**Title of Paper**  
THE PULSATING PUZZLES

**Purpose**  
To report a case of pulsatile proptosis with defective vision both eye due to neurofibromatosis with sphenoid wing dysplasia.

**Method**  
A Case report on the ocular examination findings and investigations done on the patient are described.

**Results**  
Examination revealed pulsatile proptosis bilaterally along with ptosis and convergent squint left eye,lisch nodules ,axillary freckles and neurofibromas over the skin.MRI Report showed b/l optic nerve glioma and sphenoid wing dysplasia.

**Conclusion**  
Any patient presenting with b/l pulsatile proptosis evaluate for any neurofibromatous lesion over skin and presence of ocular features like lisch nodules.Do MRI scanning to rule out sphenoid wing dysplasia and presence of Optic nerve gliomas.
Title of Paper: Optical coherence tomography based analysis of retinal changes in pregnancy and gestational diabetes mellitus

Purpose: To study the optical coherence tomography changes in normal pregnancy and gestational diabetes mellitus.

Method: Prospective comparative study of 2 groups: healthy pregnant women & pregnant women with GDM at 32 to 34 weeks of gestation at 18-40 yrs. GDM diagnosed based on American Diabetes Association 2015 guidelines - 2 step strategy. Exclusion criteria: Pregestational diabetes mellitus, pre-existing hypertension, retinal and macular diseases, renal disease, vascular disease, arteritis, glaucoma, iop > 21 mm Hg, cataract, refractive error correction more than or equal to +/- 5D (spherical) or +/- 3D (cylinder) Use of drugs like hydroxychloroquine, oral contraceptives and antipsychiatric medications. 364 eyes included in study. Procedure: After detailed history, written consent, detailed ophthalmic examination patients are classified into group 1. Using CIRRUS HD OCT & following parameters will be evaluated: Macular thickness measured in fovea, superior inner, inferior inner, nasal inner, temporal inner, superior outer, inferior outer, nasal outer & temporal outer fields. Peripapillary retinal nerve fibre layer thickness is measured as mean thickness, superior, inferior, nasal and temporal quadrants.

Results: 364 eyes of 182 patients were included in the study. OCT measurements revealed significant thinning in macula as well as peripapillary retinal nerve fibre layer in GDM patients when compared to healthy pregnant corresponding to the uncontrolled glycemic status of the patient.

Conclusion: Retinal thickness shows significant changes in gestational diabetes mellitus advocating the need for an early OCT in pregnancy.
# Title of Paper
Pigmentary glaucoma-a case report

## Purpose
A poster presentation to show how a case of pigmentary glaucoma has been managed medically and surgically

## Method
42 year old male presented with blurring of vision RE and headache of 1 week duration. O/E VA 6/9 RE, 6/6 LE. Conjunctival congestion, krukenbergs spindle, corneal edema, deep AC, pigments on anterior vitreous face, 0.7 c/d, IOP 48mm, pigmented trabecular meshwork. Diagnosed as pigmentary glaucoma and started on combigan. Iop 32mm, added dorsun, iop 22 mm hg. Trabeculectomy with MMC done. Releasable sutures removed. Iop 12 mm hg. Fundus 0.7 c/d. Good bleb.

## Results

## Conclusion
Case of pigmentary glaucoma, not controlled medically, trabeculectomy with MMC has relieved patient of symptoms. Iop is under control and cupping has not progressed. Patient is having 6/9 vn.
**Title of Paper**: Ocular manifestation of syphilis

**Purpose**: To study various ocular manifestations of syphilis

**Method**: Prospective study

**Conclusion**: Various ocular manifestations of syphilis
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>A comparative study of outcome of SICS among diabetic and non-diabetic individuals</th>
</tr>
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<tbody>
<tr>
<td>Purpose</td>
<td>INTRODUCTION: In modern cataract surgical techniques, small incision cataract surgery (SICS) is still a viable option in developing countries since it is cost effective, provides a good visual outcome with lesser complications. AIM: To compare the visual outcomes of diabetic cataract with non-diabetic cataract</td>
</tr>
<tr>
<td>Method</td>
<td>The case records of 103 patients who underwent SICS from January 2017 to March 2017 for senile cataract were analysed for history, investigations, intraoperative and postoperative findings retrospectively. 6 cases were excluded since they had other ocular pathologies like hypertensive retinopathy.</td>
</tr>
<tr>
<td>Results</td>
<td>Of the total 97 patients, 84 were non diabetic and 13 were diabetic. Of the 13 diabetic patients, 3 had poor mydriasis pre operatively and 5 developed mild anterior segment inflammation in the early post-operative period. Post op visual acuity &gt; 6/9 in 77.38% in non-diabetic, 69.23% in diabetic patients.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>SICS is a safe and cost effective technique for both diabetic and non-diabetic patients.</td>
</tr>
</tbody>
</table>
Title of Paper | A RARE CASE OF DISSEMINATED NOCARDIOSIS WITH BILATERAL OCULAR NOCARDIOSIS IN AN SLE PATIENT
---|---
Purpose | TO REPORT A RARE CASE OF DISSEMINATED NOCARDIOSIS WITH BILATERAL OCULAR NOCARDIOSIS IN AN SLE PATIENT
Method | 33 YEAR OLD FEMALE WITH SLE, LUPUS NEPHRITIS AND NEURO LUPUS -12 YEARS, ON ORAL PREDNISOLONE DURING PREGNANCY, UNDERWENT LSCS AT 29 WEEKS OF GESTATION. NEXT DAY DEVELOPED PRODUCTIVE COUGH, PAIN SHOULDERS AND BOTH LEGS. 5 DAYS LATER, NOTICED BIG SHADOW LIKE FLOATERS RIGHT EYE, DEFECTIVE VISION, SEVERE HEADACHE, DEVELOPED ABCESS IN SHOULDER AND GLUTEAL REGION AND MULTIPLE PAINFUL NODULES ALL OVER THE BOY. CT BRAIN SHOWED FRONTAL ABCESS. BCVA OD 6/18(B) OS 6/6 FUNDUS OD SEVERE VITRITIS WITH SUBRETINAL ABCESS AND SATELLITE LESIONS, OS- SMALL SUBRETINAL LESION MILD VITRITIS. STARTED ON ORAL COTRIMOXAZOLE. VITRECTOMY DONE. CULTURE AND SENSITIVITY SHOWED NOCARDIA NOVA.
Results | THUS A DIAGNOSIS OF DISSEMINATED NOCARDIOSIS WITH MULTIPLE ABCESSSES INVOLVING BRAIN, LUNG AND SKIN WITH ENDOGENOUS ENDOPHTHALMITIS OD AND SUBRETINAL ABCESS OS WAS MADE. STARTED ON SYSTEMIC IMIPENEM AND INTRAVITREAL INJECTION IMIPENEM AND CEFTAZIDIME GIVEN AFTER 2 MONTHS. VISION IMPROVED, VITRITIS SUBSIDED, SUBRETINAL ABCESS DECREASED IN SIZE. AFTER 6 MONTHS BCVA- OD 6/9 OS 6/6 THE PATIENT IS STILL ON CEFTAZIDIME 1G IV OD
Conclusion | THUS EARLY DIAGNOSIS AND PROMPT TREATMENT HELPED TO SAVE THE LIFE AND VISION OF A YOUNG FEMALE
**Title of Paper**  
Clinical profile and immediate surgical outcome of patients with pseudoexfoliation undergoing cataract surgery

