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Kuala Lumpur, Malaysia
Day 3

APVRS SHOW DAILY

The Official Conference News of APVRS 2017

by pie magazine
posterior segment • innovation • enlightenment

Highlights

Jumpa Lagi KL, Annyeonghaseyo SEOUL!

(See you again KL, Hello Seoul!)

by Gloria D. Gamat

More than 1800 delegates of the APVRS 2017 Congress were treated to a feast in true Malaysian fashion at the Congress party last night after a 2-day rigorous scientific schedule. This year's robust scientific program, including eight masterclasses, four strong keynote presentations and more than 170 international speakers, proved more than enough for delegates, trainees and fellows to have their fill of new knowledge in the vitreo-retina sub-specialty, straight from world-renowned experts.

The team effort of the APVRS Central Secretariat and the local hosts, the Malaysian Society of Ophthalmology (MSO), has certainly paid off. The banquet halls and lecture rooms in the last 2 days were mostly packed with attendees. Also, various records were surpassed this year, including the inaugural International Lecture Award and, the most number of abstracts submitted in APVRS Congress history. Indeed, vitreo-retinal advances in ophthalmology are increasing exponentially with crucial relevance in the Asia-Pacific region, especially in Southeast Asia.

Thank you Kuala Lumpur, it has been most valuable and fun; see you all again next year in South Korea. The 12th APVRS Congress will be held in Seoul with help from The Korean Retina Society (KRS).

Photo of the Day

The Phoenix ICON and its young companion

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START STRONG STAY STRONG[1-5]

wAMD | DME | RVO | mCNV

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ABBREVIATED PRESCRIBING INFORMATION

Brand name of product EYLEA 40mg/ml solution for injection. **Approved name of the active ingredient** Aflibercept. **Indication:** Treatment of neovascular (wet) age-related macular degeneration (wet AMD), visual impairment due to macular edema secondary to retinal vein occlusion (branch RVO or central RVO), visual impairment due to diabetic macular edema (DME) and visual impairment due to myopic choroidal neovascularization (myopic CNV). **Dosage and method of administration** The recommended dose for Eylea is 2 mg aflibercept, equivalent to 0.05mL (50 µL); **Neovascular (wet) age-related macular degeneration (wet AMD):** Eylea treatment is initiated with one injection per month for three consecutive doses, followed by one injection every two months. After the first 12 months of treatment with Eylea, based on visual and/or anatomic outcomes, the treatment interval may be extended, such as with a treat-and- extend dosing regimen; **Visual impairment due to macular edema secondary to retinal vein occlusion (branch RVO or central RVO):** After the initial injection, treatment is given monthly. Monthly treatment continues until maximal visual acuity is achieved and/or there are no signs of disease activity. Three or more consecutive, monthly injections may be needed. Treatment may then be continued with a treat and extend regimen with gradually increased treatment intervals to maintain stable visual and/or anatomic outcomes, however there are insufficient data to conclude on the length of these intervals; **Diabetic macular edema (DME):** Eylea treatment is initiated with one injection per month for five consecutive doses, followed by one injection every two months. After the first 12 months of treatment with Eylea, and based on visual and/or anatomic outcomes, the treatment interval may be extended, such as with a treat- and-extend dosing regimen; **Myopic choroidal neovascularization (myopic CNV):** Single intravitreal injection is recommended. Additional doses may be administered if visual and/or anatomic outcomes indicate that the disease persists. Recurrences are treated like a new manifestation of the disease. The interval between two doses should not be shorter than one month. **Contraindications** Eylea is contraindicated in patients: with ocular or periocular infection; with Active severe intraocular inflammation; with Known hypersensitivity to aflibercept or to any of the excipients. **Special warnings and special precautions for use** **Endophthalmitis:** Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay and should be managed appropriately. Increase in intraocular pressure: **Increases in intraocular pressure** have been seen within 60 minutes of an intravitreal injection, including with EYLEA. Special precaution is needed in patients with poorly controlled glaucoma. **Other:** The safety and efficacy of Eylea therapy administered to both eyes concurrently have not been systematically studied; In the event of a retinal break the dose should be withheld and treatment should not be resumed until the break is adequately repaired; The dose should be withheld based on the clinical judgement of the treating physician, in the event of a performed or planned intraocular surgery; EYLEA should not be used during pregnancy unless the potential benefit outweighs the potential risk to the fetus. EYLEA is not recommended during breast-feeding. **Undesirable effects** The most frequently observed adverse reactions (in at least 5% of patients treated with EYLEA) were conjunctival hemorrhage, eye pain, cataract, intraocular pressure increased, vitreous detachment and vitreous floaters. **For further prescribing information, please contact** Bayer Co. (M) Sdn Bhd, B-19- 1 & B-19- 2, The Ascent Paradigm, No. 1, Jalan SS 7/26A, Kelana Jaya, 47301 Petaling Jaya, Selangor. Subject to medical prescription. **Date of text revision** 18.05.2017.

For Healthcare Professionals only

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SURGERIES GO DIGITAL WITH 3D VISUALIZATION

by Hazlin Hassan

Vitreo-retinal surgery is undergoing a digital revolution as pioneering surgeons use 3D visualization technology in their operating theaters.

Yesterday, several surgeons from around the region shared their experiences on using the NGENUITY 3D Visualization System (Alcon, Fort Worth, Texas, USA).

Benefits include better ergonomics for surgeons, improved visualization, and potential for greater safety.

They noted that any case that can be done using a conventional microscope can also be done with the system.

Based on their experiences, the 3D visualization works well for complex vitreo-retinal surgeries. It can be used in the most complicated of cases with good results.

Associate Professor I-Van Ho, vitreo-retinal surgeon and macular specialist at the Sydney Eye Hospital, Australia, said that the 3D system allowed for high magnification which is vital to certain surgical steps.

