums from Percussion House in Hong Kong dazzled guests.

The APAO hopes you have enjoyed the lectures, workshops, wet labs and symposia. See you at APAO in Bangkok in 2019!
Retinal surgery is crucial to repair a retinal tear or a detached retina. Based on the patient’s specific condition, the ophthalmologist will discuss the type of procedure recommended and the various risks and benefits of the treatment options.

Dr. Jessica Lee from Mount Sinai, New York, started off the symposium with a presentation on emerging trends in secondary intraocular lens (IOL) placement. Late IOL dislocation incidence has been described to range from 0.05% to 3%, while 90% of reviewed cases of dislocated IOLs have predisposing factors such as pseudoexfoliation, traumatic zonular loss, uveitis, prior vitrectomy, and increased axial length. The secondary IOL placement methods include anterior chamber (AC) IOL, iris fixation with suture, artisan lens, glued-IOL technique, transconjunctival trocar method, Gore-tex® suture Akreos lens technique, and Yamana technique (flanged haptic). Many options each have potential benefits and drawbacks. It is important to know all the options so that the optimal technique can be used. However, techniques are constantly evolving, so it is best to keep up with the latest techniques.

Further in the session, Dr. Pramod Bhende from Sankara Nethralaya, Chennai, India, spoke on ‘Complex Retinal Detachment (RD) Surgery: Coloboma of the Choroid’. He highlighted special situations with high incidences of RD, unconventional break locations and patterns of RD, where classic principles of RD surgery do not apply. In these cases, pars plana vitrectomy (PPV) plus silicone oil infusion (SOI) is the preferred technique, and it can produce a satisfactory surgical outcome. It is important to tackle silicone oil removal (SOR) with care. It has a high recurrence rate (10%-33%) after SOR, while increased intraocular pressure (IOP) is a postoperative complication.

The following presentation was on the topic of complex retinal and endoscopic surgery by Dr. Linda Lam from Keck School of Medicine of University of Southern California, USA. Dr. Lam recommended an outside-in approach for diabetic retinal detachments, and removal of lens and bag for P. acnes cases. She also suggested to stain the posterior hyaloid with triamcinolone and use brilliant blue for macular cases. For acute retinal necrosis (ARN) cases, careful membrane dissection is required. Meanwhile, she recommended filering a ring and keratoprothesis for corneal involving trauma and intraocular foreign body (IOFB) cases.

Dr. Kenneth Fong from Sunway Medical Centre and Beacon Hospital, Malaysia, spoke on hypersonic vitrectomy. Dr. Fong elaborated on Vitesse hypersonic vitrectomy as a revolutionary approach to vitreous removal, with optimized control and precision, consistent flow, and unobstructed aspiration. It can perform 1.2 million cuts per minute. He explained how it works and compared it to traditional pneumatic cutters.

Dr. Elliott Sohn from the University of Iowa, USA, discussed about the progress in treating inherited retinal diseases. He said that the goals at the Institute for Vision Research, University of Iowa, USA, are to be able to treat every person affected by an inherited retinal disorder, regardless of rarity and disease stage, for less than USD 50,000. He spoke about retinal allografts, and using induced pluripotent stem cells (iPSCs) to create authentic photoreceptor precursor cells suitable for autologous transplantation, as well as developing protocols and cell culture reagents suitable for iPSC generation and photo receptor differentiation.

Lastly, Dr. Tarek Hassan from Oakland University, Michigan, USA, talked about the management of recurrent macular holes (MH). The MH reopens for a variety of reasons. Mechanisms of recurrence must be considered in order to direct surgical repair. When MH reoccurs, there are two main surgical goals, which are to free the MH edges and allow glial plug to heal the MH.
Challenges in Diagnosing and Treating Noninfectious Posterior and Panuveitis

by Hazlin Hassan

Uveitis can prove to be one of the most challenging diagnostic dilemmas in ophthalmology, and can lead to blindness if left untreated.

Uveitis can be a part of many different diseases, and because the treatment and prognosis of the different types of uveitis vary greatly, accurate diagnosis is crucial. However, early treatment often leads to a good prognosis.

Several experts in the field shared some of their experiences during yesterday’s “Intraocular inflammation, Uveitis and Scleritis: Noninfectious Posterior and Panuveitis” session.

Dr. David S. Chu, Associate Professor of Clinical Ophthalmology at Rutgers University, and Medical Director of the Metropolitan Eye Research and Surgery Institute, USA, explained about uveitis, which is an inflammation of uvea, including iris, ciliary body and choroid. Categorized as anterior, intermediate, posterior and panuveitis, it presents with variable clinical manifestations between different etiologies, co-morbidities and other factors. Symptoms include visual disturbance, pain, photophobia, and floaters, although this varies greatly between patients. Some of the clinical signs for uveitis he listed were vision change, vitreous cell, snow banking, chorioretinal lesions, retinal edema, vitreous haze, retinal vascular sheathing, and others.

Among some of the methods which could be used to determine uveitis is by using spectral domain optical coherence tomography (SD-OCT), which is capable of identifying cellular reaction in the anterior chamber but requires further refinements of software. Another indirect measure of ocular inflammation is by macula thickness. There needs to be an objective way to measure anterior chamber cell reaction to better treat patients, he said.