**Purpose**  
To study the clinical profile and immediate surgical outcome of patients with pseudoexfoliation syndrome (PXF) following manual small incision cataract surgery (MSICS)

**Method**  
A prospective observational study of patients with cataract and PXF was conducted between November 2015 and April 2017. A complete ophthalmic examination was done followed by MSICS in a tertiary care hospital. Preoperative examination, intraoperative and postoperative complications and immediate visual outcome were noted

**Results**  
80 operated eyes of 80 patients were studied. Mean age was 62.51±8.91 years. 51% had bilateral presentation. PXF material on pupillary margin (96%) was the most common finding followed by PXF on anterior lens capsule (62%) and Bull 's eye pattern (27%). 73% patients had hard cataract. Intraoperatively poor pupillary dilatation was noted in 62% patients and posterior capsular rent in 13%. Immediate post-operative vision was greater than or equal to 20/60 in 51% patients

**Conclusion**  
PXF should be noted preoperatively and a surgeon should plan the surgery beforehand to avoid any intraoperative complications.
A RARE CASE OF BILATERAL INDIRECT CAROTID CAVERNOUS FISTULAE TYPE D WITH SPONTANEOUS CLOSURE

Purpose
To report a rare case of bilateral indirect carotid cavernous fistula type D with spontaneous closure

Method
75 year/female,presented with bulging and redness BE-7months,increased for 3 months. H/O headache&vomiting-7 months. H/O painless defective vision BE-10 years,increased for 7 months. H/O tinnitus. No h/o diplopia, discharge, flashes, floaters, hearing loss, fever, weight loss, sweating, palpititation. H/O fall 25 days back & she had pelvic fracture.

H/O POAG BE-3 months, on topical Brimonidine and Timolol. k/c/o diabetes, hypertension, COPD, on treatment.

At presentation, bedridden. Ocular movements were restricted in all directions BE. BCVA 2/60 BE. Leudde’s exophthalmometry-axial proptosis 5 mm BE. Transmitted pulsations & bruit was present over the proptosed eyes. She had periorbital edema, conjunctival congestion, chemosis, conjunctival prolapse and dilated episcleral veins BE. AC-shallow, pupillary reflexes- sluggish & IOP raised in BE. Fundus examination- hyperemic disc with blurring of margins.

Results
Thus a provisional diagnosis of Carotid Cavernous Fistulae BE was made.

MRI BRAIN AND MRV
Features of left CCF

DSA
ANGIOGRAM 4 VESSEL

Bilateral indirect CCF type D, more extensive on right side (proliferative pattern) than on the left (early restrictive type). Venous egress is via the left SOV and petrosal sinuses with cerebellar and cortical venous reflex. Associated mild intracranial atherosclerotic disease. Trial of conservative management with carotid compression exercises was done.

FOLLOW UP
Visual acuity and ocular movements improved.

Conclusion
Prompt diagnosis of the condition and timely conservative management helped to cure this disease without the need for complicated surgical intervention.
Title of Paper | OCULAR DISORDERS IN CHILDREN WITH DISABILITIES IN SPECIAL SCHOOLS OF THIRUVANANTHAPURAM.
--- | ---
Purpose | 1. To assess and find out visual problems and ocular disorders in children with disability, studying in special schools.
2. To impart awareness among parents and teachers about the need for ocular examination and early treatment of ocular disorders in children with disabilities.

Method | The study included 262 (5 to 25 years) studying in special schools in Thiruvananthapuram. Ocular examination was done using a torch light, head posture and facial anomalies observed. Snellen's E chart, picture charts or HOTV Charts used for assessing visual acuity. Hirschberg light reflex test and cover uncover tests done to evaluate strabismus. Ocular movements tested, and any nystagmus noted. Magnifying loupe was used to rule out anomalies of lid, conjunctiva, cornea, anterior chamber, iris and lens and pupillary light reflexes noted. Cycloplegic retinoscopy was done using 0.3% cyclopentolate or Homatropine 0.5% eye drops. Fundus examination done using indirect ophthalmoscope.

Results | After excluding 20 uncooperative students out of the total 262, 242 students examined 72.7% males. Categorized into Down syndrome, Autism, mental retardation, Cerebral palsy, learning disabilities and miscellaneous group (who couldn’t be categorized or not diagnosed medically). Ocular disorders (68.6%), more in Down syndrome (86%). Refractive errors (58.7%), more in females (62.1%) and in mentally retarded (37%). Myopia, Hypermetropia and Astigmatism seen in 139 (28%), 79 (14%), 65 (13%) respectively. 65% had mild myopia (<3D). Strabismus in 33 children, 57% esotropia. Cataract in 14 children. Squamous blepharitis 6.2%, allergic conjunctivitis 4.1%, congenital ptosis 1.2%, corneal opacity and sclerocornea (4.1%), microcornea (1.6%), keratoconus (0.8%).

Conclusion | Early diagnosis and treatment of ocular problems in disabled children will help in their overall development. As they won’t be able to express their problems like normal children, periodic examination by experts should be made mandatory in special schools. Parents should take extra care to identify and correct visual problems in disabled children.
**Title of Paper**: AN UNIQUE CASE OF CHRONIC CENTRAL SEROUS RETINOPATHY WITH PERIPHERAL NEOVASCULARISATION OF RETINA.

