

Symposium: Threads and Tunnels: Navigating the Modern Maze of Vitrectomy and IOL Fixation

時間 Time	演講題目 Topic	演講者 Speaker
14:00-14:05	引言	
Moderator: 陳珊霓 San-Ni Chen 中國醫藥大學附設醫院 陳宏吉 Hung-Chi Chen 林口長庚醫院 吳建良 Chien-Liang Wu 萬芳醫院		
14:05-14:20 EYE-S01	Laying the Foundation: Principles and Fluidics of Anterior Vitrectomy	許粹剛 Tsui-Kang Hsu 振興醫院
14:20-14:35 EYE-S02	Taking the Lead: Anterior Approach Techniques for Anterior Vitrectomy	李原傑 Yuan-Chieh Lee 花蓮慈濟醫院
14:35-14:50 EYE-S03	Wheeling Around the Back: Posterior Approaches to Anterior Vitrectomy	簡湘文 Hsiang-Wen Chien 國泰醫院
14:50-15:05 EYE-S04	OCT Across Borders: Posterior Imaging Insights for Anterior Segment Decisions	王嘉康 Jia-Kang Wang 亞東醫院
15:05-15:15	Discussion	吳立理 Li-Li Wu 台北慈濟醫院 吳宛霖 Wan-Lin Wu 亞東醫院
15:15-15:30	Coffee Break	
Moderator: 陳世真 Shih-Jen Chen 臺北榮民總醫院 張淑雯 Shu-Wen Chang 亞東醫院 林鴻源 Bryan Hung-Yuan Lin 中壢大學眼科		
15:30-15:45 EYE-S05	When the Capsule Fails: Managing Posterior Dislocation and Repositioning	陳珊霓 San-Ni Chen 中國醫藥大學附設醫院
15:45-16:00 EYE-S06	Stabilizing Vision: Modern Iris-fixated IOLs	林泰祺 Tai-Chi Lin 臺北榮民總醫院
16:00-16:15 EYE-S07	The Yamane Advantage: Positioning Precision, Tilt Accuracy, and Stability	許詠瑞 Yung-Ray Hsu 亞東醫院
16:15-16:30 EYE-S08	Safe and Uncomplicated: Improving Your Scleral Suture Technique	張延瑞 Yen-Jui Chang 北市聯醫陽明院區
16:30-16:45 EYE-S09	IOL Exchange: Indications, Techniques, and Pitfalls	吳建良 Chien-Liang Wu 萬芳醫院
16:45-17:00	Discussion	周昱百 Yu-Bai Chou 臺北榮民總醫院 黃勁聞 C.W. Huang 輔大醫院

EYE-S01

Laying the Foundation: Principles and Fluidics of Anterior Vitrectomy

Tsui-Kang Hsu, MD. MPH. PhD.

Department of Ophthalmology, Cheng-Hsin General Hospital

The foundation of anterior vitrectomy involves understanding the following key principles:

Anterior vitrectomy is performed to remove vitreous humor that has prolapsed into the anterior chamber, usually due to posterior capsule rupture during cataract surgery or trauma. It helps prevent complications like retinal detachment, cystoid macular edema, or secondary glaucoma.

Commonly indicated in cases of posterior capsule rupture, lens dislocation, traumatic injuries, or intraoperative vitreous prolapse. While identified the situations, we may utilize a vitrectomy cutter with small gauge(23/25/27G). It is connected to a vitrectomy machine that controls cutting rate and suction.

- While performing the anterior vitrectomy, there are some principles need to pay well attention:
- Maintaining appropriate intraocular pressure.
- Gentle handling to avoid traction on the vitreous base.
- Continuous visualization with a surgical microscope and stained the prolapsed vitreous with kenacort particles.
- Posterior approach to the prolapsed vitreous will be a more physiologic way to prevent further vitreous bulging into anterior chamber.
- Ensuring complete removal of vitreous strands to prevent postoperative complications.
- Proper preoperative assessment, sterile technique, and postoperative management including anti-inflammatory and antibiotic therapy to ensure optimal healing.