In the meantime OCT and other technology show promising early results, he concluded, and that “more work needs to be done.”

Furthermore, Dr. De-Kuang Hwang of the Taipei Veterans General Hospital talked about “Diagnosing Noninfectious Posterior and Panuveitis.”

The most difficult thing to make sure is that it is uveitis, he said adding that other diseases needed to be ruled out. Uveitis can be a part of many different disease processes, including intraocular syphilis, toxoplasmosis, sarcoidosis, and birdshot chorioretinopathy, among others.

Diagnosing non-infectious posterior and panuveitis is important for future research and treatments, he noted, but added that it is still difficult and controversial in some cases.

A step-by-step approach containing uveitis patterns, history, systemic symptoms, laboratory test and clinical presentations should be used for differential diagnosis.

Dr. Peter McClusky, of the Save Sight Institute, Sydney Eye Hospital, Australia, discussed about Behcet’s disease in Sydney, which is not an uncommon diagnosis. He cited the example of a 35-year-old male who experienced fluctuating, blurred vision in the right eye for the last 10 days and had no medical or surgical illnesses in the past, no pets and no at risk sexual activity. Eventually, he told doctors that he had mouth ulcers, skin rash, headaches, hearing loss and arthralgias, leading to a diagnosis of

Behcet’s disease. This diagnosis may be considered in the event there is no other clinical explanation; there is recurrent oral ulceration, and two of the following: recurrent genital ulceration, anterior uveitis, posterior uveitis, panuveitis, or retinal vasculitis, erythema nodosum, pseudofolliculitis, papulopustular lesions or acneiform nodules.

Dr. Peizeng Yang, of the Chongqing Eye Institute, Chongqing Key Laboratory of Ophthalmology and The First Affiliated Hospital Chongqing Medical University, China, shared his insights on “Immunosuppressive Therapy for Vogt-Koyanagi-Harada Disease (VKH),” one of the most common uveitis entities in China.

An autoimmune disease, it mainly affects certain pigmented races, such as Asians and Native Americans. Therapeutic regimens in a study involving 355 blind eyes, of which 73 (20.6%) were caused by VKH disease, used the initial dose of corticosteroids at 80-100 mg/d for 2-4 weeks, pulsed high dose of corticosteroids (more than 200 mg) for severe patients, and a combination of corticosteroids with other immunosuppressive agents in patients with chronic recurrent disease.

“Our therapeutic regimens could effectively control the intraocular inflammation in most Chinese VKH patients with few side effects,” he said, in explaining the results.

There was complete control of uveitis in 94% of patients in 3 months after treatment, and 98% of patients after 6 months to 7.5 years follow-up.
SMILE to Take Larger Share of Refractive Eye Surgery Market

by John Butcher

Small incision lenticule extraction (SMILE) surgery will capture an increasing share of the refractive eye surgery market in the coming years, according to experts speaking at yesterday’s session on refractive surgery at the APAO 2018 Congress.

The new surgery has proved a success in studies and may enjoy some advantages over its rival LASIK, ophthalmologists told a morning talk. With U.S. FDA approval last year, and increasing awareness of the procedure globally, it will grow in popularity as an option for correcting myopia and other eye conditions.

In SMILE surgery the surgeon uses a laser to create a small lens-shaped bit of tissue within the cornea. Then a small arc-shaped incision is made in the surface of the cornea, through which the surgeon extracts the tissue and removes it. The effect is to alter the shape of the cornea correcting nearsightedness.

The difference between SMILE and LASIK eye surgery is that the latter requires a large opening that enables a laser to reshape the underlying cornea, while the incision with SMILE is considerably smaller (often less than 4mm) to allow removal of the tissue.

The SMILE procedure is relatively recent compared to LASIK, which has “gone through a 25-year evolutionary period” of customization and improvement, Dr. Ronald Krueger, from the Cleveland Clinic in Ohio, United States, told the audience.

Modern day LASIK results are “very good” he said, and some of the postoperative symptoms that were a problem are beginning to show improvement.

However, despite the long track record and popularity of LASIK, there is room for SMILE, he added.

One of the main attractions of SMILE is that it is “less invasive,” he told the audience.

That, and other factors, has seen it grow in popularity worldwide to more than a million procedures.

The most recent boost to its popularity came in March last year with U.S. FDA approval following a study into SMILE that ended in 2016.

The FDA study results showed around 88% of participants achieved 20-20 vision at six months and 12 months, which is “not quite as high as LASIK but still very respectable,” said Dr. Krueger.

There are now 55 sites in the U.S. performing SMILE surgery, although there is limited promotion and awareness in America of the procedure, he added.

The market will grow though as patients become more aware of the benefits of SMILE over LASIK, such as less risk of dry eye and less potential trauma that could cause problems in the future, he said.

Studies demonstrating the safety of SMILE surgery may go some way to increasing its popularity.

Dr. Rupal Shah, Group Medical Director of Centre for Sight-New Vision Laser Centers in India, who was involved in studies of intra- and postoperative complications from SMILE surgery spoke about her findings.