**Purpose**: To report a rare case of chronic multifocal CSR with peripheral retinal neovascularisation which spontaneously resolved after focal laser.

**Method**: CASEREPORT: A 33Year old male patient was diagnosed as recurrent CSCR. BCVA OD 6/9 OS 6/6. Fundoscopy and OCT revealed OD SMD (submacular detachment). The follow-up after 6 weeks showed complete resolution of SMD with BCVA 6/6. The patient returned to us after 2 years with a h/o rectal carcinoma. BCVA 6/24. Fundus showed subretinal fibrinous lesion, inferior exudative RD, NVE at inferior periphery. DFA showed multifocal leaks, inferior capillary non perfusion areas and profuse leak from new vessels.

**Results**: Focal green laser was given to the leaking sites. Follow-up showed dramatic decrease in exudative RD and spontaneous resolution of NVE within 4months.

**Conclusion**: Chronic exudation might have caused long standing ischemia and neovascularisation which was resolved by treating the root cause. This case is unique and no such case report have been documented before.
<table>
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<tr>
<th>Title of Paper</th>
<th>WHEN ICE TURNS VICE...IGNORANCE COSTS AN EYE</th>
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<tr>
<td>Purpose</td>
<td>To report a rare case of central retinal artery occlusion (CRAO) in a young male.</td>
</tr>
<tr>
<td>Method</td>
<td>Case report: A 29 year old male presented with sudden onset defective vision in the left eye for past 4 hours. He gave a history of redness, pain and watery discharge in the left eye for past 2 days. For a soothing effect, he applied frozen water over his left eye for few minutes in an intermittent manner. He complained of sudden vision loss after that. His BCVA OD was 6/6, OS PL+PR+. Slitlamp examination revealed conjunctival congestion and mild chemosis OS. Fundoscopy revealed whitening of retina with cherry red spot and cattle track sign s/o CRAO. Right eye was essentially normal</td>
</tr>
<tr>
<td>Results</td>
<td>Immediate goniomassage, AC paracentesis with oral acetazolamide was given. His vision remained the same. He was advised to get cardiac, neuro consult with blood investigations to rule out hypercoagulable disorders. Nothing turned out to be relevant.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Cold stimulus might have caused vasospasm leading to CRAO. It was just a child's play which went terribly wrong.</td>
</tr>
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### Title of Paper
AN UNUSUAL CASE OF BILATERAL ENDOGENOUS ENDOPHTHALMITIS

### Purpose
To report a rare case of bilateral endogenous endophthalmitis with an atypical presentation caused by Aeromonas hydrophila

### Method
75 year old female a known case of diabetes, hypertension, dyslipidemia, hypothyroidism, CAD, presented with complaints of swelling, redness, pain and rapidly progressive loss of vision of both eyes with 2 days duration. On examination, visual acuity: OD - PL+ve, OS - PL-ve. There was bilateral proptosis with total limitation of extra ocular movements associated with marked lid edema, severe congestion, chemosis and total hyphema. Differential diagnoses considered were Cavernous sinus thrombosis, Bilateral orbital cellulitis and Bilateral panophthalmitis. MRI brain was done along with venous doppler of superior ophthalmic vein and blood culture.

### Results
MRI brain showed mild intracanal fat stranding, preseptal edema and mild post contrast enhancement of left inferior rectus muscle. There was no evidence of Cavernous sinus thrombosis. Venous doppler of superior ophthalmic vein showed decreased flow in both eyes, left more than right. Repeat MRI orbit revealed orbital cellulitis and endophthalmitis, left more than right. Blood culture showed Staphylococci, group B beta hemolytic Streptococci and Serratia marcescens. Both eye spontaneously perforated and the culture of the contents revealed Aeromonas hydrophila which was not isolated from blood culture.

### Conclusion
Considering the fact that a case of endophthalmitis can present in an atypical manner and the presentation can be misleading and so rare and severe that the patient will end up invariably in a state of poor visual prognosis, an early diagnosis and aggressive management has to be initiated.
<table>
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<tr>
<th>Title of Paper</th>
<th>A RARE CASE OF RECURRENT ORBITAL CELLULITIS DUE TO BOTRYOMYCOSIS</th>
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<tr>
<td>Purpose</td>
<td>To report a case of recurrent orbital cellulitis due to botryomycosis in a young healthy male.</td>
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<tr>
<td>Method</td>
<td>A 48-year-old male presented with sudden onset severe pain, lid swelling and decreased vision in the right eye since 4 days. He was unable to open RE since 2 days. There was no history of trauma/sinusitis. He denied PL in RE. Extraocular movements were grossly restricted in all gazes. Periorbital edema, conjunctival chemosis, RAPD &amp; optic disc edema were present. LE was normal. CT brain, orbits and para nasal sinuses showed RE proptosis, bulky extraocular muscles and Right maxillary &amp; ethmoidal sinusitis. He was started on IV Ceftazidime, Vancomycin and Metronidazole along with oral steroids &amp; topical Moxifloxacin.</td>
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<tr>
<td>Results</td>
<td>He underwent right sided functional endoscopic sinus surgery (FESS) with orbital decompression. Histopathology was suggestive of botryomycosis. However, he presented again with similar complaints two weeks later. Examination findings were similar to initial presentation. Right orbital decompression &amp; frontal abscess drainage was done by Neurosurgeon. He was well and discharged.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Botryomycosis is a chronic, suppurative, granulomatous infection usually seen in immune-compromised individuals. It is a rare condition and usually involves the skin. Orbital cellulitis secondary to botryomycosis is extremely rare. Combined surgery with systemic antibiotics is the treatment of choice.</td>
</tr>
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</table>
**Title of Paper**: UNILATERAL HARRADA: THE SO CALLED RARE CLINICAL ENTITY

**Purpose**: To evaluate clinical features, visual outcome and multimodal imaging in unilateral harada.

**Method**: Retrospective analysis of 21 cases of unilateral harada over 5 years with a minimum followup of one year.

**Results**: 21 cases with mean age of 41.8 years and unilateral involvement were included. BCVA was 0.46 LOGMAR at presentation. There was RAPD& anterior uveitis in 6 cases, disc oedema in 6 cases. OCT showed Serous macular detachment in all cases, EDI showed a thickened choroid (average of 559u subfoveally). There was no T sign in B scan. FFA showed multiple RPE leaks in mid phase with pooling in late phase in all. ICG showed hypocyanascent spots. Systemic investigations were negative. Systemic steroids in tapering dose over 6 weeks resulted in complete recovery of vision with reversal of findings in OCT without a recurrence till last followup.

