AIOC 2022: 80th Annual Conference of All India Ophthalmological Society

DO'S AND DONT'S: POSTERIOR POLAR CATARACT

Dr TP Lahane, Mumbai

Daljit Singh's classification

- Type 1: Opacity associated with posterior subcapsular cataract.
- Type 2: Opacity with ringed appearance like an onion.
- Type 3: Opacity with dense white spots at the edge often associated with thin or absent posterior capsule.
- Type 4: Combination of the above 3 types with nuclear sclerosis.

Do's

- Visual acuity and refraction
- Undilated and dilated fundus evaluation
- A Scan ultrasonography
- B Scan ultrasonography
- Anterior segment optical coherence tomography (ASOCT)
- ASOCT is a beneficial tool to assess the status of the posterior capsule preoperatively
- Intraoperative ASOCT
- Modified posterior optical coherence tomography
- Pujari et al defined conical sign with +20 dioptre and modified posterior coherence tomography (m-OCT)

Tips

- Patient counseling
- Adaptation in operative technique
- Posterior segment instrument stand-by

THE HARD CATARACT: A CHALLENGE

Dr Hemlata Gupta, New Delhi

- Thorough preoperative evaluation.
- Protect endothelium. Plan beforehand, and keep backup ready.
- Avoid wound burn-check inflow/outflow if any clogging.
- Viscoelastic may be injected behind nuclear fragments, to serve as a protective cushion over the posterior capsule. Reduce phaco parameters when dealing with last fragments.
- PCR: Management depends upon the stage of the surgical procedure at which posterior capsular tear is detected.
- POSTOP: Keep a check on inflammation and intraocular pressure.

MANAGEMENT OF POSTERIOR POLAR CATARACT – NEWER CONCEPTS

Dr JS Titiyal, New Delhi

The technique of femtosecond laser-assisted cataract surgery with a hybrid pattern of cylinder and chop is safe and effective in managing cases of posterior polar cataract, specifically for high grades of nuclear sclerosis. In the technique, a hybrid pattern of three cylinders (2, 4 and 6 mm) and three chops (6 mm in length) was used for nucleotomy. Block by block emulsification of the pre-chopped nucleus was done from the center outward, with the remaining outer rings acting as a protective cushion. Manual hydrodissection and hydrodelineation were avoided. In the postoperative uncorrected Snellen visual acuity was 20/25 or greater in all cases.

A CENTURY GONE IN VAIN – A CONSECUTIVE SERIES OF 100 BALL-RELATED EYE INJURIES!

Dr Rohit Agrawal, Kolkata

Worldwide, there are roughly 1.6 million people blinded by ocular trauma every year and about 2.3 million individuals have bilateral low vision due to these eye injuries. Retinal detachments have been reported in up to 9% of contusion injuries, can present many years post-trauma, and require a long-term follow-up. Sports with a high risk of eye injury include cricket, hockey, racket sports, handball, baseball, basketball, football, soccer and volleyball. Cricket is one of the most popular games in the Indian subcontinent and injuries are

reported both in professional and recreational matches. Blunt forces cause peripheral volume displacement with increased wedge pressure that causes damage to the area of least resistance along with the lens, iris root and trabecular meshwork. Lens subluxation, retinal dialysis, optic nerve avulsion and vitreous hemorrhage are more severe complications. The brow offers protection when the line of approach is horizontal, but when the ball approaches the eye laterally or inferiorly injuries are bound to happen. There are very few studies that have explored the vision-threatening complications, need for surgical intervention and final visual outcome after treatment for ball-related ocular trauma.

This is a descriptive report of 100 consecutive patients who presented to us with ball-related eye injuries; and describes the demography, ocular findings and medical interventions. The drawbacks of this study are that the mechanism of injury could not be determined in all cases and the lack of long-term follow-up to determine sequelae. While medical and/or surgical intervention can restore vision in most, more emphasis is needed for the preventive aspects. Most eye (and face) injuries can be prevented, or the effects of such injuries can be minimized by using protective eyewear like polycarbonate frames and lenses and helmets with face protection. The face mask may consist of metal wire, coated wire or a transparent polycarbonate shield. Education and awareness can go a long way in reducing the number and severity of injuries and prevent a lifetime of ocular morbidity.

SUBLUXATED IOL'S: HOW TO FIXATE THEM STRAIGHT?

Dr Keiki Mehta, Mumbai

Very often an implanted intraocular lens (IOL), moves out of position due to two major reasons: Inadequate capsule support due to a tear; Inadequate zonular support with sectoral dehiscence. If sutured, break in the sutures suspending. If the capsule is intact but the shift has occurred due to inadequate zonular support, the best technique to stabilize the IOL bag complex is a transcapsular suture.

CFS – HOW WE MADE IT!

Prof (Dr) Mahipal S Sachdev, New Delhi

A man without education is like a building without a foundation.