Intraoperative complications from the study, which ran from 2010 to 2014, included suction loss in 0.94 % of cases, which could be managed usually by reblocking and completing the procedure on the same day.

Lenticule sticking to the cap was also an issue in 1.3 % of patients, managed by removing the lenticule with difficulty.

Other issues include incision tears (0.32%), decentration of more than 0.8mm (0.065%), decentration of more than 0.4 to 0.8mm (1.3%), significant OBL leading to difficult separation (3.9%), managed by separating the lenticule with difficulty, vascular bleeding (0.48%) and epithelial abrasion (0.65%).

Postoperative complications, according to the study, included delayed visual recovery in 0.48%, epithelial ingrowth in one eye, which was resolved by removing the ingrowth, DLK in 0.48%, resolved by a washed pocket and steroids, steroid response in 4%, resolved by discontinuing the use of steroids, undercorrection of more than 0.75 D SphEq in 0.97% of cases, corrected using CIRCLE software in 60%, transient dry eyes in 13.9% of people, resolved using artificial tears, and persistent dry eyes in 2.6% of patients, resolved using cyclosporin eye drops, punctual plugs, omega three fatty acids, or all three.

The problem that demanded most additional study was suction loss, according to Dr. Shah, but it was found it could be “easily resolved.”
In fact, overall, the rate of complications with SMILE surgery “were not really significant and had no long term implications,” she told the audience.

Dr. Sri Ganesh from Nethradhama Superspeciality Eye Hospital, India, talked about the use of SMILE surgery to correct hyperopia, which he said worked in a similar fashion to SMILE for myopia, the only difference being the geometry of the refractive lenticule.

The first hyperopic SMILE surgery was conducted in 2014, he said, and studies had shown it worked as well, if not better, than LASIK.

In terms of centration between SMILE and LASIK, the offset magnitude was slightly less for SMILE, according to studies, he said.

SMILE achieved a larger optical zone diameter than LASIK, and spherical aberration was similar for both.

Studies showed that 89% of eyes after SMILE hyperopia had 20-40 vision or better.

However, safety levels for LASIK were slightly higher than for SMILE.

Overall, research so far has shown some potential advantages of SMILE over LASIK, Dr. Ganesh told the audience.

Further multi-center studies have begun on 374 eyes to be treated across the globe, with follow-up for one year, he added, which should shed more light on the comparisons between SMILE and LASIK.

**INDUSTRY UPDATE**

**New & Improved | Cataract Surgery Workflow**

OCULUS Pentacam AXL is now linked to the IOLcompass Pro Guidance system from Leica Microsystems and TrueVision’s TruePlan

When big names in ophthalmic instrumentation come together, their synergy creates devices that benefit both surgeons and patients. In this case, the winning trifecta of OCULUS, Leica Microsystems and TrueVision have now been linked to provide the best efficiency and precision in cataract surgery.

Through this team effort, the OCULUS Pentacam AXL is now linked with Leica Microsystem’s IOLcompass Pro Guidance System and TrueVision’s TruePlan – which means an improved cataract surgery workflow. This technology, which is now available for purchase, is a result of a previous partnership between OCULUS with TrueVision and Leica Microsystems.

The Pentacam AXL from OCULUS not only enhances clinical applications, it also provides optical biometry for IOL calculation (along with the known smart software modules). Using the standard formulas, as well as the latest generation – including the Savini toric calculator and the Barrett formulas – the Pentacam IOL Calculator makes the OCULUS Pentacam AXL a dependable device for cataract surgeons.

Leica Microsystems develops and manufactures high-precision surgical microscopes that seamlessly integrate digital imaging technologies. Its contribution to this trifecta is an IOL guidance system, the IOLcompass Pro. The final partner in this trio – TrueVision – adds the TruePlan surgical planning application. This application, which is now directly linked to the OCULUS Pentacam AXL software, optimizes corneal incision guidance, LRI’s, lens centration and IOL positioning during cataract surgery. The combination of these different technologies creates a platform that provides the best outcomes for cataract patients.

For a demonstration of the Proveo 8 with IOLcompass and Pentacam AXL, visit the OCULUS or Leica booth at APAO 2018. More information can be found at: www.oculus.de, www.truevisionsys.com and www.leica-microsystems.com.

Further multi-center studies have begun on 374 eyes to be treated across the globe, with follow-up for one year, he added, which should shed more light on the comparisons between SMILE and LASIK.

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Maria Cecilia Aquino, MD, Glaucoma Specialist, National University Hospital Singapore

Limited-Time Trade-in Opportunities Now Available
People usually have clear vision, but when a person suffers from cataract, their clear lens has turned cloudy. Their vision will become blurred, hazy and less colorful. In cataract surgery, the eye’s natural lens is removed and replaced with a clear artificial lens called an intraocular lens (IOL). The IOL bends (refracts) light rays that enter the eye, helping patients to see.

Dr. Christopher Khng from Eyewise Vision Clinic, Singapore, began the symposium by discussing the new advancements in IOL design. Patients who have multifocal lens tend to complain about glare, halo, and starbursts, among others. However, with MINI WELL EDOF (SIFI Medtech, Leuven, Belgium) IOL implantations, almost 70% of patients did not see halos, while beyond 80% did not see starbursts. He found the performance of the MINI WELL for night-time viewing quite impressive. It provided good contrast and good visual quality to his patients – they were happy, with a high level of acceptance.