**Conclusion**: Unilateral VKH is rare but clings to the described clinical and FFA features of classical disease. Unilateral Harada disease may be a new clinical entity with lack of any systemic involvement and good prognosis.
**Title of Paper**
Lateral elongation of the Flat Irregular Pigment Epithelial Detachment (FIPED). A precursor lesion of Polypoidal choroidal vasculopathy.

**Purpose**
To investigate precursor lesions of Polypoidal choroidal vasculopathy (PCV).

**Method**
Retrospective analysis of 75 clinically unaffected, treatment naïve other eyes of unilateral PCV with a minimum follow-up of one year were studied.

**Results**
SDOCT revealed PED in 18 eyes. Of which 9 eyes had flat irregular pigment epithelial detachment, 5 eyes had serous and 4 eyes had drusenoid PED. 8 eyes developed PCV in a mean duration of 15±6 months. All 8 cases showed horizontal elongation of FIPED with a mean length of 2065±498 μ (P<0.001). 4 eyes had active and 3 had quiescent polyp. SDOCT showed SRF over the sections of FIPED. ICG frames showed presence of polyps through the same sections. Other 9 eyes with PED; mean height of 99±24 μ showed an increase in height not more than 54 μ. Of which one case developed active polyp within 6 months (P>0.05).

**Conclusion**
Lateral expansion or elongation of flat irregular PED can be considered as a precursor lesion of PCV. Such cases need strict follow-up. Long term studies are warranted.
<table>
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<th><strong>Title of Paper</strong></th>
<th>The &quot;Double-Layer Sign&quot; on Spectral-Domain Optical Coherence Tomography</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>The &quot;Double layer sign (DLS)&quot;) on SD-OCT, formed by shallow irregularly elevated RPE with underlying intact Bruch’s, is conceivably due to chronic choroidal hyperpermeability in pachychoroidopathy. The aim of our study was to evaluate and possibly differentiate between DLS seen in two pachychoroid variants &quot;Polypoidal choroidal vasculopathy (PCV) and chronic central serous chorioretinopathy (CCSCR).</td>
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<tr>
<td><strong>Method</strong></td>
<td>Retrospective analysis of seventy eyes with pachychoroidopathy who underwent multimodal imaging including enhanced-depth imaging optical coherence tomography (EDI-OCT), fundus autofluorescence, digital fluorescein angiography (DFA) and indocyanine green angiography (ICGA) on Spectralis OCT. Presence of PCV was confirmed on ICGA. Based on multimodal imaging, the eyes were categorized into two pachychoroid variants presenting with DLS - Polypoidal choroidal vasculopathy (PCV) and chronic central serous chorioretinopathy (CCSCR). Presence of DLS was scrutinized on SD-OCT and its detailed analysis was performed by a single masked grader. The sub-foveal choroidal thickness (SFCT) was measured too.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>35 eyes each were present in PCV and CCSCR groups with CCSCR seen significantly more in males (p =0.005), in younger population (CCSCR: 55.66 ± 10.88 yrs; PCV: 62.89 ± 8.64 yrs; p &lt; 0.001) and with significantly greater SFCT (CCSCR: 467.23 ± 97.13µ; PCV: 297.11 ± 82.47µ; p &lt; 0.001). DLS was significantly associated with PCV (32/35 eyes; sensitivity:91.43%; specificity:68.57%; positive predictive value [PPV]:74.42%; negative predictive value [NPV]:88.89%) as compared with CCSCR (11/35 eyes; sensitivity:31.43%; specificity:8.57%; PPV:25.58%; NPV:11.11%; p&lt;0.001). All 32 eyes of PCV with DLS had characteristic moderate hyperreflectivity (p&lt;0.001), while DLS in CCSCR showed uniform hyporeflectivity in all 11 eyes, except one.</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>Presence of DLS in pachychoroidopathy is significantly associated and favorably predictive of PCV as against CCSCR. Occurrence of hyperreflectivity between undulated RPE and Bruch’s is a vital indicator of PCV while hyporeflectivity corresponded well to CCSCR. Moreover, younger age, male gender and thicker choroid correlates better with CCSCR than PCV.</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>CENTRAL MACULAR THICKNESS IN DIABETICS WITHOUT RETINOPATHY: A CROSS-SECTIONAL STUDY</td>
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<td><strong>Purpose</strong></td>
<td>Diabetic maculopathy is the leading cause for blindness in type 2 diabetes mellitus (T2DM). Spectral Domain Optical Coherence Tomography can detect subtle changes in the central macular thickness (CMT). Aim of this study is to assess CMT in T2DM without retinopathy and to correlate it with duration of diabetes and HbA1c.</td>
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<tr>
<td><strong>Method</strong></td>
<td>It is a cross-sectional study which included 104 type 2 diabetic patients attending ophthalmology out-patient department from November 2015 to April 2017. Spectral domain optical coherence tomography was used to estimate the central macular thickness. Patients with other systemic illnesses, any ocular pathologies like glaucoma, cataract, posterior segment pathologies and history of any previous ocular surgeries were excluded from this study.</td>
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<tr>
<td><strong>Results</strong></td>
<td>This study included 44 male diabetics and 60 female diabetics. Average age of males were 53.66±10.85 years and females were 48.63±7.09 years with duration of diabetes ranging from newly diagnosed to 15 years. The mean HbA1c was 8.99±2.51 %. The mean central macular thickness was 199.10±17.78 microns; central macular thickness among males being thicker (208.35±16.14 microns) than in females (192.33±15.85 microns) which was statistically significant (p=0.00). We found no statistically significant correlation between the central macular thickness with duration of diabetes (p=0.63) and HbA1c level (p=0.28).</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>The mean central macular thickness among type 2 diabetes mellitus without retinopathy was 199.10±17.78 microns and the central macular thickness showed no correlation with duration of diabetes and HbA1c.</td>
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### ABSTRACT DETAILS: DS17-19