Prof. Lu Hai, of Beijing Tongren Hospital, China, cited two complicated cases in which he had used the 3D system, a 9-year-old patient with retinal detachment and a 10-year-old with Coats' Disease, retinal detachment and vitreous hemorrhage.

"These were very difficult and tough cases. If you can finish a case like this with the 3D system, then you can finish any case using it," he told the audience.

Prof. Kyu Hyung Park, Professor and Chair of the Department of Opthalmology, Seoul National University Bundang Hospital, presented on "NGENUITY DAVS Initial Experiences."

He cited advantages of the system including less neck and back pain for surgeons, and less fatigue.

Visualization was improved, and provided a more accurate procedure, with high dynamic range, high magnification, high depth of focus, extended depth of field, broad vision and multicolor channels.

Surgeons may also reduce light exposure, making it easier to focus during the procedure.

How it works is that a small camera box attaches to any microscope where the oculars usually are, and views are displayed on a monitor. The surgeon wears polarized glasses or clip-ons, sits back in the chair, and operates looking heads-up at the screen.

There are many advantages to operating with a 3D viewing system. Doctors can manipulate the images to allow their surgical views to be enhanced, making it easier to focus on certain details.

Prof. Kyu Hyung Park

Surgeons often suffer from neck and backaches after the end of a long day, and the 3D system could change all that. Some speakers said it helped reduce some of the neck pain as they do not have to stoop awkwardly during the procedure.

Another advantage is that other people attending in the operating theater can see exactly what the surgeon is seeing and vice-versa. This allows for a better educational experience. Medical students can see what is actually taking place in the same detail as the surgeons. Prof. Lu Hai cited the example of a surgeon who allowed a fellow surgeon to conduct a complicated operation thanks to the 3D system.

The surgeons yesterday stated that there is a short learning curve and noted a slight lag when bigger movements are made.

"The learning curve is very short. It is because we are using technology that we have used. Most of us have seen a 3D movie, and it is exactly the same. We are already used to operating. The jump is actually quite easy. The technology and visualization is different, but don't be scared about jumping across, within a case or two you will be onto it," said Dr. Ho.

Spotlight On:

Management of *Diabetic Retinopathy, Including DME*

by Collins Santhanasamy


Dr. Nor Fariza Ngah


Dr. Susan B. Bressler

The symposium on 'Controversies, Challenges, and Evidences on Management of Diabetic Retinopathy (DR) Including DME' was opened by Dr. Susan B. Bressler from Johns Hopkins University School of Medicine as the first speaker. She spoke on factors associated with progression of proliferative diabetic retinopathy (PDR) in eyes that are treated with pan-retinal photocoagulation (PRP) or ranibizumab (Lucentis, Novartis, Basel, Switzerland). The study was an exploratory analysis of data coming from Protocol S where participants with PDR were randomly assigned to ranibizumab or PRP to manage PDR. It was found that the rates of PDR worsening were actually higher in the PRP group when compared to ranibizumab, by a factor of 30% and in fact this difference was even greater when the study was adjusted for baseline PDR severity (70%). While anti-VEGF requires compliance to a more frequent visit schedule than PRP, the findings in this study provide additional evidence supporting the use of ranibizumab as an alternative therapy to PRP for PDR, at least through 2 years of follow-up.

Co-Chair of the symposium, Dr. Nor Fariza Ngah, Head of National Ophthalmology Service of MOH, Malaysia and Consultant Ophthalmologist and Departmental Head of Hospital Shah Alam spoke on the topic of 'Challenges in Diabetic Retinopathy Screening at National level'. She elaborated on the prevalence of DM among Malaysian adults according to the National Health and Morbidity Survey (NHMS) of Malaysia stating that every time the survey is conducted, an alarming increase in prevalence is observed. The highest prevalence according to the 2015 survey was in Kedah (25.4%), followed by Perlis (20.6%) and Johor (19.8%). According to ethnicity, incidence amongst the Indians was highest (22.1%), followed by Malays (14.6%) and the Chinese (12.0%). This alarming trend lead the World Health Organization (WHO) to estimate that by 2030, Malaysia would have 2.48 million cases of DM. A survey done in the ASEAN region in 2010 showed that Malaysia had the highest prevalence of overweight and diabetic patients in the region.

In order to address this issue, the Diabetic Retinopathy Screening (DRS) Program was started in Malaysia in 2010 with the latest Clinical Practice Guidelines (CPG) updated this year. The screening program is conducted at all 3 levels of healthcare in Malaysia. Because of this 3 tier-system, Malaysia does not currently have the statistical data to analyze the percentage of DR amongst the diabetic population. However a study conducted in 2007-2008 of 22,870 patients at the tertiary care level showed that 72% never had an eye examination before with 27% having low vision. Enhancing the DRS program now involves a multidisciplinary approach which is primarily focused at creating awareness in the primary care personnel population as well as the general public.

Dr. Susan M. Malinowski from Retina Consultants of Michigan presented on the topic of 'Centrifuged Intravitreal Triamcinolone Acetonide (TA) a.k.a Slurry Kenalog®' which is an easy, quick, and inexpensive alternative to long term steroid delivery. A single injection of Slurry Kenalog® lasts an average of 8.4 months. With the cost of a 2-year therapy only at $29 for 2.9 injections, it is a viable treatment option for patients who cannot afford more expensive treatments.
The idea behind this is that the TA in suspension can be centrifuged to form a long acting depot. The larger the depot, the longer the duration of effect. The steroid can be concentrated by millipore filtration, sedimentation or centrifugation, of which, the last option is the cheapest. It can be delivered via injection using a 30G needle.

