Ophthalmology

EYE-S01 Too Many OCT Parameters...Where Do I Need to Look?

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Optical coherence tomography (OCT) is changing the way clinicians diagnose and monitor ocular disorders. The OCT scans have far better resolutions, providing the clinician with a wealth of information. Thus, it is not surprising that most glaucoma or retinal specialists now consider OCT to be the main structural tool for detecting and monitoring in patients with suspected or established disease. However, this wonderful technology also creates a problem for the glaucoma clinician.

OCT manufacturers offer a plethora of reports, each with a variety of plots and summary statistics. However, now the clinician is faced with the problem of which report to use, and which aspect of a report to focus on. This has led many clinicians to depend heavily upon pie charts and summary statistics; the "red means bad and green means good" approach. While this is an easy method to use and teach, it leads to too many mistakes, both false positives and false negatives. And, equally important, it does not come close to making optimal use of this wonderful technology. Thus, it is essential for anyone who diagnosing and treating glaucoma to learn to make better use of OCT.

While it is important to know what to look for in OCT reports, it is also essential to know what to ignore. Or in other words, to understand artifacts seen on OCT images. This subject is thoroughly addressed so that OCT users will benefit from this lecture.

EYE-S02 The Role of Endothelial Counting in Cataract Surgery

Jyh-Chin Yang

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Since Phacoemulsification, there were increased incidence of cornea decompensation. So, prevention of post-operation cornea problem was also an important issue.

For some cases of low pre-op endothelial count, it seems to be crucial to detect the risk factor by specular microscope. According to the result of lower endothelial count patient, we doctor should take same steps in advance during operation to achieve the best result.

How to adjust the machine, using different OVDs and more skillful manipulation were all very important for special cases.

EYE-S03

Dealing with a Compromised Lens Capsule after Intravitreal Injection

Jia-Kang Wang Department of Ophthalomology, Far Eastern Memorial Hospital

Crystalline lens trauma, especially posterior capsular penetration by inadvertent intravitreal injections is rarely reported in the past literature review. Lower fluidic settings, avoiding hydrodissection, and careful manipulation of nucleus and cortex during phacoemulsification are crucial to avoid posterior capsular rupture for cases with lenticular needle injury. If nuclear fragment drops or vitreous prolapse occurs after inevitable posterior capsular rupture, thorough anterior or pars plana vitrectomy and lensectomy are required.

EYE-S04 Indications and Timing of Cataract Surgery in AMD

Chang-Ping Lin Department of Ophthalmology National Taiwan University Hospital Age-related macular degeneration (AMD) and cataract often coexist in patients. Case reports and cohort studies have raised the concern that cataract surgery may increase the risk of progression of AMD. So, how do we advise a patient with visually significant cataract and AMD?

Several meta-analysis studies demonstrated that:

- 1) Macular status, wet AMD subtype, were not associated with macular changes or with treatment intervals after surgery.
- Neither the macular status prior to surgery nor the cumulative number of anti-VEGF injections was associated with clinical outcomes postoperatively.
- 3) There is not an increased risk of progression to exudative AMD 6-12 months after cataract surgery.
- 4) Cataract surgery increases visual acuity without an increased risk of progression to exudative AMD.

Current suggestions include:

Timing of cataract surgery in wet AMD patients should be adjusted according to patients' needs.

It is indicated to perform cataract surgery regardless of wet AMD activity when a potential improvement in visual acuity can be expected,"

There is no justification to support delaying surgery until dry macula has been achieved. Surgery should, therefore, not be postponed for these considerations in patients who require it.

Postponing cataract surgery due to the presence of wet AMD is unnecessary and doing so may adversely affect the patient's quality of life.

Conclusion: Cataract and AMD often coexist in patients. The presence of AMD may adversely affect the visual outcome after cataract surgery. However, deferring surgery for visually significant cataract in patients with AMD will also negatively influence the visual function of patients.

Further studies with larger number of subjects, longer term of follow up and more objective evaluation of severity of cataract and AMD and questionnaire of visual function are needed to draw more conclusive suggestions in the future.