<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>A RARE CASE OF INTRACRANIAL COLLOID CYST PRESENTING AS OPHTHALMOPLEGIA</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>To present a case of 46 year old male with complaints of headache for 2 years. Diplopia, behavioural change and memory loss for 6 months. He took medications by himself for headache but now it is not relieving with the same. Hence he consulted over here.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>On examination he had impaired recent and remote memory. Examination of right eye revealed visual acuity of 6/36 with 1.50Dsph 6/9 nfig, features of right oculomotor paresis, right divergent squint of 15 degree, ptosis, fixed mid dilated pupil. Examination of left eye revealed visual acuity of 6/24 with +1.25 Dsph 6/9nfig, normal anterior segment. Examination of fundus revealed features of established papilloedema in both eyes.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Patient was admitted emergency MRI brain was taken it showed a well circumscribed cystic mass lesion arising from the roof of third ventricle near the interventricular foramen of Monroe which is hyperintense in T1, T2 and FLAIR sequence. There is a peripheral rim of blooming on SWI sequence possibly calcified capsule. The lateral ventricles appear dilated suggestive of obstructive hydrocephalus. Lesion is noted to compress optic chiasma and right cavernous sinus. Features suggesting a colloid cyst arising from the foramen of Monroe.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Colloid cyst is a rare intracranial tumor comprising 0.5-1% of intracranial tumors. Colloid cyst presenting as ophthalmoplegia is again a rare entity. So a headache can lead us to even such a rare diagnosis. So proper examination and timely evaluation is necessary in all cases of headaches.</td>
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</table>
# A Comparison between the size of Pituitary adenoma and Visual Field Defect in Patients having Pituitary Adenoma with Optic Nerve Compression

**Title of Paper**
A Comparison between the size of Pituitary adenoma and Visual Field Defect in Patients having Pituitary Adenoma with Optic Nerve Compression

**Purpose**
To compare the size of Pituitary Adenoma as given in MRI report with the visual field defect in patients with Pituitary Adenoma having Optic Nerve compression.

**Method**
Ten patients with Pituitary Adenoma had Optic Nerve compression on MRI. The size of Pituitary Adenoma in craniocaudal, anteroposterior and transverse axis and the total size was compared with the field defect detected by Humphrey’s Field Analyzer. In patients without field defect, temporal depression was calculated by the quadrant sum of sensitivity.

**Results**
Out of the ten patients, six patients had field defect and four patients did not have field defect. The size of Pituitary adenoma in craniocaudal axis and transverse axis was higher in patients with field defect, but was not statistically significant. The size of Pituitary Adenoma in anteroposterior axis and total size was higher in patients with field defect and was statistically significant. In patients without field defect, temporal depression index in upper field in left eye had significant positive correlation with the size of Pituitary Adenoma in anteroposterior axis.

**Conclusion**
Even patients of Pituitary Adenoma with Optic Nerve compression on MRI can have normal visual fields. In such cases, the total size and the size of Pituitary Adenoma in anteroposterior axis can be a significant predictor of visual field defects.
### Title of Paper
Uveitis in Multiple Myeloma - a case report

### Purpose
To report a case of Multiple Myeloma where patient developed uveitis after starting treatment.

### Method
A 67 year old lady who was diagnosed to have Multiple Myeloma was started on chemotherapy with Bortezomib, Lenalidomide and Dexamethasone and was given injection Zoledronic acid. She started having pain and redness in both eyes on the next day. She was diagnosed to have both eyes Anterior Uveitis and was treated with topical steroids and cycloplegics.

### Results
Uveitis was treated completely and she did not have any recurrence, even after completing the course of chemotherapy and getting injection Zoledronic acid every month for 6 months. She had 2 episodes of mild Episcleritis, which was treated with nonsteroidal anti inflammatory eye drops.

### Conclusion
Bisphosphonate induced uveitis and scleritis has been well documented in literature, but this patient developed uveitis only after the first dose. An attempt is made to explain the reasons.
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<tr>
<th><strong>Title of Paper</strong></th>
<th>An eye’s heart attack</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>For poster presentation in KSOS</td>
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<tr>
<td><strong>Method</strong></td>
<td>John, a 30yr old smoker and occasional alcoholic, presented with sudden loss of vision in his RE while waking up in the morning. He experienced severe right sided neck pain associated with headache and pain in RE in the previous day. One week before he had Fever and loose stools. O/E, no perception of light in his RE with RAPD and hyperemic disc with intense ischemic retinal whitening noted extensively throughout posterior pole and attenuated arteries. Macular area was raised &amp; edematous. No cherry red spot. Because of severe visual loss and absence of cherry red spot, ophthalmic artery occlusion was suspected.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Patient was referred immediately and investigated. Serum homocysteine was elevated. MRI brain showed acute infarct in the right temporal region, corona radiata and insular cortex. MRA and neck vessel Doppler showed complete thrombosis of right internal carotid artery. Diagnosis of ophthalmic artery occlusion secondary to complete right internal carotid artery occlusion, Homocysteniemia, and no focal neurological deficit was made.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Because of the complete occlusion surgical intervention was not done. Patient was started on tab. ecosprin, tab. homocyst, and tab. atorvastatin and was kept under follow up</td>
</tr>
<tr>
<td>Title of Paper</td>
<td>booming fungal etiology behind jacod syndrome: a prospective case series</td>
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<tr>
<td>Purpose</td>
<td>To study prevalence, and outcome of Jacod syndrome</td>
</tr>
<tr>
<td>Method</td>
<td>Prospective case series reported from March 2016 to May 2017</td>
</tr>
<tr>
<td>Inclusion</td>
<td>patients presenting with acute onset of total ophthalmoplegia</td>
</tr>
<tr>
<td>Exclusion</td>
<td>congenital orbital wall disorders, Preexisting orbital disease, recent history of trauma, h/o myasthenia, congenital progressive external ophthalmoplegia, cavernous sinus thrombosis, orbital cellulitis</td>
</tr>
<tr>
<td>PROCEDURE</td>
<td>23 patients with orbital apex syndrome was evaluated. All Routine blood investigations, imaging-CT/mri was done. Sample sent for histopathology based on which treatment was initiated.</td>
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<td>PROCEDURE</td>
<td>23 patients with orbital apex syndrome was evaluated. All Routine blood investigations, imaging-CT/mri was done. Sample sent for histopathology based on which treatment was initiated.</td>
</tr>
<tr>
<td>Results</td>
<td>66% of the 23 patients who were included in the study underwent FESS. Orbital decompression was attempted in only 8 patients (33%) only 2 patient showed improvement of ophthalmoplegia following orbital decompression. Following surgical intervention FESS specimen was sent for histopathology which showed equal incidence of mucormycosis and aspergillosis enlightening 100% fungal etiology. All patients with mucormycosis died. 6 out of the 23 patients who survived 4 were diagnosed with pseudotumour 2 with aspergillosis. 75% of the patients were diabetic.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>This study highlights escalating fungal etiology for Jacod syndrome with 100% FESS samples showing fungal etiology thereby throwing light on the need of thorough investigative modality for each and every case of total ophthalmoplegia.</td>
</tr>
</tbody>
</table>
## Title of Paper
STUDY OF RETINAL NERVE FIBRE LAYER THICKNESS AND CENTRAL CORNEAL THICKNESS IN OCULAR HYPERTENSION