Dr. Malinowski has used this method for 7.5 years, performing 257 injections on 52 patients translating into 63 eyes with an average follow-up of 39 months per eye with no serious adverse events and an acceptable side effect profile. A delegate from Indonesia commented that he used this method on 4 patients in the last few months in Indonesia and the result displayed in one particular patient presenting with central retinal vein occlusion with chronic macular edema was 'simply spectacular' with the swelling decreasing by 50% in one day.

APVRS 2017 Lecture Awardees

Share Life Wisdom and Clinical Pearls

by Khor Hui Min

The late Dato' Dr. Keshmahinder Singh (1921-2007) was widely regarded as the 'Father of Malaysian Ophthalmology' or the 'Doyenne of Malaysian Ophthalmology'. He was a founding member of the Malaysian Medical Association Ophthalmological Society (MMAOS) in 1964. He was also the president of the Asia-Pacific Academy of Ophthalmology (APAO) Congress in 1987.

The winner of the Keshmahinder Singh Award is a distinguished person in the field of ophthalmology who has made valuable contributions to the discipline. On 9 December 2017, the Award was presented to Dr. Andrew Chang by the daughter of the late Dato' Dr. Keshmahinder Singh. Dr. Andrew Chang is a clinical associate professor at the University of Sydney. He is a consultant vitreoretinal surgeon and the head of the Retinal Unit at the Sydney Eye Hospital. He is also the medical director of Sydney Retina Clinic. Besides that, he serves as the Secretary and Committee Member of the Asia-Pacific Vitreo-retina Society, and Chair of the New South Wales Royal Australian and New Zealand College of Ophthalmologists (RANZCO). On top of that, he is a clinical advisor to the Department of Health Australia. Thereafter, Dr. Andrew Chang gave the first lecture, which was on 'Vitreoretinal Surgery—An Unexpected Adventure'.

He shared the wisdom he gained over the years. Firstly, listen to your patients, because they are trying to tell you the diagnosis. Secondly, never assume that the better eye will always remain so. Try your best to restore sight even in the worst eye. Finally, you have two hands, left and right, so use them! He discussed clinical trials in vitreo-retinal (VR) surgery, VR surgery for age-related macular degeneration (AMD), vitrectomy technology, macula hole surgery, and epiretinal membrane (ERM) peeling, among others.

The APVRS International Award recognizes individuals from outside the Asia-Pacific region for outstanding contributions in advancing the understanding, diagnosis and treatment of vitreo-retinal diseases. This year, the award was given to Dr. Neil M. Bressler, who is the Chief of the Retina Division in the Wilmer Eye Institute (Department of Ophthalmology), as well as Chairs of the National Institute of Health, the National Institute's Data and Safety Monitoring Committee, and the US Food and Drug Administration Ophthalmic Devices Panel. He is also the President of the Macula Society and the Editor-in-Chief of JAMA Ophthalmology.

Prof. Neil M. Bressler

Prof. Neil M. Bressler gave a lecture on 'Revolution in Diabetic Retinopathy Management—A Race Against Time'. He spoke about public attitudes about eye and vision health, sharing results from a Research America poll on what the public perceived as having the greatest impact in daily life. Apparently, the majority of Americans, regardless of ethnicity, regarded blindness as having the greatest impact in their lives. He said that diabetic retinopathy (DR) affected 7.7 million Americans in 2010, and is predicted to affect 14.6 million Americans in 2050, with an estimated 2 million that have diabetic macular edema (DME). Diabetes is a disease that has a global impact, with 347 million people who suffer from the disease worldwide. The prevalence of diabetes is highest among those 40 to 59 years of age. Fifteen years after diagnosis of diabetes, 2% of patients become blind, while 10% will develop severe visual impairment.

Dr. Andrew Chang

Prof. Bressler also shared about the Diabetic Retinopathy Clinical Research Network (DRCR.net), a collaborative network dedicated to facilitating multicenter clinical research of diabetic retinopathy, age-related macular degeneration (AMD), hereditary retinal degenerations and other retinal diseases. The network is open to sharing data both with- or without scientific collaboration, including both published and unpublished data. Interested parties can send their requests to drcrnet@jaeb.org via the analysis/manuscript idea form.

Aflibercept Monotherapy Continues to Provide Better Results in PCV Management

by Collins Santhanasamy

The symposium on Advances in Polypoidal Choroidal Vasculopathy (PCV) Management was moderated by a 3-member panel consisting of Associate Professor Adrian Koh (Singapore), Professor Shibo Tang (China) and Dr. Wong Jun Shyan (Malaysia).

Dr. Tock H. Lim from the National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, who is also a Visiting Professor at Universiti Kebangsaan Malaysia presented on the topic of 'PCV Prevalence and Diagnosis'.

PCV was first described by Yanuzzi (*Mac Soc, 1982*) and over the last 10 years there have been a lot of changes in the understanding of the disease which has been brought about by better imaging techniques. For the last 3 to 4 decades, the primary imaging technique for diagnosis of PCV was done by indocyanine green angiography (ICGA). However in the last 2 decades, with technological advancement and the development of confocal scanning laser ophthalmoscope (CSLO) angiography, we can now visualize the branching vascular network better. This allowed us to understand that it is a bi-component disease.

Dr. Oh Woong Kwon, Professor Emeritus of Yonsei University, vitreoretinal specialist and director of the Retina Center, Nune Eye Hospital in Seoul, South Korea, spoke on the 3 novel patterns of polypoidal lesions seen on OCTA, namely, 'Luminal', 'Rosette' and 'Network' types. He shared his study results where he discovered that the shapes of the polypoidal lesions could change into another patterns on OCTA after serial treatments of anti-VEGF.