EYE-S05 Using Iris Claw Lens in Children

Chien-Liang Wu Taipei Municipal Wanfang Hospital

Iris claw intraocular lens (Artisan Aphakia) was invented by Prof. Jan Worst in 1978. It was used in the treatment of aphakia patients without adequate capsular support. The IOL is a single piece PMMA with two claws on both sides of the optic. The claws fixates on peripheral iris through a technique called enclavation. Although this lens is not currently FDA approved, It has long history of both adult and pediatric use in Europe and Asia.

Many studies proved its safety and efficacy in the treatment of adult and pediatric aphakia. Currently a multi-center trial of 300 pediatric aphakic patients in the US is under investigation. The iris claw lens can be fixated in front of iris plane or retropupillary. The procedure is technically less challenging than scleral fixation of posterior chamber IOL and is less time consuming. The 'one size fits all' property makes the iris claw lens a good option for pediatric aphakia treatment.

EYE-S06 Use of Multifocal IOLs in Children

Tzu-Chun Tsai

Department of Ophthalmology, National Taiwan University Hospital

While the use of multifocal intraocular lenses in adult cataract surgery is getting widely accepted, its application in pediatric group is still under debate. Although some reports had suggested an improved distant and near visual acuity, and better stereoacuity in children using multifocal intraocular lens, concerns such as reduced contrast sensitivity, difficulty in the power calculation and age-dependent myopia shift could not be overlooked. In this talk, I will evaluate the evidence for and

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against the use of multifocal intraocular lens in infants and young children.

EYE-S07

The Value of Big Data Analysis of Cataract Databases

Chih-Chien Hsu Department of Ophthalmology, Taiwan Veterans General Hospital

Big data is called the fourth industrial revolution of mankind. Electronic medical records, administrative and health insurance databases, large national biobanks, and the International Epidemiological Alliance are all forms of "big data" in ophthalmology. Coupled with new technologies such as artificial intelligence and deep learning, the potential of big data is expected to be better utilized in the future. In the field of ophthalmology, given the data-intensive nature of the profession, big data will also play an important role. In this speech, we will discuss the value of big data analysis of cataract database and share the content of several articles about big data of cataracts in various regions of the world, potential applications in ophthalmology, and the challenges of using and using these data.

EYE-S08 Bilateral Cataract Surgery will be the Norm?

Hung-Yuan Lin Zhongli Universal Eye Center, Taoyuan

Recently, a relatively novel approach termed Immediately Sequential Bilateral Cataract Surgery (ISBCS) has been developed during the COVID-19 pandemic. Eye surgeons have discussed if there's a possibility of performing ISBCS to decrease the number of visits for surgery and follow-up. However, it is not officially allowed in Taiwan. Therefore, various views have been expressed in different nations by sending a request email to top experts in the world. Understanding and learning the different perspective during the lecture to meet specific needs.

EYE-S09

Will Dropless Replace Eye Drops in the Postoperative Management in Cataract Surgery?

Chi-Chin Sun Department of Ophthalmology, Chang Gung Memorial Hospital, Keelung

Expectation from the patients after modern cataract surgery is higher than ever because of the advances in surgical technique, operative equipment and premium IOL technology. Optimized surgical outcomes depend, in part, on the prevention of postoperative infection and inflammation control. Till now, standard protocols involve topical antimicrobial and anti-inflammatory medications managed by the patients or caregivers. However, limitations of topical therapy including compliance, self-administration difficulties, patient, caregiver and healthcare team burdens, efficacy and safety issues do adversely affect both visual outcomes and patient satisfaction. Therefore, there is a room for designing novel intracameral and sustained-release delivery modalities to offer the opportunity for dropless cataract surgery. Abundant evidence has documented the effect and safety of single injection strategy at the end of surgery for infection and inflammation control. If proven safely and effectively, these new physician-administered methods will absolve the patient of self-dosing responsibility, increase patient satisfaction, and reduce the physician team burden. This talk will give a brief introduction of this concept and discuss the pros and cons of this new physician- administered approaches.