Furthermore, Dr. Victor Jose Caparas from the Associated Eye Specialists and the American Eye Center, Manila, spoke about the first experiences with the MINI WELL EDOF lens. Dr. Caparas shared that many patients were unhappy with multifocal IOLs, and it is not just because of glare, halo and starbursts. Multiple vision IOLs create simultaneous multiple overlapped retinal images, and the patients had to adapt to this, and it was confusing for them. The EDOF IOL is a new category of IOL that is distinctly different from multifocals. It uses a continuum of focal points, which produces sharper vision and lesser side effects (commonly seen with multifocals). He did a study with 22 subjects and 44 eyes, with an average age of 66. The youngest was 50 while the oldest was 78. On their first visit, after their operation, they had vision slightly less than 20/20, whereas on their last visit, their vision improved to between 20/20 and 20/15. For binocular vision, the first test yielded 20/20 and it improved to 20/15 at the third visit. If he corrected for distance, the result was even better. His patients reported excellent vision acuity for far and very good vision for near. It gave them excellent contrast sensitivity. In addition, the IOL was easy to implant and it centered very well. There were hardly any complaints from his patients.

‘Clinical experiences with an advanced EDOF IOL and new toric model’ was the next topic in the symposium. Dr. Santaro Noguchi from Saneikai Tsukazaki Hospital, Japan, shared his experience with the EDOF IOL and the satisfaction of his patients in using it. His study revealed that his patients were highly satisfied with the implant, and given a choice to choose a different implant, they did not want to change it.

The final presentation at the symposium was ‘Patient Satisfaction in Cataract Patients: Focus Study Outcomes’ by Prof. Gerd Auffarth from the Ruprecht-Karls University of Heidelberg, Germany. He said that normal reading speed was 80 words per minute. With normal multifocal or bifocal lens, patients could hardly get up to 60 words per minute. He found that MINI WELL EDOF IOL provided very good reading performance, where more than 90% of patients could achieve 0.5 logRAD for over 80 words per minute. Moreover, incidence of photic phenomena such as halo and glare were very low. In fact, 73% and 81% of patients did not report any halo and glare respectively.

As medical science and technology improves, so should the quality of life of patients who suffer from various ailments. In reality, the goal of medical research and development should always be focused on helping patients live as close to a normal life as possible, and with this target in mind, the MINI WELL EDOF has done well.
PHOTOS OF PIE TEAM & FRIENDS
Onwards for Women in Ophthalmology

Women and Men Unite for Diversity in the Field

by Joanna Lee

Speaking to an audience of about 60 attendees during the first ever “Women in Ophthalmology Lunch” event, Chair of APAO Leadership Development Committee and Dean of Education at The Royal Australian and New Zealand College of Ophthalmologists (RANZCO), Dr. Catherine Green eased the crowd into a thought provoking session.

Peppering the talk with humour, Dr. Green made a weighty topic digestable along at the lunch with her thought-provoking and timely message on diversity and inclusion – how it is everybody’s business in the field of ophthalmology.

The lunch was open to everyone to join in. “Men were invited, too,” Dr. Green said, noting that there were a number of male participants in the room. She added that this is important because their participation is much needed to help women champion non-discriminatory practices to make the workplace a safer one for women.

“The idea is to get a platform where women in ophthalmology can get together, connect and start working in a much more coordinated way in order to solve the challenges that we face,” Dr. Green said.

Discrimination, whether it is conscious or lurking in the shadows is much more ubiquitous as we think. Most recently, as evident in the #metoo movement, sexual harassment and bullying are reported by a large proportion of female surgeons and ophthalmologists but it is not spoken about. As Dr. Green put it, “hospitals may be hazardous to your health”.

This creates not only unsafe workplaces for women but also more opportunities for errors when treating patients.

It is interesting to note that companies with diverse gender and ethnic boards outperform those without. Also, collective intelligence has been shown to correlate with the average social sensitivity of group members and the equality in distribution of conversational turn-taking. Most notably collective intelligence is correlated with the proportion of females within the group and not with the average or maximum intelligence of the individual members in the group.

Dr. Green said that by not supporting women in the field, it would mean a 50% of talent opportunities lost for the field. Statistics by ATO showed that female ophthalmologists earn only 39% of the average salary for an ophthalmologist.

She urged the participants to look into the recruitment selection process to come up with tools that mitigate systemic and implicit bias. Skillful mentoring is also important along with creating flexible workplace and trainings besides having targets for leadership roles especially for women.

Diversity in the Field

Women and Men Unite for

Women and Men Unite for Diversity in the Field

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Speaking to an audience of about 60 attendees during the first ever “Women in Ophthalmology Lunch” event, Chair of APAO Leadership Development Committee and Dean of Education at The Royal Australian and New Zealand College of Ophthalmologists (RANZCO), Dr. Catherine Green eased the crowd into a thought provoking session.