The CFS vision, 1996

- The need: super-specialty niche.
- The opportunity: no player in the corporate sector in North India.
- Foresight: Build an institution for the future, move beyond cataract clinics to a world-class comprehensive eye care setup.
- Clinical excellence + know - how of "business" of ophthalmology.
- Clear ideology: Institution above self, excellence above quick profit, first movers in technology.

Research and development

- In house institutional ethics committee.
- Three ongoing major international trials.
- Five national level multicentric trials are approved and underway.
- Training in research methodology and analysis.
- Mandatory podium presentation for all fellows.

You should stand for a culture of excellence!

LOOKING BEYOND OPHTHALMOLOGY: HOW DID THEY DO IT?

Dr Debashish Bhattacharya, Kolkata

Our vision and mission

- To ensure world-class eye care to patients of all segments of our society.
- Provide compassionate care through our faculty, residents, nurses, optometrists and other staff.
- Strive to provide services using the latest technology available in the world.
- Train specialist and super-specialist ophthalmologists in the largest postgraduate and residency training program in the world. To be the center of excellence in ophthalmic innovation and research.
- Make the national eye bank the nodal center for providing services and training personnel from all over India.
- Develop community eye care services for greater outreach to the people of our country.

We are meeting this vision at Dr. RP Centre for Ophthalmic Sciences through patient care, research and teaching. We have a unique concept of ocular subspecialties:

- Vitreo-retina and uvea
- Cornea and ocular surface
- Glaucoma
- Community ophthalmology
- Ocular biochemistry
- Ocular microbiology

- Ocular pathology
- Ocular pharmacology
- Ophthalmic anesthesia
- Ophthalmic radiology
- Low vision services
- Lens
- Refractive
- Strabismus and neuro-ophthalmology
- Oculoplasty and oncology services
- Cataract.

Research is a major part of the mandate at RP Centre.

RP Centre remains a leader in ophthalmic research in India with the largest number of articles published and presence of dedicated research departments in paramedical, ocular pharmacology, biochemistry, pathology and microbiology.

SMALL PUPIL – LARGE NUCLEUS

Dr Ragini Parekh, Mumbai

Managing strategy:

- Strong mydriatic 10% phenyl epinephrine and 2% cyclopentolate. Intracameral adrenaline
- Viscomydriasis - high-density visco
- Irish hooks
- Pupil ring expander - morcher
- Sphincterotomy
- Capsular tension ring (CTR) in case of zonular weakness in pseudoexfoliation syndrome (PXS).

Important points: Adequate use of viscoelastic is important for endothelial protection. The availability of effective intracameral mydriatic and anesthetic agents reduces the need for topical preparations. Plan and preparation can make the smallest of pupil surgery easy.

THERAPEUTIC KERATOPLASTY IN MICROBIAL KERATITIS

Dr JS Titiyal, New Delhi

- Therapeutic keratoplasty has a definitive role in the management of progressive microbial keratitis refractory to medical therapy.
- TPK offers a microbiological cure rate of up to 100% in bacterial keratitis, recurrence of infection remains a concern following fungal infections and Acanthamoeba keratitis.
- Appropriate timing of surgery is critical for success.
- In addition to adept intraoperative skills, intensive postoperative treatment and meticulous follow-up are pivotal to ensuring the success of a therapeutic graft.

ACANTHAMOEBA KERATITIS

Dr Rajesh Sinha, New Delhi

Acanthamoeba keratitis forms <1% of all infectious keratitis. The risk factors include CL users (85%), homemade saline, contaminated or swimming pool water, trauma, vegetable matter or orthokeratology.

Examination

- Epithelial irregularities: punctuate, linear, pseudo-dendritiform, haze 25-50%.
- Denotes early disease.
- Slow progression.
- Periods of remission: days to months.
- Absence of corneal neovascularization.
- Scleritis: (11-42%) – Deep scleral vascular engorgement, scleral nodules; resolution may lead to ectasia.

Combination therapy

- Biguanide: Chlorhexidine (0.02%) or polyhexamethylene biguanide (PHMB) (0.02%).
- Diamidine: Propamidine (0.1%) or hexamidine (0.1%) – 1-hourly for 48 hours round the clock; Hourly drops during daytime for 72 hours; After 5 days: 2-hourly by day for 3 to 4 weeks; Tailored thereafter, generally for 6 months.
- If drug toxicity occurs, withdraw for 3 to 5 days, continue PHMB.
- If inadequate response: Bacterial or herpes infection.

Supportive therapy

- Cycloplegic
- Antiglaucoma
- Lubricants in resolving keratitis with large epithelial defect.
- Pain relief: NSAIDs, opioids, lignocaine patch.

Newer treatments-phototherapeutic keratectomy:

- Effective when lesions are limited to about one-third.
- Beneficial option in medication-resistant.
- Direct removal of resistant amoebic cysts and better visual recovery without irregular astigmatism.