Professor and Chairman of the Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medicine, Nagoya, Japan, Dr. Yuichiro Ogura presented the 2-year results from the PLANET Trial, a 96-week, randomized, double-masked, sham-controlled phase 3b/4 study conducted at 62 sites in Asia and Europe. The first year results of this study were presented at the 10th APVRS meeting last year suggested that the rescue PDT showed no additional functional benefits. The aims of the PLANET study were to investigate the efficacy and safety of the intravitreal aflibercept (IVT-AFL) injection and to compare IVT-AFL monotherapy with IVT-AFL plus rescue photodynamic therapy (PDT) in patients with PCV.

Treatment of 3-monthly injections was initiated in 333 patients, and at week 12, 318 patients were randomized into two groups. The AFL + sham PDT group which received only AFL monotherapy, or the AFL 2mg + rescue active PDT. From week 12 to 52, all patients who did not qualify for rescue were treated with fixed 2q8 injections (2 mg aflibercept every 8 weeks). If rescue criteria were met, patients received AFL 2q4 plus sham or active PDT. From week 52 to 96, patients not meeting rescue criteria could be kept on fixed 2q8 or be treated using a treat-and-extend regimen.

Baseline demographics were similar between the groups. Over 90% patients were Asians and almost half of the patients were Japanese. The baseline BCVA was 57.7 ETDRS letters and 59.0 letters in each group and at week 12, only 5-6% patients required rescue therapy.

The results showed an improved BCVA in the both groups that were well maintained up to week 96 and that AFL monotherapy was non-inferior to AFL + active PDT in mean BCVA change. Over 80% of patients did not require rescue treatment during the 96 weeks of the study. On the other hand, the AFL + sham group maintained the visual acuity gains of the first year until the end of the study, the AFL + PDT group has lost almost 5 letters from week 52 to week 96 and very few patients lost visual acuity of 3 lines or more at Week 96 in both groups. The mean change in CST from baseline to Week 96 showed no difference between the groups. The percentage of patients with no active polyps at week 96 was 82.1% in the IVT-AFL + sham PDT and 85.6% in the IVT-AFL + rescue PDT, respectively. About 30% of patients showed complete polyp regression at Week 96. At week 52, the numbers were higher, which means some patients had recurrence of polyps.

Dr. Yuichiro Ogura concluded that the findings of the study suggested that AFL monotherapy for the treatment of PCV resulted in an improvement in BCVA of 10.7 ETDRS letters over 96 weeks and at Week 96, more than 80% of patients in the AFL monotherapy and AFL + PDT groups had no evidence of active polyps on ICGA.

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The 12th APVRS

Congress of Asia-Pacific Vitreo-retina Society

SEOUL 2018

December 14 - 16

Coex Convention and Exhibition Center, Korea

IMPORTANT DATES

Abstract Submission Opens	April 1, 2018
Early-bird Registration Opens	April 1, 2018

NOVARTIS LUNCH SYMPOSIUM

ADVANCES IN nAMD MANAGEMENT. IMPROVING OUTCOMES WITH EFFECTIVE INDIVIDUALIZATION

Date : Sunday, 10 December 2017
Time : 12:45 - 13:45
Venue : Conference Hall 3, Kuala Lumpur Convention Centre

AGENDA

Time	Topics	Speakers
1245 - 1250	Welcome & Introduction	**Prof. Hiroko Terasaki** Nagoya University, Japan
1250 - 1305	Anti-VEGF's in nAMD :Evolution of Treatment Regimens and Emerging Important Clinical Considerations	**Prof. Wong Tien Yin** Singapore National Eye Centre, Singapore
1305 - 1320	Ranibizumab Raising the Bar in nAMD: Insights from RIVAL 12 Months Results	**Prof. Ian McAllister** Lions Eye Institute, Australia
1320 - 1335	Real World Experience with Anti-VEGF in nAMD Management	**Prof. Lim Tock Han** Tan Tock Seng Hospital, Singapore
1335 - 1345	Q & A and Summary	**Prof. Hiroko Terasaki** Nagoya University, Japan

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SPEAKER: **A/Prof. Adrian Koh** *(Singapore)*

Everest II

> 9th December, 2017 > 11.30 – 11.40 > Banquet Hall, KLCC

EVEREST II Trial: 2-Year Results

Ranibizumab + vPDT
Optimal VA Gains with Fewer Injections

by Collins Santhanasamy

The banquet hall of the Kuala Lumpur Convention Center (KLCC) was packed to near maximum capacity yesterday as delegates from around the world crowded the hall in anticipation of the exciting announcement of the results of the much awaited EVEREST II study which has been running for 2 years. The goal of the EVEREST II was to study and compare the efficacy and safety in 2 treatment options for polypoidal choroidal vasculopathy (PCV).

A combination therapy of ranibizumab 0.5mg and verteporfin photodynamic therapy (vPDT) was compared to monotherapy ranibizumab 0.5 mg in the EVEREST II study over a period of 24 months in symptomatic macular PCV patients. A total of 322 patients from 42 sites across 7 Asian countries including Hong Kong, Japan, Malaysia, Singapore, South Korea, Taiwan and Thailand participated in this 1:1 randomization study.

Professor Dr. Adrian Koh, MBBS (S'pore), FRCS(Eden), MMed (Ophth), FRCOphth, FAMS, presented the results to the eager audience who listened intently. Dr. Koh is the Founding Partner and Senior Consultant at the Eye & Retina Surgeons, Camden Medical Centre in Singapore. He is also the Director of Retinal Centre International, and Vice-President of the International Retinal Foundation.

Prof. Koh announced that there were two important outcomes from this study. The first was that the visual acuity gained was 9.6 letters in the combined group as compared to 5.5 letters in the ranibizumab monotherapy group which was a highly statistically significant finding. The second important outcome was that the percentage of complete polyp progression at 2 years was more than double in combination therapy (56.6%) as compared to monotherapy (26.7%)!