EYE-S02

Taking the Lead: Anterior Approach Technique for Anterior Vitrectomy

Yuan-Chieh Lee

Department of Ophthalmology, Hualien Tzu Chi Hospital

Anterior vitrectomy is a surgical procedure primarily performed to remove vitreous humor from the anterior chamber of the eye, most commonly indicated following complications such as posterior capsule rupture during cataract surgery. This technique is essential in preventing further intraocular complications, including vitreous prolapse, retinal detachment, and cystoid macular edema. The procedure involves the careful use of specialized vitrectomy instruments to excise and aspirate prolapsed vitreous from the anterior chamber, thereby restoring the normal anatomical relationships and reducing the risk of postoperative sequelae. Advances in surgical technology have improved the safety and efficacy of anterior vitrectomy, allowing for better visualization, minimized trauma to intraocular tissues, and enhanced patient outcomes. Proper case selection, meticulous technique, and understanding of anterior segment anatomy are critical for the success of this procedure. Anterior vitrectomy remains an indispensable skill for anterior segment surgeons, particularly in the management of intraoperative complications during cataract extraction and other ocular surgeries.

EYE-S03

Wheeling Around the Back: Posterior Approaches to Anterior Vitrectomy

Hsiang-Wen Chien

Cathay General Hospital

Posterior capsular rupture (PCR) is one of the most common complications during cataract surgery. When PCR occurs unexpectedly, anterior vitrectomy has traditionally been the most common approach to manage vitreous loss.

In this talk, we explore posterior approaches, particularly pars plana vitrectomy, as an alternative “wheeling around the back” technique to address

anterior issues more efficiently. Our objectives include detailing the surgical steps for pars plana entry, discussing the advantages and disadvantages of the posterior versus anterior approach for anterior vitrectomy, and presenting case studies as well as combined techniques for complex scenarios.

EYE-S04

OCT Across Borders: Posterior Imaging Insights for Anterior Segment Decisions

Jia-Kang Wang

Department of Ophthalmology, Far Eastern Memorial Hospital

Posterior segment examination is essential before and after either in smooth or eventful cataract surgeries. Except old-style indirect ophthalmoscope, ultrawide field image provided another fair choice for fundus examination. In cases with mature or brunescant cataract, traditional B-scan inspection for posterior segment is mandatory especially obscuring fundus image. Optical coherence tomography (OCT) for macula is important for some of the cases because traditional fundus examination possibly overlooks trivial macular defects before cataract surgery. Those included patients with the degree of visual impairment not proportional to the grade of the cataract, metamorphopsia rather than blurred vision complained, and macula is not seen clearly by funduscopy. A total 335 eyes were included in our case series. The macular areas of all eyes examined by spectral domain-OCT, if macula “appeared” normal after fundus examination or macula not seen clearly but visualized by OCT. Nineteen eyes (19/335, 5.6%) found to have macular abnormalities, including epiretinal membrane, small choroidal neovascularization, vitreomacular traction syndrome, small choroidal neovascularization, shallow submacular fluid, subfoveal outer nuclear layer loss, and subfoveal ellipsoid zone disruption. Now swept source OCT is incorporated in some optical biometry, preoperative foveal examination and axial length measurement can be completed

quickly in one session of examination. After cataract operations, OCT investigation is also crucial in some of the patients. Those composed of cases with preoperative macular pathology, diabetes, uveitis, retinal vein occlusion, and retinitis pigmentosa. Pseudophakic macular edema can still occur in low incidence of nondiabetic patients with normal preoperative macular appearance and uneventful surgery.