Peppering the talk with humour, Dr. Green made a weighty topic digestable along at the lunch with her thought-provoking and timely message on diversity and inclusion – how it is everybody’s business in the field of ophthalmology.

The lunch was open to everyone to join in. “Men were invited, too,” Dr. Green said, noting that there were a number of male participants in the room. She added that this is important because their participation is much needed to help women champion non-discriminatory practices to make the workplace a safer one for women.

“The idea is to get a platform where women in ophthalmology can get together, connect and start working in a much more coordinated way in order to solve the challenges that we face,” Dr. Green said.

Discrimination, whether it is conscious or lurking in the shadows is much more ubiquitous as we think. Most recently, as evident in the #metoo movement, sexual harassment and bullying are reported by a large proportion of female surgeons and ophthalmologists but it is not spoken about. As Dr. Green put it, “hospitals may be hazardous to your health”.

This creates not only unsafe workplaces for women but also more opportunities for errors when treating patients.

It is interesting to note that companies with diverse gender and ethnic boards outperform those without. Also, collective intelligence has been shown to correlate with the average social sensitivity of group members and the equality in distribution of conversational turn-taking. Most notably collective intelligence is correlated with the proportion of females within the group and not with the average or maximum intelligence of the individual members in the group.

Dr. Green said that by not supporting women in the field, it would mean a 50% of talent opportunities lost for the field. Statistics by ATO showed that female ophthalmologists earn only 39% of the average salary for an ophthalmologist.

She urged the participants to look into the recruitment selection process to come up with tools that mitigate systemic and implicit bias. Skillful mentoring is also important along with creating flexible workplace and trainings besides having targets for leadership roles especially for women.
According to the American Academy of Ophthalmology (AAO), chronic hyperglycemia is a major risk factor of diabetic macular edema (DME), and the incidence of DME over a 10-year period is 20% in patients with younger onset diabetes, while in older onset diabetes it is approximately 40%.

At the medical retina symposium on advances in DME treatment, chaired by Dr. Timothy Lai from the Chinese University of Hong Kong, esteemed professors presented the latest research and information on DME.

Dr. Timothy Lai started off the symposium with a talk on the importance of vision gains from a patient’s perspective. For patients with diabetes, loss of sight is the most feared complication, and losing vision can have a significant impact on day-to-day life. Conversely, gaining lost vision can improve the quality of life of patients and their ability to perform daily activities. For example, a vision gain of 5 letters can significantly increase the likelihood of a patient being able to drive at night or read the newspaper. It is important to consider the vision that the patients live with every day, therefore the area-under-the-curve (AUC) analysis provides key information about the daily visual experiences of patients that cannot be gained from examining individual time points. When comparing different agents or regimens, greater AUC represents better vision, on average, over time.

Treating patients with aflibercept early may minimize the time spent with poor vision and provide meaningful final vision gains.

The following presentation on clinical updates in the management of DME was by Dr. Gemmy Cheung from Duke-NUS Graduate Medical School, Singapore. Aflibercept has a longer duration of activity and exhibits stronger VEGF-binding compared to ranibizumab, she emphasized. In the VIVID and VISTA studies, greater than 10 letter gains were achieved with aflibercept in DME, and these were maintained over 3 years. VIVID EAST and VIVID Japan confirmed the favorable outcomes in the global VIVID and VISTA studies. Aflibercept is associated with disease modification in DME, with approximately one-third to 60% of patients achieving 2-step or more improvements in the Diabetic Retinopathy Severity Scale (DRSS).

‘Improving Vision for Patients: Insights from DRCR.net’ was the next presentation. Dr. Neil Bressler from the Wilmer Eye Institute at Johns Hopkins University School of Medicine in Baltimore, United States, said that the objective of DRCR.net anti-VEGF treatment regimen is to try to maximize visual acuity improvement while minimizing the number of injections and number of visits. When initiating DME treatment before pro re nata (PRN) regimens, consider starting with 6 monthly injections (with one uncommon exception). There is no evidence that adding corticosteroids to anti-VEGF for persistent DME after 6 months is superior to continuing anti-VEGF alone. If there is access to all three anti-VEGF agents for treating DME, it is probably better to start with aflibercept instead of bevacizumab or ranibizumab when visual acuity is 20/50 or worse.

To round up the medical retina symposium on advances in DME treatment, Dr. Timothy Lai emphasized the importance of proactive treatment for robust long-term outcomes in DME. Delaying anti-VEGF treatment initiation may result in irreversible vision loss. In VIVID/VISTA, vision gain of greater than 10 letters and disease modification were achieved and maintained over a 3-year period with proactive aflibercept treatment. In Protocol T, among eyes with persistent DME through 24 weeks, the resolution of chronic persistent DME by 2 years is highest with aflibercept. The overall superiority of aflibercept among eyes with 20/50 or worse vision is evidenced by significantly greater vision gains at one year, and significantly greater vision gains over 2 years (AUC analysis).
Dr. Akira Nakajima was both influential in ophthalmology globally and a kind and humble man, colleagues said during a meeting of APAO yesterday to honor the former president of the organization who died last year.

