

JAI SHREE GURUDEV

OPHTHO-VISION

DEPARTMENT OF OPHTHALMOLOGY

HISTORY OF IOLS (intraocular lens)

In 1946 of London, Dr Harold Ridley who was working at the royal air force, was fascinated when encountered with a patient who had a penetrating injury with shattered cockpit glass, which was inert for longer periods. He later found that the material was polymethyl methacrylate which was known as plexi glass.

This led him to use this material to make intraocular lenses. His initial attempts weren't fruitful as the cataract was removed along with the overlying capsule, thus plexiglass lenses lacked the support required to keep them in place to provide good vision. Hence the safety and the quality of this procedure was under scrutiny. During the 70's Dr.Binkhorst and Dr Worst came up with an idea to keep the capsule intact , thus putting the implants in the bag. This procedure proved to be promising, but required larger incisions to remove the cataract.

Later Dr Charles Kelman came with with an idea to use ultrasonic waves to emulsify the lens, thus paving the way for Phacoemulsification, initially this wasn't popular as the incision had to be large to accommodate rigid IOLS. With the advent of foldable lenses, phacoemulsification became the most popular and favoured procedure by patients for cataract surgery till date. It had the advantage to use small incisions thus reducing the chances of infection and ensured immediate post op rehabilitation.

Major advances have occurred in the development of intraocular lenses where toric lenses, multifocal lenses, phakic IOLS etc are used to correct various aberrations that are present in the eye. But in the developing countries rigid IOLS are favoured over the rest in terms of cost effectiveness and availability.

The 65 year history of lens implants has been strewn with failure and partial success. Today, cataract surgery with implantation of an intraocular lens is the safest operation in the world, boasting more than a 98% success rate. We owe a lot to those surgeons and their patients who were willing to "take a chance" on something new.



SIR HAROLD RIDLEY

CME ON STRABISMUS

We conducted a state level CME on strabismus on 21st october 2016 , where eminent speakers Dr Manjoo Reddy, Dr Chinmayee and Dr Sowmya Ramani spoke about their expertise and eased our difficulties in understanding strabismus better. It was attended by 180 delegates from in and around Karnataka and KMC has awarded 2 credit points for the same.



CAMPS CONDUCTED BY OUR DEPARTEMENT

A total of 65 camps were conducted from September to February, where about 4000 patients were screened by community ophthalmologists. In this due period about 1185 patients (both camp and opd) were operated, in which 845 patients were cataract and the rest were operated for other extraocular pathologies.



Optical coherence tomography –



Recently we have procured Optical coherence tomography instrument. Optical coherence tomography (OCT) with micrometre resolution and cross-sectional imaging capabilities has become a prominent biomedical tissue-imaging technique; it is particularly suited to ophthalmic applications and other tissue imaging requiring micrometre resolution and millimetre penetration depth. OCT is based on low-coherence interferometry. Optical Coherence Tomography, or ‘OCT’, is a technique for obtaining sub-surface images of translucent or opaque materials at a resolution equivalent to a low-power microscope. It is effectively ‘optical ultrasound’, imaging reflections from within tissue to provide cross-sectional images. The key benefits of OCT are:

- Live sub-surface images at near-microscopic resolution
- Instant, direct imaging of tissue morphology
- No preparation of the sample or subject
- No ionizing radiation

OCT delivers high resolution because it is based on light, rather than sound or radio frequency. Thus OCT can build up clear 3D images of thick samples by rejecting background signal while collecting light directly reflected from surfaces of interest. OCT is heavily used by ophthalmologists to obtain high-resolution images of the eyes anterior segment and retina. Owing to its cross-sectional capabilities, OCT provides a straightforward method of assessing axonal integrity in multiple sclerosis and glaucoma. OCT is also well suited to assess macular degeneration and is considered the new standard for the assessment of diabetic macular edema. More recently, ophthalmic OCT devices have been engineered to perform angiography, and have been used to assess retinal microvasculature pathology in diseases such as glaucoma and diabetic retinopathy.

ON GOING PUBLICATIONS

1. Surgical management of pterygium in a rural hospital using bare sclera vs conjunctival autograft technique (published in international journal of medical sciences) – Dr Dinesh P

ICMR

1. Assessment of visual impairment among diabetic population in rural hospital – Dr Kalpana under the guidance of Dr. H.T.Venkate Gowda

2. Prevalence and causes of corneal blindness in a rural blind school. – Dr Shika under the guidance of Dr.Dinesh P

CONFERENCES ATTENDED

Karnataka ophthalmic society conducted a state level conference at Koteswar, Udupi on 18th,19th,20th which was attended by Dr Venkategowda Professor and HOD of Ophthalmology, Dr Sundip Shenoy(Professor),Dr Anitha S Maiya (Associate Professor), Dr. Dinesh P (Assistant Professor) Dr Deepa(pg), Dr Nidhi Pandey(pg), Dr Pavan(pg), Dr Anushree Kumar(pg), Dr Shruthi(pg), Dr Savitha(pg), Dr Noothana(pg), Dr Pranesh Ravi(pg).