Furthermore, both the mean change in best corrected visual acuity (BCVA) and the BCVA gains of the combination therapy group at month 24 were better than the monotherapy group with both treatments allowing patients to avoid visual loss.

This showed that the excellent results seen in month 12 were maintained even until Month 24 and that more superior results were observed in combination therapy in respect to improving BCVA and achieving complete polyp regression from baseline to Month 24.

The change in central subfield foveal thickness (CSFT) from baseline up to Month 24 was at 152.9 microns which held steadily from Month 3 onwards; 69.6% patients who were treated with combination therapy also had fluid free retinas at Month 24 as compared to only 47.1% in monotherapy and in fact, 58% of these patients in the combined therapy group had no signs of disease activity at all.

Indeed, many researches thought that the use of vPDT would increase the risk of hemorrhage but this was not so. Verteporfin injection is used in combination with photodynamic therapy to treat abnormal growth of leaky blood vessels in the eye. The median number of vPDT treatments administered on patients was 2. "This relieved some of our fears that multiple, repeated times of vPDT would cause progressive atrophy. We did not find any safety signals here," Dr. Koh emphasized.

The median number of ranibizumab injections administered prior to Month 24 in combination therapy was half (6) the amount of injections in the monotherapy. Interestingly, about one third of the patients did not require significantly more injections from the initial loading dose. All patients were required to have one vPDT and 3 ranibizumab 0.5mg injections in the first 3 months and that was all that they required for the rest of the 2 study while 19.5% of patients in the monotherapy group required 20-24 monthly injections during the 2-year study.

As expected, due to the decreased number of injections, patient compliance was greater with 87% of patients adhering to the treatment protocol as compared to only 77% in the monotherapy group.

A delegate from the audience commented that he thought that the EVEREST II trial should really affect treatment protocols around the world and that it was highly applicable. "It is a really important thing to decrease treatment burden and improve vision. I really think that it is important for the United States, Europe and other parts of the world to be made aware of this study. Many patients have persistent sub-retinal fluid and if we can use vPDT on those patients, we could get the fluid to go away with good visual results and a decrease in treatment burden."

"The real problem of this is that we do not have a vPDT laser so I think that the medical community has to come together and make a vPDT laser for the world." To which Dr. Koh commented that he believed that there were indeed plans by certain companies to revive the manufacture and distribution of vPDT lasers so that it becomes more available in the future.

"On behalf of the EVEREST team, I would like to thank all collaborators, investigators and patients who took part in this important study," Prof. Koh concluded.

PCV Sufferers Can Rejoice Over Better Treatment Option

Professor Tien Yin Wong

by Hazlin Hassan

Polypoidal choroidal vasculopathy (PCV), a disease found more frequently in the Asia-Pacific region than in Caucasian communities, may soon be treated with aflibercept monotherapy, instead of aflibercept plus rescue photodynamic therapy (PDT).

According to 2-year results from the PLANET study, conducted to determine the efficacy and safety of aflibercept monotherapy versus aflibercept with rescue PDT, aflibercept monotherapy was found to have led to favorable vision gains and high rates of polyp inactivation.

This could help doctors to do away with costly equipment, unnecessary treatments, while at the same time help patients avoid unwanted side effects linked to PDT, resulting in a simpler, and better, regimen.

The PLANET study demonstrates that aflibercept monotherapy is non-inferior to treatments using aflibercept plus active rescue PDT, said Professor Tien Yin Wong, Singapore National Eye Centre, during the Bayer Satellite Symposium yesterday titled "Eylea: Extending Horizons In The Management of nAMD And PCV."

The data also showed that with aflibercept (Eylea, Bayer, Leverkusen, Germany), patients gain many more letters of visual acuity than with ranibizumab (Lucentis, Novartis, Basel, Switzerland). Polyps were also inactivated in more than 80% of patients.

Prof. Wong explained that at week 52, patients gained more than 10 letters, and this was maintained to week 96; 94% of patients avoided loss of 15 letters or more over 96 weeks. Seventy seven percent (77%) of patients had a dry retina at week 12, with 81% remaining dry by week 96; 80% had inactive polyps at week 52, and this remained at week 96.

More than 80% of patients required no rescue PDT treatment over the 2-year period.

Treat-and-extend was allowed in the second year of PLANET as an alternative to fixed dosing. Intervals of 10 and 12 weeks were used for 55% and 39% of patients, respectively. Patients with 10- and 12-week intervals had outcomes similar to the overall population and a reduction of 1-2 injections compared with patients receiving fixed dosing.

It was noted that some clinics lack access to PDT and indocyanine green angiography (ICGA), but ICGA is required in order to guide PDT. This lack of access to the necessary equipment, as is often the case in Asia-Pacific, is a key barrier to utilizing PDT in PCV treatment. Hence aflibercept provides the best visual outcomes for patients.

Aflibercept monotherapy has several advantages over PDT combination therapy, said Professor Won Ki Lee, from Seoul St. Mary's Hospital, South Korea. It avoids potential side effects associated with long-term PDT use, is a simple regimen not requiring access to specialist and provides excellent outcomes in diverse disease subtypes, he said. "After positive outcomes with aflibercept monotherapy, questions have been raised concerning the role of PDT combination in the treatment of PCV," he told the symposium audience.

Professor Masahito Ohji, Shiga University of Medical Science, Japan, presented on data from the ALTAIR Treat and Extend study which adds to the growing body of evidence supporting the use of monotherapy. The Phase IV ALTAIR clinical trial evaluated the efficacy and safety of aflibercept with variable treatment intervals in Japanese patients with nAMD. It was found that the efficacy of aflibercept treat-and-extend regimens remains with either 2- or 4- week adjustments.