Dr. Nakajima passed away on June 16, aged 93, after a long and accomplished career in ophthalmology. He was president of the Asia-Pacific Academy of Ophthalmology (APAO) from 1972 to 1976, president of the Academia Ophthalmologica Internationalis from 1988 to 1990, president of the International Council of Ophthalmology (ICO) from 1990 to 1998, and a winner of both the Gonin Medal for outstanding work and research in 1986, and the José Rizal Medal from the APAO in 1987.

Professor Tetsuro Oshika, from the University of Tokyo, described him as a “wise teacher and mentor,” who played an “immense role” in creating global dialogue between ophthalmologists.

“He showed us what can be achieved for the betterment of world vision,” he said.

His influence in the Asia region was great enough for the APAO to launch an award in his honor – the APAO Nakajima Award – in 2005, for young distinguished ophthalmologists from the Asia-Pacific region.

He was a professor at Juntendo University in Tokyo from 1961, where he was also director of the Research Institute of Ophthalmology.

He also held vast clinical expertise and made major contributions to the fields of cornea and external eye disease, ocular genetics and refraction, among other areas.

In addition, throughout his career he made unparalleled contributions to ophthalmic teaching and training, clinical and laboratory research, and clinical ophthalmic practice in Japan, the Asia-Pacific region and the world.

ICO president Dr. Hugh Taylor, who worked with Nakajima for many years, said he was “proud to have been his colleague but sad at his passing.”

As well as being “instrumental in ophthalmology around the world,” he was also a “very warm and caring person,” he added.

Dr. Taylor described a conversation early in their friendship when Dr. Nakajima described meeting his grandfather in the early 1950s when the ophthalmologist was visiting Japan and met a young Dr. Nakajima who was at the time still studying.

The profession had lost a “leader and a friend,” he said, who had an “unexpected and cheeky smile.”

Dr. Clement Tham, the first winner of the APAO Nakajima Award, said although he had never worked closely with Dr. Nakajima he had heard him described as “one of the most distinguished” ophthalmologists of his generation.

Dr. Bruce Spivey, a former president of the ICO, said that Dr. Nakajima was a “very charming man and a true internationalist” who had been a global influence on ophthalmology.

He first met Dr. Nakajima in 1978 and saw him regularly at international ophthalmology events.

Dr. Nakajima “travelled light” he said. “He would show up for a week with basically what he had on his back,” which was usually a white short-sleeved shirt, suit and pocket full of material.

He was quick to raise a toast, added Dr. Spivey, and always made his points well.

Dr. Spivey shared photographs of times the pair had spent together, including their last meeting in 2014, when they had dinner together.

“It was a lovely memory of a marvellous man,” he said.

Dr. Nakajima was always committed in everything he did, he added.

“He was the leading Asian ophthalmologist in an international impact in his time.”

A “Leader and A Friend” by John Butcher
Ophthalmologists and related professional in the eyecare field made a call for action on sports-related eye injuries at yesterday’s APOTS symposium on sports-related ophthalmic trauma at APAO 2018 congress.

Speakers said the vast majority of injuries are avoidable and outlined ways to drastically reduce them, including through education, protection, data and potential rule changes.

There are more than 60,000 sports-related eye injuries per year, 13,500 of them resulting in permanent loss of sight, and up to 90% of them are preventable, said Professor Sundaram Natarajan, chairman and managing director of Aditya Jyot Eye Hospital in India.

Although ophthalmologists categorize sports into low, moderate and high risk categories, eye injuries come from across the whole spectrum of sports, he added, from high risk ones such as boxing, to low risk sports such as swimming and cycling.

The level of sports-related eye injuries makes it an international public safety issue that can lead to visual disability and disproportionately affects young people, said Fasika Woreta, assistant professor of ophthalmology at the Wilmer Eye Institute in the United States.

Protective gear alone could prevent 90% of eye injuries from sport, she told the audience, stressing that protection should meet international standards.

Australian optometrist and researcher Ms. Annette Hoskin said high risk sports were those that involve an implement, projectile or collision, with the most common injuries being orbital fractures, hyphaema, lacerations, and open globe injuries.

Geography and seasonal variations affect the rate of injuries and there are unique characteristics to every country in terms of injury patterns, but one common factor is the ease with which injuries could be prevented.

The ways to initiate change include community engagement, role models, and data because “before you have data it is really hard to get engagement with the community,” she said.

Protection is a good means to preventing eye injuries, she added, but it is the last, not the only one.

Ms. Hoskin suggested changing the rules of sports, particularly for children, as a way of preventing injury.

Ophthalmologists should also be aware of high risk patients, and advise them to wear protection when undertaking any potentially risky activity.

They should educate the public about what is good protection, for example advising patients not to wear glass spectacles that if hit with an object could turn what might have been blunt trauma into a penetrating injury thorough shards of glass.

In Asia, where there are high and rapidly rising levels of myopia, children should be encouraged to wear protective spectacles, not ones made from glass, she added.

It is important that standards for protective eyewear are set, as inadequate protection could make injuries worse, she added.

Ophthalmologists should also be aware of particularly dangerous sports as well as other risk factors, which include being male, nine to 14 years old, engaged in sport and on school grounds, according to her research.