EYE-S05

When the Capsule Fails: Management of Posterior Dislocation and Repositioning

San-Ni Chen

Center of Advanced Treatment Center of Vitreoretinal Disease and Uveitis

Risk factors for posterior dislocation of intraocular lens (IOL) include trauma, retinitis pigmentosa, high myopia, pseudoexfoliation syndrome, chronic uveitis, previous vitrectomy, marfan syndrome, Intraoperative complications during primary cataract surgery, such as a small continuous curvilinear capsulorhexis, capsular rupture, or zonular damage, are also considered important causes of early dislocation. Etc.

Management of dislocated IOL includes retrieval of dislocated IOL, fixate the IOL with the previous IOL or removal of the dislocated IOL and implant a new IOL. Methods and techniques of the surgery will be discussed and shown in the talk.

EYE-S06

Stabilizing Vision: Modern Iris-fixated IOLs

Tai-Chi Lin

*Director, Vitreoretinal Division, Taipei Veterans General Hospital
Associate Professor, National Yang-Ming Chiao Tung University*

The Artisan intraocular lens (IOL), also known

as the iris-claw lens, is a versatile and well-established option in both refractive and therapeutic ophthalmic surgery. Its unique fixation method—anchoring to the mid-peripheral iris—offers stable placement in the anterior or posterior chamber, making it suitable for a range of clinical scenarios. Originally designed for the correction of high ametropia in phakic eyes, the Artisan IOL has demonstrated excellent long-term outcomes in patients with high myopia or hyperopia who are not ideal candidates for corneal refractive surgery due to thin corneas or irregular topography.

Beyond refractive indications, the Artisan IOL is increasingly used in aphakic patients without sufficient capsular support, such as those with complications from cataract surgery, trauma, or congenital lens abnormalities. In these cases, the lens can be fixated either anteriorly (over the iris) or retropupillary (behind the iris), providing a stable alternative to scleral-fixated or angle-supported IOLs. The retropupillary technique, in particular, has gained popularity due to its more physiologic lens position, reduced risk of endothelial cell loss, and lower incidence of iris-related complications.

The implantation technique of the Artisan IOL requires precise enclavation of the haptics to the iris stroma, and the procedure can be performed through a relatively small incision, depending on the model used. Recent advances in surgical instrumentation and technique refinement have further improved the safety and predictability of Artisan IOL implantation.

Overall, the Artisan IOL offers a reliable and adaptable solution for a wide range of visual rehabilitation needs. Its broad indications, combined with the flexibility of different implantation techniques, make it a valuable tool for surgeons.

In this talk, different indications and surgical techniques of the implantation of the Artisan IOL will be demonstrated.

EYE-S07

The Yamane Advantage: Positioning Precision, Tilt Accuracy, and Stability

Yung-Ray Hsu

Ophthalmology Department, Far Eastern Memorial Hospital

The Yamane technique has become a pivotal approach in secondary intraocular lens fixation, offering sutureless, intrascleral haptic fixation with impressive visual outcomes. However, achieving consistent success requires a deep understanding of its nuances. This talk will explore not only the theoretical advantages, such as precise IOL centration, minimal tilt, and long-term stability, but also the real-world challenges faced in its surgical execution. Emphasis will be placed on the learning curve, common pitfalls, and practical tips, to help surgeons optimize outcomes for the patients.

EYE-S08

Safe and Uncomplicated: Improving Your Scleral Suture Technique

Yen-Jui Chang

Taipei City Hospital

Purpose:

We present a novel technique for intraocular lens (IOL) fixation. The technique can be used on single-piece acrylic IOLs and can manage the patients who are either aphakia or with a dislocated IOL.

Methods and Results:

One end of Gore-Tex suture is tied into the optic-haptic junction of the IOL. Another end is fixated in the scleral wall. The Single sclerotomy setting is suitable for fixation of a pre-existing IOL. And the Double sclerotomies setting is suitable for fixation of a newly injected IOL.

Conclusion:

The technique is a reliable method for scleral fixation of IOLs, which can be applied on the widely used single-piece acrylic IOLs. In our experience, it is reproducible and rarely cause complications.

EYE-S09