

EYE-01

The Pivotal Role of Anterior Chamber Depth (ACD) in Enhancing Precision and Success in Cataract Surgery*Jia-Kang Wang**Department of Ophthalmology, Far Eastern Memorial Hospital*

Anterior chamber was the working space of modern cataract surgery and intraocular lens (IOL) implantation. ACD serves as a crucial role in the process of the operation. ACD as one factor determines effective lens position (ELP) in IOL power calculation in recently-developed formulas. Shallow ACD is difficult for continuous circular capsulorhexis creation either in manual or ZEPTO-assisted methods. Phacoemulsification is easy to cause postoperative corneal edema for affecting corneal endothelial function in eyes with shallow ACD. Shallow ACD also limited placement of anterior chamber IOL after complicated cataract surgery. Deepening of ACD with angle structure changes are associated with intraocular pressure reduction after cataract surgery in patients with open-angle or angle closure glaucoma.

EYE-02

Iris Prolapse: Mechanism and Management*Chiun-Ho Hou**National Taiwan University Hospital*

This presentation discusses the mechanism and management of iris prolapse, a condition encountered during cataract surgery. Iris prolapse occurs due to a balance of forces acting on the iris: the hydrostatic pressure differential between the posterior and anterior chambers, and the tonicity provided by the iris sphincter and dilator muscles. The Bernoulli principle is central to understanding the dynamics of iris prolapse, where the pressure decreases as fluid flow velocity increases.

Several factors contribute to iris prolapse, including anatomical considerations such as shallow anterior chambers and surgical factors like wound

architecture and phacoemulsification technique. Pharmacological agents, particularly α 1-adrenoceptor antagonists, can predispose patients to intraoperative floppy iris syndrome (IFIS), complicating surgical management.

Management strategies emphasize preoperative planning, including discontinuation of α 1-antagonists, and intraoperative techniques such as appropriate wound construction and careful hydrodissection. The use of intracameral epinephrine or phenylephrine can aid in maintaining iris tone, though these agents carry risks of systemic side effects. Intra-operatively, controlling intraocular pressure and ensuring proper wound sealing are critical to preventing complications associated with iris prolapse. This presentation consolidates current understanding and offers practical guidelines for ophthalmic surgeons to manage this challenging condition effectively.

EYE-03

Vitreoretinal Interface Disorders in Cataract Surgery*Yuan-Shen Wang**Shin Kong Wu Ho-Su Memorial Hospital*

Age-related cataract is the leading cause of blindness worldwide for which surgical procedures are commonly performed. Vitreoretinal interface disorders, such as epiretinal membrane (ERM) and macular hole (MH), commonly occur with cataract, and the detection, grading, and assessment of the visual significance of each factor may be limited by the other. The purpose of this speech is to assess the functional and anatomic outcome of cataract and vitreoretinal interface disorders in combined and consecutive surgeries.

EYE-04

Retained Lens Fragments: Vitrectomy Approaches

Yun-Hsiang Chang

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Retained lens fragments in the vitreous cavity is one of the most feared complications of modern cataract surgery. Although the incidence of dropped nucleus is low, any cataract surgeon who has a reasonable case volume and who operates on a spectrum of case complexity will at some point experience a dropped nucleus. When it happens, a timely management is usually needed. In this talk, we are going to have an overview of retained lens fragments in the vitreous cavity and the vitrectomy approaches for this potentially devastating complication.

EYE-05

Challenges of Premium IOL implantation in the Presence of Posterior Capsule Rupture

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Posterior capsular rent (PCR) may be encountered in cases planned for premium IOL implantation, and we highlight a spectrum of thinking process for solution wherein careful surgical manipulations allowed the placement of premium IOLs (such as EDoF/multifocal IOLs) in the bag in the presence of a PCR. Premium IOL may be safely placed in the bag in cases with small central PCR that occurs after nuclear emulsification with intact vitreous phase; Most premium IOL is made of one-piece IOL. I will discuss about the safety and probability for one-piece IOL implantation in the sulcus. Anterior optic capture of the IOL optic was an option for such condition to decreased the chance of pigment dispersion syndrome. Different design or materials even angulation make premium IOL implantation in the presence of PCR in the eyeball possible.

EYE-06

Is it True that Presbyopia-correcting IOLs are not Indicated for Dentists

Chih-Chien Hsu

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Presbyopia-correcting IOLs give people the possibility to perform tasks at various distances without wearing glasses, but these IOLs also lose the people lose the quality of their vision. In the past, it was believed that high-precision workers were not suitable for using this kind of IOLs. However, for dentists who engage in precision work, they also value leisure activities in their daily lives and have the need to take off their glasses. This article therefore explores whether it is appropriate for dentists to use presbyopia-correcting IOLs

EYE-07

What is New in Presbyopia Correcting IOLs?

Bryan Hung-Yuan Lin, M.D.

Universal Eye Center Zhong-Li, Taiwan

This presentation examines the latest advancements in presbyopia-correcting intraocular lenses (IOLs), with a particular focus on new IOLs that have received FDA and CE approval but have not yet been introduced in Taiwan, lenses currently under FDA and CE review, and upcoming IOLs. An in-depth analysis of these IOLs will be provided, examining their innovative features and functions, providing insights into their potential to improve presbyopia management and address the limitations of current treatments. Simultaneously, by exploring these developments, this presentation aims to provide a comprehensive overview of how the latest IOL technologies can alleviate the visual challenges associated with presbyopia.

EYE-08

Mix and Match vs Bilateral Trifocal: Quality of Vision

Chun-Pin Tsai

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Most trifocal IOLs have a strictly diffractive design, which imposes optical constraints on the location of the intermediate and near foci. Although near vision was much better than for a monofocal IOL and an EDOF lens made from a similar material, objective optical quality was reported to be slightly lower. Halos and glares were the most common visual disturbance associated with this lens. One possible way to reduce the potential for visual disturbances while retaining a large range of vision is to implant a different IOL design in each eye; this

approach has been termed “mix and match.” First described in 2008, mixing and matching lenses have been a generally accepted procedure to try to achieve the “best of both worlds.” Combining an EDOF IOL with a multifocal IOL offers the advantage of improved stereopsis in both distant and intermediate vision ranges. It's crucial to identify the proper dominant eye in each patient. Implanting a trifocal IOL in the non-dominant eye may help reduce optical disturbances. If cataracts are not severe, a simple method to determine the dominant eye is to ask the patient to hold up their hands to create a circle, with the dominant eye being the one they use to peer through the circle. Additionally, we can assess the dominant eye based on factors such as axial length, astigmatism, optic nerve condition, and fundus examination. It's important to note that the dominant eye may shift if both eyes have similar conditions.