Dr. Rupesh Agrawal, a consultant at the National Healthcare Group Eye Institute at Tan Tock Seng Hospital in Singapore, made a call to action, asking the audience, “Are we just giving lectures? We should do something more.”

The start to that may be IGATE, an initiative he is involved with that brings together various ocular trauma societies to tackle sports-related eye injuries.

IGATE aims to collect data on the history and circumstances of injuries that will tell ophthalmologists “what we should be aware of and concerned about.”
Ocular Manifestations in HIV/AIDS Patients in a Tertiary Referral Hospital in Indonesia from January 2014 to December 2016

Patients with HIV/AIDS may show numerous symptoms related to direct damage caused by the virus or their decreased immunity. And today, because of increased life expectancy in the era of highly active antiretroviral therapy (HAART), ocular manifestation in those patients is more common. In this study, Drs. Made Susiyanti and Lisa Maulida evaluated the ocular manifestations and profile in patients with HIV/AIDS. The doctors retrospectively reviewed medical records of new patients with HIV/AIDS that came to a tertiary referral hospital in Indonesia from January 2014 to December 2016. They also noted demographic and clinical characteristics. During the time frame studied, there were 60 new patients with HIV/AIDS that came to the hospital and only 45 patients were evaluated. Most of them were male (68.9%), with age ranging around 25-49 years (84.4%). The most common risk factor found was sexual behavior (24.4%), Cytomegalovirus (CMV) retinitis was the most prevalent diagnosis (35.6%), followed by retinochoroiditis toxoplasma (11.1%) and retinochoroiditis tuberculosis (8.9%). A total of 48.5% of subjects had both eyes involved. There were 48.3% of eyes with best corrected visual acuity (BCVA) of <3/60 at the first visit, which increased to 62.7% at the end visit. At the first visit, CD4 count of most patients was less than 200 cell/μL (48.9%), with 51.1% already on HAART at the first visit. Following the evaluation, Drs. Susiyanti and Maulida concluded that CMV retinitis, retinochoroiditis toxoplasma and retinochoroiditis tuberculosis were the three most common ocular manifestations in HIV/AIDS patients.

Evaluation of a Virtual Reality Low Vision Aid in Patients with Low Vision

Can virtual reality improve vision? To determine this, Dr. Nam Ju Moon and colleagues evaluated the usefulness of a virtual reality low vision aid (VRLVA) for patients with low vision. Their prospective study included 40 patients with low vision. They evaluated binocular best corrected distance, intermediate, near visual acuity (BCDVA, BCIVA, BCNVA), contrast sensitivity, and reading performance at baseline and at the end of study (2 weeks after the training course). When the study concluded, patients completed a self-rated functional score (SFS) and satisfaction questionnaire on their experience with VRLVA. The investigators found that after using Relumino as a VRLVA, significant improvements in BCDVA, BCIVA, BCNVA, and contrast sensitivity were found (P < 0.001 for all). Using Relumino had no effect on reading speed, but reading accuracy was significantly improved (P = 0.027). SFS also improved from a mean of 11.74 to 19.54 (P <0.001). Most of the patients were satisfied with the improvement in visual function and thought that VRLVA was a useful tool to aid low vision in daily life. These results demonstrate that Relumino provided benefits to patients with low vision in daily life. In addition, no device-related adverse events occurred throughout the study and it is believed to be safe to use.
Poster No.: EX1-014  
Panel No.: 014

Results of Femtosecond Laser-Assisted Cataract Surgery

To assess femtosecond laser-assisted cataract surgery as a method of cataract extraction, Dr. Nguyen Xuan Hiep and colleagues reported their results from a prospective study of this surgery in Vietnamese patients. From January to August 2017, 41 eyes of 32 patients with cataract underwent femtosecond laser assisted cataract surgery and intraocular lens (IOL) implantation. The visual acuity, refraction, and keratometry were evaluated preoperatively and 1 week, 1 month, and 3 months after surgery, and any complications were recorded. The authors found that this method improved the visual acuity, refraction outcomes, the accuracy of capsulorhexis and the centering of the IOL position, while the accurate incisions reduced corneal astigmatism. The postoperative uncorrected distant visual acuity (UDVA) was 20/40 or more at 1 week, 1 month, and 3 months (in 87.8%, 92.7%, and 97.6% of the eyes, respectively); the rate of UDVA of 20/25 at 3 months was 73.2%. The postoperative refraction spherical equivalent was within ±0.50 diopters (D) and ±1.0 D at 3 months (in 82.9% and 95.2% of the eyes, respectively). The average preoperative corneal astigmatism was 1.30 ± 1.04 D; postoperative corneal astigmatism decreased to 0.67 ± 0.49 D. The capsulorhexis was continuous in 97.6% of the operated eyes. The frequency of IOL in the centered position was 100%. The rate of complications was low with 9 patients developing fine subconjunctival hemorrhage and eye redness. Two patients had mild corneal edema which disappeared within less than 5 days, and there was 1 case with anterior capsule tear in a patient with intumescent cataract (2.4%).