PCV is a subtype of exudative age-related macular degeneration (AMD) that can cause permanent vision loss due to hemorrhage, exudation, macular edema, and disciform scar formation. In view of the potential visual loss associated with the natural history, PCV patients should therefore be treated accordingly. Anti-VEGF monotherapy is standard of care for treatment of AMD.

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Up-Close and Personal with

The Vitreo-Macular Interface

by Khor Hui Min

The surgical retina symposium started off with a presentation on 'Allogenic Lens Capsule Transplant for Macular Hole' by Dr. Peiquan Zhao, from the Eye and ENT Hospital, Shanghai Medical University, China. He discussed the challenges for refractory macular holes (MHs), such as cases of internal limiting membrane (ILM) flap usually not available, and chronic and/or giant MH. He also talked about the superiority of capsular flap – basement membrane, higher density compared to ILM, and more easily available than ILM. In previous research, capsular flap transplantation was feasible, there was a higher rate of MH closure, and the closure of anterior capsular flap was higher than the posterior capsular flap (100 percent vs. 50 percent). New developments of Dr. Zhao's study include lens capsular flap exposed to distilled deionized water (DDW) for 5 minutes eliminating epithelial cells, and that allogenic lens capsular flap could bridge the hole edge and facilitate hole closure without significant complications. He concluded that both allogenic and autologous lens capsular flap transplantation have high closure rate and visual acuity improvement in MHs. Also, longer follow-up with more cases is needed to evaluate the long-term effects of this technique.

Furthermore, Dr. Shobhit Chawla, the medical director of Prakash Netra Kendr (PNK), Lucknow, India, presented on 'The Versatile ILM'. The ILM is the boundary that establishes the contact and communication point of two compartments, the retina and vitreous. Vitrectomy is performed to release the pathological influence of the vitreous on the retina and is useful in restoring the normal anatomical shape of the macula and improving visual acuity. The removal of the ILM has been a major advancement in vitrectomy in the past 15 years, but the surgical technique of ILM peeling may unintentionally injure the underlying retina. ILM peeling is used today to treat various vitreo-retinal disorders, including MHs.

The presentation entitled 'Foveolar Architecture Reconstruction ILM Surgery of Traction Maculopathy' was delivered by Dr. Tzyy-chang Ho from the National University of Taiwan. He described the different types of MHs – myopic MH, large MH and chronic MH. He also spoke about inverted ILM flap techniques, which was first described by Michalewska in 2010. Then, he discussed on the role of inverted ILM flap in hole closure in our present day. He said that foveolar architecture reconstruction is the key to visual acuity recovery.

Dr. Se Woong Kang from Sungkyunkwan University Seoul, South Korea, presented on 'Atypical Epiretinal Tissue (AET) in Full-Thickness Macular Hole (FTMH)'. He began his talk with AET in Lamellar MH (LMH), which he described as a mound of homogenous medium reflectivity located on the epiretinal surface, without contractile property. For visually significant lamellar hole with AET, vitrectomy with stripping of ILM seems beneficial. His study was focused on identifying the clinical characteristics of FTMH with AET, and to expand the spectrum of pathogenesis of MH. The AET was noted in about 10 percent of idiopathic FTMH. At least a part of the FTMH with AET may come from LMH, via unique vitreous adhesion to foveal tissue. The presence of AET was related to poorer anatomical success and less visual recovery after surgery, suggesting that AET reflects a chronic pathogenic process involving more severe damage to the foveal tissue.

In Dr. Mustafa Iqbal's presentation, entitled 'What is the Ideal Management of Optic Disc Pit Related Maculopathy?', he discussed the pathogenesis and treatment of maculopathy associated with cavity optic disc anomalies. The unifying anatomic theme of these anomalies is the presence of a scleral (or laminal cribrosa) defect permitting anomalous communications between intraocular and extraocular spaces.

Dr. Peter Stalmans of UZ Leuven, Belgium presented on 'Best Treatment for Vitreomacular Traction (VMT): Ocriplasmin, Pneumatic Vitreolysis or Vitreotomy'. He spoke on the pathogenesis, incidence and spontaneous evolution of VMT. He compared and discussed the efficacy, safety, cost and scientific evidence associated with ocriplasmin, surgery and pneumatic treatments.

Dr. Tom H. Williamson of St Thomas' Hospital, London presented on 'Macular Epiretinal Membrane (ERM) Surgery, is ILM Peel Required?' It can be difficult to determine the nature of membranes pre- or intraoperatively, while combined ERM-ILM specimens may be more common than previously recognized. He discussed the pros and cons of ILM removal. In a meta-analysis in 2017, in 1286 selected eyes, the recurrence rate of ERM was significantly lower with ILM peeling than with no ILM peeling (odds ratio 0.25; 95% CI 0.12-0.49; $P < 0.0001$).

The final presentation of the symposium was 'The Vitreoretinal Interface by Blinding Retinal Disease: Perspectives on Gene, Stem Cell, and Cell-based Therapy' by Dr. Suber Huang of the Retina Center of Ohio, USA. He explained that gene therapy is not stem cell therapy, gene editing or cell-based therapy. He then spoke about retinal gene therapy, where there are three uses – replacement/compensation, long-term drug delivery, and insertion of a new gene.

Dr. Peiquan Zhao

Dr. Shobhit Chawla

Dr. Tzyy-chang Ho

Dr. Se Woong Kang


Dr. Mustafa Iqbal


Dr. Peter Stalmans


Dr. Tom H. Williamson


Dr. Suber Huang

Scenes, and Behind-the-Scenes, @ APVRS 2017

WHEN FRONT AND BACK COLLIDE

by Khor Hui Min

The symposium on 'Managing Anterior Segment Surgery Complications' began with a presentation by Dr. Lawrence Lee of City Eye Centre on 'Vitreoretinal (VR) Complications of Glaucoma Surgeries'. He discussed traumatic glaucoma, nanophthalmos, aqueous misdirection, massive choroidals, giant retina tear (GRT) vitrectomy in molteno tube, uveitis and glaucoma, recurrent vitreous hemorrhage, and Uveitis-Glaucoma-Hyphema (UGH) Syndrome.

