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WILL OCTA REPLACE FFA?

Dr Lalit Verma, New Delhi

While a wide array of fundus imaging modalities are now available, fundus fluorescein angiography (FFA) continues to hold its ground as the gold standard for posterior segment vascular imaging. Even today, FFA offers unique advantages, particularly with developments like wide-field (50°-100°) and ultra-wide-field (100°-200°) imaging using confocal scanning laser ophthalmoscope (cSLO) technology. It remains invaluable in detecting peripheral lesions such as neovascularization elsewhere, vasculitis, and capillary nonperfusion areas—regions often missed on optical coherence tomography angiography (OCTA).

Moreover, FFA provides precise guidance for focal laser treatment in conditions like diabetic macular edema, central serous retinopathy, Coats' disease, and early retinal angiomas, where OCTA currently falls short. However, OCTA is evolving rapidly—from being a purely diagnostic tool to one aiding in therapeutic decisions. As its capabilities expand, OCTA may increasingly replace FFA in routine clinical practice. Still, whether FFA should continue to be considered the gold standard is becoming a subject of ongoing debate in the current era of multimodal imaging.

IOL SCAFFOLD – PCR WITH RETAINED NUCLEUS

Dr Amar Agarwal, Chennai

In cases of posterior capsule rupture (PCR) with a retained nucleus, the intraocular lens (IOL) scaffold technique offers a structured approach to safely manage complex anterior segment scenarios.

A foldable three-piece IOL is carefully injected beneath the retained nuclear fragments, providing a scaffold for nucleus emulsification and vitrectomy. Tools like trocar anterior chamber maintainers and globe stabilization rods help maintain chamber stability and protect ocular structures during the procedure. Iris hooks aid visualization and prevent iatrogenic iris trauma, while vitrectomy ensures cortical cleanup. The nucleus pieces are brought anteriorly above the iris for safer emulsification. Scleral flaps are created for a glued IOL fixation using a modified posterior-assisted levitation technique, involving externalization and haptic tucking into Scharioth pockets created with a 26G needle. Intravitreal triamcinolone, air tamponade, and fibrin glue seal the procedure. In complicated cases like pseudophakic bullous keratopathy with residual nucleus and one-piece IOLs, the IOL is bisected and extracted through corneal incisions with the help of an IOL scaffold. In scenarios involving microcornea, aphakia, and Soemmering's ring, visualization and dissection are achieved using iris hooks, vitrectomy, and careful haptic manipulation.

The scaffold technique even facilitates the safe removal of intraocular foreign bodies, where the IOL acts as a barrier, preventing posterior drop and allowing controlled extraction through a clear corneal incision. This comprehensive method highlights the value of the IOL scaffold as a versatile and safe solution in managing triple trouble cases involving retained lens matter, IOL malposition, and corneal decompensation.

A YOUNG LADY WITH PROGRESSIVE SCLERITIS

Dr Carmen Chan, Hong Kong

A 27-year-old woman with a history of Raynaud phenomenon and negative autoimmune markers (RF, ANA, ENA, ANCA) presented with a 4-week history of redness and pain in her left eye.

Examination revealed anterior chamber cells, posterior vitreous cells, and superonasal choroiditis in the left eye, while the right eye was normal. Magnetic resonance imaging (MRI) of the orbits showed a left intraconal orbital mass in the superonasal quadrant, suggestive of nodular scleritis, along with mildly enlarged lacrimal glands bilaterally. Positron emission tomography - computed tomography (PET-CT) revealed multiple pulmonary masses.

A therapeutic trial of high-dose oral steroids led to worsening of the condition, prompting further investigation. A scleral biopsy, along with IgG4 testing, bilateral tonsillectomy, tongue base lymphoid biopsy, and open lung biopsy, led to a diagnosis of probable IgG4-related disease with simultaneous ocular, pulmonary, and tonsillar involvement.

Despite initiating high-dose intravenous methylprednisolone (1 g/day for 3 days) followed by oral prednisolone (50 mg daily), the disease progressed. The left eye developed intraocular extension and eventually became phthisical with no light perception. During steroid therapy, the right eye also developed scleritis and intraocular involvement. Two doses of rituximab (1 g every 2 weeks) were administered, and a steroid-sparing agent was added. The right eye responded well to treatment, and at the latest follow-up, vision was preserved at 20/20 with inflammation controlled on mycophenolate mofetil (250 mg twice daily).

This case highlights the importance of considering IgG4-related disease in patients with atypical, progressive scleritis and orbital involvement. It underscores the need for a multidisciplinary approach, early diagnosis, and timely initiation of immunomodulatory therapy to preserve vision.

CATARACT SURGERY IN CORNEAL DISORDERS

Dr Namrata Sharma, New Delhi

Surgical management of cataract in patients with corneal haze can be categorized into single-stage or combined procedures. The choice of approach depends on several factors, including:

- Type and location of corneal opacity/haze
- Surgeon's expertise (Small incision cataract surgery/ Phacoemulsification)
- Availability of donor corneas
- Patient's visual requirements (risk-benefit analysis).

When selecting an IOL, the following factors are critical:

- Type of IOL: Monofocal
- Keratometry and videokeratography
- Biometry techniques: Ultrasonic B-scan, Immersion scan, and IOL Master.

Phacoemulsification in Corneal Opacity: The principle of "Finding, Seeing, Creating, and Filling the Gaps" is key to successful phacoemulsification in corneal opacity. Important surgical considerations include-

- Incision placement and capsulorhexis: Eccentric approach
- Hydro procedures: Copious hydration
- Crater formation: Eccentric and peripheral chopping techniques
- Adjunct procedures: Sphincterotomy, optical iridectomy.

Surgical Aids and Techniques: To optimize visualization and surgical precision, various aids can be utilized-

- Microscope enhancements: Retroillumination
- Surgical aids: Nylon hooks, Trypan Blue dye, Dispersive OVD (ophthalmic viscoelastic device), balanced salt solution (BSS) Plus
- Fluid management: Low fluid parameters for better control.

Prognosis and Surgical Strategy: The prognosis depends on the severity of corneal involvement-

- High-risk grafts: Phacoemulsification first, followed by corneal grafting
- Good prognosis for grafts: Combined cataract and corneal procedure.

THE SECRET BENEATH

Dr Bhuvan Chanana, New Delhi

Choroidal metastasis can sometimes be the first and only ocular clue to an underlying systemic malignancy. In this remarkable case, a 29-year-old African-origin female presented with painless vision loss in her right eye for 3 weeks. Her best-corrected visual acuity (BCVA) was finger counting in the right eye, while the left eye remained 20/20. Notably, she was a non-smoker with no relevant family history.

Optical coherence tomography revealed submacular fluid with retinal exudates, and an MRI of the orbit showed an intensely enhancing plaque-like lesion in the posterior segment of the right globe, extending up to the optic disc. Further MRI brain imaging revealed multiple enhancing lesions in both cerebral and cerebellar hemispheres, strongly suggestive of widespread metastasis.

Subsequent systemic evaluation confirmed lung adenocarcinoma as the primary site. This atypical unilateral ocular presentation in a young, non-smoking female, with secondary lesions originating from the lung, is unprecedented in current world literature, making this case uniquely significant.

Key Takeaway

In patients presenting with choroidal mass and exudative retinal detachment, especially with atypical features, a comprehensive systemic evaluation and multidisciplinary coordination are critical for early diagnosis and management of potential hidden malignancies.

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