Poster No.: EX1-282  
Panel No.: 282

New Anti-VEGF Therapy Protocol for Macular Edema Associated With Retinal Vein Occlusion

While, anti-vascular endothelial growth factor (VEGF) agents are effective for retinal vein occlusion (RVO) with macular edema, recurrence is common. Because effect varies widely among RVO patients, it is difficult to set the protocol for anti-VEGF therapy. To determine a new estimated follow-up interval for anti-VEGF therapy, Dr. Hidetaka Noma and colleagues investigated the relationship between recurrence of macular edema and the visual prognosis while monitoring cytokine kinetics. After the first dose of anti-VEGF, the authors examined 37 RVO patients every 2 weeks until recurrence. Aqueous humor levels of VEGF, soluble VEGF receptor (sVEGFR)-1, sVEGFR-2, and inflammatory factors were measured by the suspension array method. They found that after the first dose of anti-VEGF therapy, anti-VEGF therapy at the estimated interval (set by examination every 2 weeks until recurrence), the patients maintained significantly improved best corrected visual acuity with reduction of sVEGFR and inflammatory cytokines. These findings suggest that anti-VEGF therapy at every estimated interval maintains best corrected visual acuity, which is supported by the finding that sVEGFR and inflammatory cytokines are reduced by this approach.

Poster No.: EX1-062  
Panel No.: 062

Effect of a Tight Necktie on Intraocular Pressure

Could wearing a tight necktie increase intraocular pressure (IOP)? Nothing that many patients wear tight neckties throughout the day, Dr. Sharfuddin Ahmed hypothesized that this may elevate IOP by increasing episcleral venous pressure. So, if the patient consistently were to wear a tight necktie as a normal preference in daily life, this could lead to a sustained increase in IOP and could predispose to the development of glaucomatous optic neuropathy. Using Goldmann applanation tonometry, Dr. Ahmed evaluated the effect of tight neckties on 60 eyes of 30 normal subjects and 30 with open angle glaucoma. The patients were all male, had best corrected visual acuity of 6/12 or better, and wore collared shirts. IOP was measured with an open shirt collar, 3 minutes after placing a tight necktie, and 3 minutes after loosening it. All measurements were made by the same examiner. The investigator found that mean IOP in normal subjects increased by 2.2 mm Hg and in glaucoma patients by 1.4 mm Hg. In normal subjects, IOP in 12 eyes was increased by ≥2 mm Hg and in 9 eyes by ≥4 mm Hg. In glaucoma patients, IOP in 10 eyes was increased by ≥2 mm Hg and in 7 eyes by ≥4 mm Hg. These results led Dr. Ahmed to conclude that a tight necktie increases IOP in both normal subjects and glaucoma patients and could affect the diagnosis and management of glaucoma.
Step aside, conventional lasers. Smart lasers are here to stay. The all-digital navigated retinal laser Navilas provides precise accuracy of laser treatments and proves an indispensable teaching aid whilst ensuring comfort to the patient.

The latest Navilas 577s (OD-OS, Teltow, Germany) enables physicians to pre-plan laser therapy on diagnostic images, and implement the treatment map using computer guidance.

The system performs focal laser treatments without a contact lens, and uses infrared illumination rather than an uncomfortable bright light, setting the patient at ease and ensuring a more comfortable treatment.

Dr. Jay Kumar Chhablani, of the LV Prasad Eye Institute, India, said that once he started using the system 7 to 8 years ago, he has never looked back. He explained that the best part about the system is that it has taken away the presumption of treatment because it allows you to do the laser planning on the computer. With conventional lasers, a supervisor may tell you where to do the laser treatment but it is the fellow who decides where to put the mark as both the supervisor and the fellow cannot see the same thing at the same time.

"With this system, I can ask my fellow surgeons where they are going to do the treatment so he goes and marks the spot and I can tell him if it is the wrong area or not. This is a phenomenal advantage for teaching. The precision of Navilas, which has been shown in our papers, is almost 97%," he said.

"It also has an eye tracker, so when the eye moves, the laser will stop which is not possible with the conventional laser. It is one of the biggest innovations in the field of laser. I personally feel it has really changed laser treatments. I cannot remember the last time I used a conventional laser. I can't rest when my fellows are using conventional lasers, I don't see where they are placing the laser."

In summarizing the advantages, he said: "It is a computer-based laser planner, an excellent tool for education; it has an eye tracker, and provides documentation. When you click the button you can save all the information. You know exactly where you did the laser treatment previously. Otherwise, there is no documentation with the conventional laser."

The 577s can be used for treatment of diabetic macular edema, choroidal neovascularization (CNV), central and branch retinal vein occlusion (RVO), lattice degeneration and retinal tears (laser retinopexy), among others.

In a paper written by Dr. Chhablani and colleagues, conventional laser delivery systems were found to have many limitations including questionable accuracy, need of contact lens with local anesthesia, and inadvertent damage to fovea. The navigated laser system with computer-based laser planning and laser treatment without contact lens achieves improved patient compliance, improved accuracy, and treatment ease for the physician, efficient panretinal photocoagulation pattern laser, excellent documentation, and advanced laser training. The article compared navigated laser systems with available conventional and PASCAL laser systems based on the literature and personal experience of the authors.

With all these advantages, the Navilas system takes patient management to a much more advanced level.

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