Dr. Vijaya Lingam from Sankara Netbralaya, Chennai, closely followed with a a presentation on 'Management of Glaucoma Caused by Retinal Detachment Surgery'. She talked about glaucoma with retinal detachment, scleral buckling, pars plana surgery, intravitreal gas, silicone oil injection, and pupillary block. She also discussed secondary glaucoma due to silicone oil trapped in the posterior chamber, and emulsified oil in superior angle. She emphasized on the role of the glaucomologist, especially in making decisions about combined surgery, recommendations for conjunctival incisions, postoperative follow-up, and also taking care of surgery induced glaucoma.

Dr. Kian Seng Lim from the International Specialist Eye Center presented on 'Choroidal Effusion'. He started off by speaking about choroidal detachment and choroidal effusion. He then discussed the risk factors, which are glaucoma surgery over-filtration/leak, hypotony, medications (IOP-lowering, MMC), iridotomies, post-vitrectomized eyes, inflamed eyes (scleritis), Sturge Weber syndrome, nanopthalmos, and uveal effusion syndrome. He also talked about the signs, management and complications of choroidal effusion.

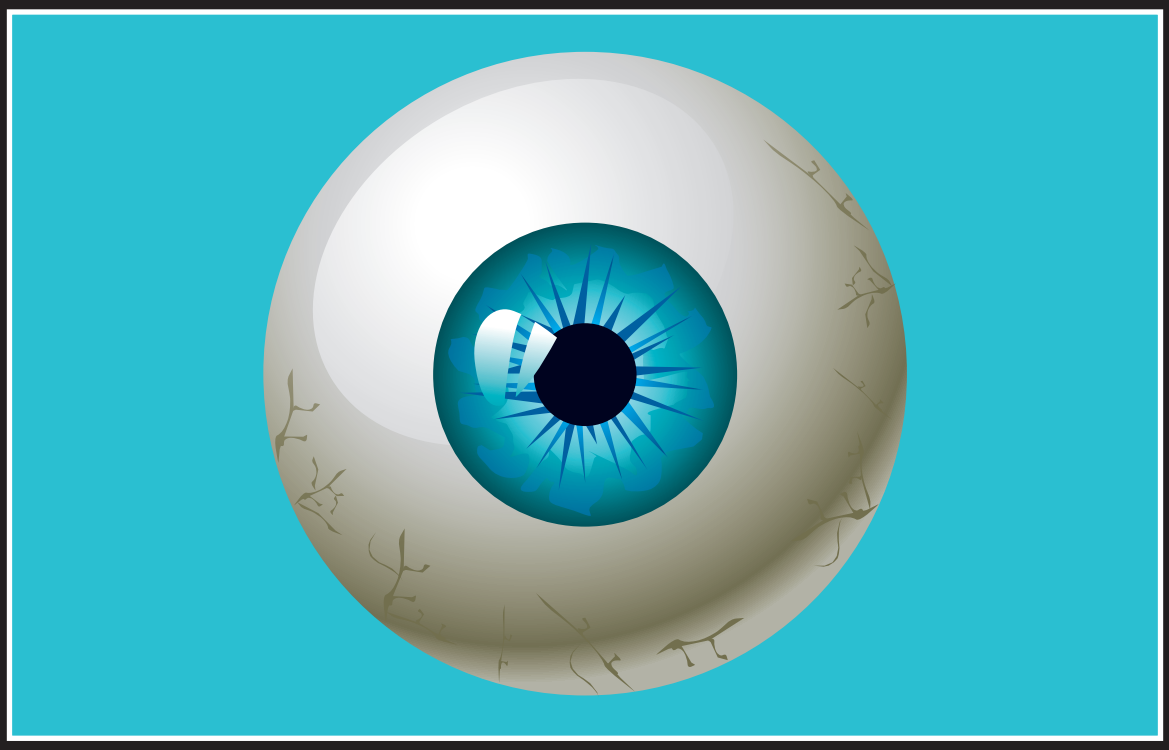
Prof. Dr. Ferenc Kuhn, President of the International Society of Ocular Trauma, talked about 'Suprachoroidal Hemorrhage', showing a video of a surgery, then discussing it, part by part.

Further, Dr. Andrew Chang from the University of Sydney presented on 'Management of Dislocated Intraocular Lens (IOL)'. The basic indication of a dislocated IOL is a lack of posterior or anterior capsular support, where the capsule becomes damaged or weak. The causes are trauma (damage to the iris), complicated cataract surgery (out of the bag dislocation, or late in the bag dislocation), and subluxation (marfans). He also talked about options for IOL replacement, scleral fixation, anterior fixation vs. scleral fixation, and iris fixation.

Dr. Min Kim from Yonsei University College of Medicine, Seoul, gave a presentation on 'Surgical Management of Aphakia in IOL Dislocation'. IOL dislocation is infrequent, but a serious complication of cataract surgery. There is also extracapsular out-of-the-bag IOL dislocation or IOL capsular bag complex. There is now a growing population of pseudophakic patients with a longer lifespan, with an increase in the incidence of IOL dislocation, and reported to occur in 0.2% to 1.8% of patients after surgery. The approach for correcting aphakia IOL dislocation in eyes lacking capsular support includes anterior chamber (AC) IOL (angle supported IOL/iris fixation IOL), scleral sutured posterior chamber (PC) IOL, sutureless and glued scleral fixation PC IOL fixation, iris-sutured PC IOL, and sulcus sutured fixation IOL. He also talked about management of late IOL dislocation.