## Purpose
To determine any correlation between the retinal nerve fibre layer thickness (RNFLT) and central corneal thickness (CCT) in patients with ocular hypertension (OHT).

## Method
This was a prospective, observational study, done between August 2015 and May 2017. Patients with OHT were included and sub-divided into thin (CCT less than or equal to 555Åμm) and thick (CCT >555Åμm) corneas. RNFLT was measured with Spectral Domain- Optical Coherence Tomography and CCT with ultrasound pachymetry.

## Results
We examined 65 eyes of 35 OHT patients. The mean intra-ocular pressure (IOP), CCT and RNFLT were 23.48±2.47 mmHg, 553.81±38.3Åμm and 102.12±12.28Åμm respectively. Mean RNFLT in thin corneas was 101.14±10.68Åμm and in thick corneas was 103.21±13.92Åμm. There was no significant difference in the average (p=0.50) or quadrant-wise (superior, nasal, inferior and temporal) RNFLT, between the two groups.

## Conclusion
CCT cannot be used as an indicator for retinal nerve fibre loss in patients diagnosed with ocular hypertension.
OCULAR MANIFESTATIONS IN HEAD INJURY- A CROSS-SECTIONAL STUDY IN A TERTIARY CARE TEACHING HOSPITAL IN NORTH KERALA

Purpose
To study the ocular manifestations in head injury and correlate these with the neurological status and patient survival in cases of head injury presenting to the Emergency Department of MES Medical College, Perinthalmanna from 1st Jan 2016 to 31st Dec 2016.

Method
This was a prospective, cross-sectional study conducted among patients with head injury. Patients who died or were discharged within a period of 24 hours of admission were excluded. After taking history regarding the cause of injury, bedside assessment of vision and torchlight examination of anterior segment including pupillary reactions were performed. Fundus examination using direct ophthalmoscope was performed wherever possible. The Glasgow Coma Scale scoring was used to assess the neurological status of all patients and CT Head was taken where indicated. Data were analyzed using Epi-Info software.

Results
Out of 295 patients with head injury 73(24.75%) patients had ocular manifestations. The most common ocular manifestations were ecchymoses(63%), lid edema(42.5%), subconjunctival hemorrhage(30%) and lid laceration(20.5%). The ocular manifestations of neurological significance were traumatic optic neuropathy(13.7%), Hutchinson's pupil(5.48%), third nerve palsy(5.48%) and fourth nerve palsy(2.74%). Out of 9 patients who died, 6 had ocular signs of neurological significance(p <0.003). There was a significant association of ocular manifestations with the neurological status(p<0.002) as determined by the Glasgow Coma Scale and also with the mortality(p<0.003) in head injury patients.

Conclusion
The presence of ocular manifestations of neurological significance at presentation help not only to localize the damage but also to predict the survival in patients with head injury.
**Title of Paper**
A Clinical Study of Primary Open Angle Glaucoma Suspects

**Purpose**
To study the burden of POAG suspects in patients aged 40-55 years attending the Ophthalmology OPD of MES Medical College, Perinthalmanna during the period of 1st January 2016 to 31st December 2016 and to identify those patients who developed POAG during follow up.

**Method**
This prospective longitudinal study was conducted over a period of one and a half years at MES Medical College. All patients aged 40-55 years with suspected POAG having increased IOP or optic disc cupping in the presence of two normal visual fields were included. Other known risk factors like family history of glaucoma, diabetes, hypertension and myopia were also asked for. Each patient was followed every 3 months for 6 months when IOP, optic discs and visual fields were examined. Patients with abnormal visual fields on follow up were diagnosed as POAG and treated as such.

**Results**
Of 6383 patients screened, 150 were POAG suspects, giving a prevalence of 2.3%. Of these, 36.7% were >50 years old, 21.3% had diabetes, 16% had myopia, 39.3% had C/D ratio >0.6 and 23.7% had IOP of >20 mm Hg. 24 of the 228 eyes (114 patients) followed up developed POAG. Of these, 37.2% had diabetes, 31.2% had hypertension and 25% each had myopia or a family history of glaucoma. The mean age of the population who developed POAG was higher (52 versus 46 years) (p<0.001). There was a statistically significant risk of developing POAG with larger C/D ratios (>0.6, p <0.001) and higher IOPs (>20, p<0.001).

**Conclusion**
Higher age, co-morbidities like diabetes, hypertension, myopia, a family history of glaucoma, abnormal C/D ratio and higher IOP are significant risk factors for developing POAG. So patients with these risk factors need regular monitoring for POAG.
**Title of Paper**  
"GARLAND IN THE RETINA"- An unusual cause for nightblindness.

**Purpose**  
To report an unusual cause for night blindness in a high myopic child.

**Method**  
A female child with history of defective vision for distance since early childhood noticed nightblindness when she grew older. She was prescribed correction for high myopia and was suspected to have atypical retinitis pigmentosa with refractory amblyopia. No family history was present. She lost follow-up for few years. When she reached adolescence her fundus examination showed confluent chorioretinal atrophic patches with scalloped posterior border in mid periphery of both eyes.

**Results**  
OCT macula showed schisis with increased foveal thickness. ERG - impaired photopic and scotopic response in both eyes. FFA showed leakage at margin of healthy and affected tissue with hyperfluorescence within the lesions. Serum ornithine levels were raised. Fields were tubular in both eyes. All were suggestive of gyrate atrophy in both eyes.