MET TRAINING

Medical Education Technology training programme was conducted in our college from 22nd – 24th November 2016 for faculty members which was attended by our staffs training by Dr H.T Venkate Gowda and Dr Sundip Shenoy

INTERESTING CASES

Axenfield -Riegers anomaly-

A 25 yr old male patient from Hirisave with no associated comorbidities came with complaints of painless diminution of vision since childhood which was slowly progressive, associated with photophobia

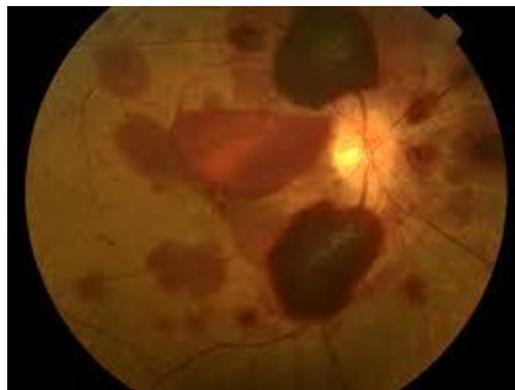
On general examination pt had micrognathia, ophthalmic examination showed visual acuity of cf 5metres in the right eye and 6/18 in the left eye, where both were not improving on pin hole. Strands of iris tissue was adherent with the posterior surface of the cornea. Anterior chamber was variable in depth in both the eyes. IRIS- partial sectoral aniridia with iris atrophy was seen in the right eye, multiple atrophic patches with iris strands, pseudoholes was seen in the left eye.

Gonioscopy showed posterior embryotoxon hence the above findings were suggestive of Axenfeld Riegers anomaly.



Tersons syndrome

A 35 yr old male patient who had a recent history of head trauma 2 weeks ago came with c/o diminition of vision in both the eye associated with floaters for the past 2 weeks. Patient was already admitted in NIMHANS for underlying subarachnoid heammorhage which was confirmed by CT scan for which he was treated. On ocular examination anterior segment was normal. posterior segment evaluation showed bilateral multiple intraretinal heammorrhages with no associated vitreous heammorrhage, hence a diagnosis of Tersons syndrome was made, patient was treated conservatively and advised for follow up every 2 weeks.



MEDICAL QUIZ

1. Irrespective of the etiology of a corneal ulcer, the drug always indicated is:

- a. Corticosteroids
- b. Cycloplegics
- c. Antibiotics

d. Antifungals

2. Patching of the eye is contraindicated in:

- a. Corneal abrasion
- b. Bacterial corneal ulcer
- c. Mucopurulent conjunctivitis
- d. After glaucoma surgery

3. A female patient 18 years old, who is contact lens wearer since two years, is complaining of redness, lacrimation and foreign body sensation of both eyes. On examination, visual acuity was 6/6 with negative fluorescein test. The expected diagnosis can be:

- a. Acute anterior uveitis.
- b. Giant papillary conjunctivitis.
- c. Bacterial corneal ulcer.
- d. Acute congestive glaucoma

4. A one-month old baby is brought with complaints of photophobia and watering. Clinical examination shows normal tear passages and clear but large cornea. The most likely diagnosis is:

- a. Congenital dacryocystitis
- b. Interstitial keratitis
- c. Keratoconus
- d. Buphthalmos

5. A patient of old standing diabetes mellitus noticed sudden muscae volitantes. On examination, the red reflex was dim, with no details of fundus could be seen. He might have:

- a. Non proliferative diabetic retinopathy
- b. Cystoid macular edema
- c. Vitreous hemorrhage
- d. Central retinal vein occlusion

6. A male patient 30 years old with visual acuity of 6/6 in both eyes. Twelve hours ago he presented with drop of vision of the left eye. On examination, visual acuity was 6/6 in the right eye and 6/60 in the left eye. Fundus examination showed blurred edges of the left optic disc. The most probable diagnosis is:

- a. Raised intra cranial pressure
- b. Raised ocular tension
- c. Central retinal artery occlusion
- d. Optic neuritis