Prof. Dr. Dennis Lam then presented on 'Posterior Capsule Rupture (PCR): Can We Proceed with the Implant?' Posterior capsule rupture is the most common major intra-operative complication. It may have serious sequelae, if not managed properly. The sequelae include dropped fragments, retinal detachment, cystoid macular edema (CME), IOL decentration, and aphakia. The patient risk factors of PCR are small palpebral fissure, excessive eye movements, un-cooperative patients. The surgical risk factors of PCR are capsulorhexis, hydro-procedures, flow balance, nuclear fragments, and manipulations. However, PCR is preventable and a good outcome is possible if managed properly.

The last presentation was by Dr. Shamala Retnasabapathy from Hospital Sungai Buloh, entitled 'Overcoming Corneal Opacity in Posterior Segment Surgery'. In corneal opacity and retinal detachment, the timing of surgery is critical, and requires urgent surgery and co-management by corneal and vitreoretinal surgeons. Temporary keratoprosthesis (TKP) with penetrating keratoplasty (PKP) allows early pars plana vitrectomy (PPV), helps to improve vision in 36% to 58%, and retinal attachment rates are encouraging. Graft survival is both variable in both TKP with PKP and PKP. However, prevention plays an important role.



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How Much You Learn From Most Medical Marketing Images

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ZEISS Helps Ophthalmologists Focus on Patients

In an increasingly challenging healthcare environment, there is rising pressure on doctors to provide the best for their patients.

ZEISS (Jena, Germany) hosted a dinner on Friday night – The Grand Retina Union – to introduce its latest range of innovations designed to boost diagnostics and treatments of retinal diseases, allowing doctors to focus on what's important: their patients.

The CLARUS 500 ultra-widefield system provides high resolution imaging across the entire retina. It is the first fundus imaging system combining true color and exceptional clarity within an ultra-wide field of view.

CLARUS 500 is the first fundus camera that combines true color with high-resolution clarity down to 7 microns in an ultra-widefield view from the macula to the far periphery. Early signs of eye disease can often be subtle and can occur in the far periphery of the retina. Now with the CLARUS 500 ultra-widefield system, practitioners can obtain a better view of the entire fundus.

The CLARUS 500 produces exceptional images in true color that closely resemble the coloration of the retina as seen through direct observation during clinical examination. Color accuracy is important in the diagnosis, documentation and management of ocular diseases; ensuring confidence when evaluating optic disc, nevi, and lesions in which subtle color differences may lead to a change in diagnosis and management.

By being able to image a larger area of the retina, clinicians have the possibility of uncovering more pathology, aiding in earlier disease diagnosis and better patient management.

Terrance Siew, regional product manager for the Southeast Asia ophthalmic diagnostics at ZEISS, said the new AngioPlex Metrix, is another powerful innovation to aid better decision-making concerning treatments.

It provides non-invasive depth-resolved images of the retina microvasculature in the eye, enabling doctors to detect retinal diseases earlier.

"With the new AngioPlex Metrix, we can actually look at different visits, how the changes in imaging are over time. You can overlay the data over the OCT and angiography images. You will be able to see much more clearly the differences and changes," he said.

As for the CLARUS, he noted that with existing technology, patients have to be brought to the machine. CLARUS changes all that.

"The CLARUS has a chin-rest and head-rest. Patients stay still on the chin-rest and you move the optics toward the patient."

For Asian patients in particular, this would provide a more comfortable experience.

Finally, CLARUS is the only such device that has resolution down to 7 microns. When you zoom in, you will still get very clear images.

"With the CLARUS, when we zoom in to visualize, the details are still maintained, the resolution is still there. It is not fuzzy or hazy," he said.

For surgeons, their work is now made a whole lot easier with the emergence of the CALLISTO 3.6. Previously hospitals had to buy two microscopes for doctors performing cataract toric lens implantation, and for doctors performing retinal surgery.

Now, with the CALLISTO 3.6, hospitals can buy an all-in-one microscope.

CALLISTO 3.6 is currently the only microscope in the world that performs as an all-in-one system, covering applications from the cornea to the retina to cataract and glaucoma.

Dr. Danilo Constantino, St. Luke's Medical Center, Global City, Philippines, said: "Advancing technology is interesting in surgical facilitation, and retinal imaging. Ultra-widefield imaging definitely will be helpful for retinal conditions."

He said the AngioPlex would be important in his practice especially in diabetic macular edema (DME) and age-related macular degeneration (AMD) cases that require multiple imaging for follow-up treatment.

CALLISTO would be beneficial in teaching hospitals with surgical trainees as it would help in their education in different procedures, he noted.

Dr. Chin Kel Vin of KPJ Sabah Specialist Hospital, Malaysia, said: "ZEISS is a leader in terms of diagnostic as well as surgical instrumentation, for the posterior segment. I think they are all great tools to help us improve our management and treat patients in the OR."

Mr. Sujay Debnath, Regional Director, Southeast Asia at ZEISS said the main objective of "The Grand Retina Union" is to provide an interactive knowledge sharing platform for retina specialists from different regions to network and share best practices, and to understand doctors' needs and how ZEISS can help them screen, diagnose and treat their patients better.

ZEISS would like to be the frontier and preferred industry partner in not only equipping ophthalmologist with cutting-edge technology but also supporting them with training for necessary skill enhancement to utilize the technology for better clinical outcomes.

Dr. Danilo Constantino, St. Luke's Medical Center, Global City, Philippines

"Advancing technology is interesting in surgical facilitation, and retinal imaging. Ultra-widefield imaging definitely will be helpful for retinal conditions."

Dr. Chin Kel Vin, KPJ Sabah Specialist Hospital, Malaysia

"ZEISS is a leader in terms of diagnostic as well as surgical instrumentation, for the posterior segment. I think they are all great tools to help us improve our management and treat patients in the OR."