**Conclusion**  
Gyrate atrophy can present in high myopes with nyctalopia and is often diagnosed as atypical RP in the early stages. An index of suspicion and to check for serum ornithine levels should be made in such cases since early dietary restriction of arginine, a precursor of ornithine can reduce its progression.
<table>
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<tr>
<th>Title of Paper</th>
<th>Innovations in management of optic disc pit maculopathy</th>
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<tbody>
<tr>
<td>Abstract</td>
<td>Aim: To explore the various options available for the management of optic disc pit maculopathy</td>
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<tr>
<td></td>
<td>Materials and Methods: Demonstrate 2 patients with optic disc pit maculopathy treated with vitrectomy, ILM peel, scleral patch graft and gas injection.</td>
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<td>Results: Overall good resolution long term with stabilisation of vision.</td>
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<td></td>
<td>Conclusion: This surgical procedure is an effective method to manage optic disc pit associated maculopathy</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>Why did the Alzheimer's patient suddenly go blind?</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of bilateral acute angle closure glaucoma following discontinuation of donepezil hydrochloride. Drug induced bilateral acute angle closure glaucoma is a well known entity reported, but accidental withdrawal of a drug precipitating a bilateral attack of AACG is rare.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A 76yr old patient presented with nausea and vomiting followed by severe headache, blurring of vision and redness of both eyes. She is a known case of Alzheimer's disease and is on Tab.Donepezil hydrochloride for the past 10 months. She had discontinued the drug three days back. Ophthalmic examination found symptoms and signs of acute congestive attack in both eye.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>The patient was started on topical antiglaucoma drugs. Donepezil hydrochloride was restarted. The patient had symptomatic relief and IOP came down to normal.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Donepezil hydrochloride, an FDA approved second generation acetyl cholinesterase inhibitor, for Alzheimer's disease, produces miosis. Abrupt withdrawal of donepezil leads to rebound dilatation of pupil and in susceptible individuals, can precipitate acute congestive glaucoma following pupillary block. Thus, a routine ophthalmic screening is recommended before initiating treatment with any antipsychotics or drugs like donepezil.</td>
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</table>
**Title of Paper**  
A clinical study to assess the prevalence of meibomian gland dysfunction in diabetics

**Purpose**  
To study the prevalence of meibomian gland dysfunction in patients with diabetes mellitus

**Method**  
100 eyes of 50 patients with diabetes and an equal number of normal subjects as control who were gender and age matched were taken. General information including age, sex, social history and diabetic status were taken. Symptoms including foreign body sensation, itching, redness, crusting of lashes were noted. Assessment of ocular surface i.e; lid margins, conjunctiva, cornea is done via slit lamp. Ocular surface staining with Lissamine green and fluorescein sodium is done. Schirmer's test and tear film break up time was done to assess the severity of dry eye. Meibomian gland dysfunction is assessed by the quality and expressibility of meibomian gland secretion by noting the volume and viscosity of the same.

**Results**  
In the non-diabetic group out of 100 eyes, there were only 2 eyes with stage 3 MGD & 12 eyes with stage 2 MGD, making it a total of 14 eyes (7%) while the rest (93%) were stage 1 which is considered normal. In the case of diabetic group, there were only 2 eyes with stage 3 MGD and 28 eyes with stage 2 MGD, making it a total of 30 eyes (15%) while the rest (85%) were stage 1.

**Conclusion**  
The overall prevalence of meibomian gland dysfunction was 11%. There was a statistically significant increase in the prevalence of meibomian gland dysfunction in diabetics (15%) as compared to the non-diabetics (7%). There was statistically significant increase in meibomian gland dropout in diabetics (17%) as compared to non-diabetics (9%).
Title of Paper

A STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICE IN DIABETIC RETINOPATHY AMONG PATIENTS ATTENDING A PRIMARY HEALTH CARE CENTRE

Purpose

Diabetic retinopathy is a major source of preventable blindness. Sufficient knowledge about the disease can prevent sight threatening complications. Aim of this study is to evaluate the knowledge and its influence on attitude and practice in diabetic retinopathy among patients attending a primary health care centre.

Method

A knowledge attitude practice questionnaire was prepared. Questionnaire was pretested in a sample group of representative population. The response was analyzed as to whether the questions were understood or not. Social workers were trained in administering questionnaire. Diabetic patients were given questionnaires at primary health centre and filled in the presence of social workers. Data was entered in SSPS and analysis was performed to identify the independent risk factors related to the knowledge about diabetic retinopathy and the influence of this knowledge in attitude and practice.

Results

Out of 324 patients 197(60.803%) had no knowledge of diabetic retinopathy compared to 127(39.197%) who had knowledge (p <0.001). Knowledge was more in age group <40 years (82.60%) and least in 51-60 age (29.34%) (p <0.001) and among females (38.596%) than in males (61.404%). Knowledge was significantly higher among upper socioeconomic group (77.8%). 83.46% of individuals in knowledge group had right attitude which was significantly higher than non knowledge group (32.48%) (p <0.001). 42.51% in knowledge group had practice of visiting ophthalmologist for eye check-up which was significantly higher than non knowledge group (13.19%) (p <0.001).

Conclusion

The attitude and practice pattern of diabetic retinopathy was statistically significant in knowledge group compared to those who had no knowledge of diabetic retinopathy. Improving knowledge about diabetic retinopathy through awareness campaigns can increase attitude and practice. Early detection can help in preventing sight threatening complications of diabetic retinopathy.
<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>THE PULSATING PUZZLE..</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of pulsatile proptosis with defective vision both eye due to neurofibromatosis with sphenoid wing dysplasia</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A Case report on the ocular examination findings and investigations done on the patient are described.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Examination revealed pulsatile proptosis bilaterally along with ptosis and convergent squint left eye, lisch nodules, axillary freckles and neurofibromas over the skin. MRI Report showed b/l optic nerve glioma and sphenoid wing dysplasia and encephalocoele</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Any patient presenting with b/l pulsatile proptosis evaluate for any neurofibromatous lesion over skin and presence of ocular features like lisch nodules. Do MRI scanning to rule out sphenoid wing dysplasia with an encephalocoele and presence of gliomas.</td>
</tr>
</tbody>
</table>
### Title of Paper
Mucous membrane grafting (MMG) and Mini Scleral Lens for the management of Ocular Surface Disease following Steven Johnson Syndrome (SJS)

### Purpose
SJS is a rare self limiting immune mediated hypersensitivity complex which can cause life and sight threatening muco-cutaneous reactions. SJS typically develops secondary to an infection or adverse drug reaction to medication. Severity of ocular involvement may vary ranging from Keratoconjunctivitis Sicca (KCS) to permanent tissue damage and corneal blindness.

### Method
Case series included three eyes of two patients with SJS sequelae. Seven year old boy developed SJS secondary to adverse drug reaction (Cefalosporine) 6 months back. He had very severe photophobia, lid margins keratinization, corneal vascularization and Schirmer values below 1 mm.

Second patient 38 year old male street vendor was suffering for 30 years. Had developed SJS at the age of 6 years secondary to Typhoid. Had RE lid margin keratinization, dystichiasis, puncta closed, keratinization of inferior ocular surface and 3600 pannus. His LE was bony dry with total keratinization.

All three eyes underwent mucous membrane grafting.

### Results
Following MMG, Mini Scleral lens trial was done after complete wound healing. The vicryl sutures went loose after one week and they were removed from all three eyes. Oral sutures was removed only in one case. Others were left since they were absorbable.

7 year old boy RE vision improved to 20/30 from 20/80 with tear reservoir 300µm and LE vision improved to 20/30 from 20/120 with tear reservoir 250µm. 38 year old RE vision improved to 20/80 from 3/60 with tear reservoir 300µm approx.

Penetrating Keratoplasty if attempted would have been a failure in these eyes.

### Conclusion
one of the most common ocular manifestation is keratinization of the eye lid margin which is causative of continued blink mediated micro trauma to the ocular surface. Such keratinization adversely impedes surgical reconstruction procedures and wound healing of the ocular surface and hence should be addressed at proper time.
**Title of Paper**
IS THE FELLOW EYE IN STRABISMIC AMBLYOPIA NORMAL?: A SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY BASED ANALYSIS

**Purpose**
- To compare the fellow eye of unilateral strabismic amblyopia patients with controls in terms of macular, retinal nerve fibre layer and choroidal parameters.
- To correlate the SD-OCT findings with interocular difference in visual acuity and contrast sensitivity in the fellow eyes of strabismic amblyopes.

**Method**
In this comparative observational study, 12 fellow eyes of children between 5-15 years of age with unilateral strabismic amblyopia were compared with age and sex matched normal subjects using SD-OCT (OCT version 3.0, Zeiss Humphrey, Dublin, USA), interocular difference in BCVA (log MAR chart) and contrast sensitivity (Pelli Robson chart). Macular, retinal nerve fibre layer and choroidal parameters were compared using Wilcoxon sign rank test and correlated with interocular difference in visual acuity and contrast sensitivity using Pearson's correlation coefficient.

**Results**
Out of the total 12 patients, mean age was 8±3.42 years. There was a statistically significant difference in the optic nerve head rim area (p=0.04) and disc area (p=0.01) between the cases and controls. There was no significant difference in the average RNFL thickness (p=0.34), average cup-disc ratio (p=0.45), cup volume (p=0.27), macular thickness (0.41), choroidal thickness (p=0.35) between the cases and controls. There was no significant correlation of interocular difference in BCVA or contrast sensitivity with optic nerve parameters among the cases.

**Conclusion**
There was a significant difference in the optic nerve parameters in patients with strabismic amblyopia than the control group. There was no correlation between contrast sensitivity/interocular difference with the optic nerve parameters.
# Title of Paper
PHAKO + EXPRESS FILTERING DIVICE FOR PATIENT WITH POAG AND CATARACT. " A PROSPECTIVE STUDY OF 10 EYES

## Purpose
Aim- To study the Post Operative Visual Acuity, Intra Ocular Pressure control, and complication in 10 eyes with cataract and primary open angle glaucoma

## Method
Method: 10 eye were selected for the study. All patients had significant cataract and primary open angle glaucoma under control with anti glaucomic topical eye drops. Vision of these patients ranged between 6/18 to 3/60. The IOP between 14-20mmHg. All patients underwent temporal clear corneal phako with foldable iol implantation and superiorly the express filtering device was implanted.

## Results
Result: All eyes were examined for visual acuity and Intra Ocular Pressure on I, III, VI, XII, XVIII AND XXIV months. Best corrected visual acuity ranged between 6/6 to 6/12. IOP measure was between 13 to 17mmHg. No Intra Operative, Post Operative complications were encountered, IOP were under control. In these 10 eyes 2 developed Posterior Capsular Opacity, one at 16th month other at 22nd month needing Yag Capsulotomy.

## Conclusion
Conclusion:- In this series all 10 eyes had a good Intra Ocular Pressure Control with good filtering bleb function. It could be an alternative to standard Trabeculectomy with Mytomycin or Ollogen.
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<tr>
<th>Title of Paper</th>
<th>INTRA OCULAR CONTACT LENS (ICL) PROSPECTIVE STUDY ON 10 PATIENTS WITH BILATERAL HIGH MYOPIA- SIMULTANEOUSLY</th>
</tr>
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<tbody>
<tr>
<td>Purpose</td>
<td>Aim: To study the visual acuity, improvement, Post Operative Complications in these 20 eyes with high Myopia and significant Astigmatism. A Prospective Study with follow up.</td>
</tr>
<tr>
<td>Method</td>
<td>Method: - 20 eyes were selected from 10 Patients. The Myopic power ranged from -13 to -20 Spherical power and &quot; 0.75 to -3.25 Cylinder. Patient with Systemic illness, Keratoconus were excluded. All surgeries were done by a single Surgeon. Each patients both eyes were operated simultaneously as wished by the patient,</td>
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<tr>
<td>Results</td>
<td>Result: - Patient were reviewed at 1st, 3rd, 6th, 12th, 16th months and at the end of 2 years. 6 eyes improved to a visual acuity of 6/6 by gaining an extra line in the snellens chart. 14 eyes got a pre-operative (best corrected) visual acuity after the procedure. No operative or Post operative complications encountered</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Conclusion: - Intra Ocular Contact Lens is a good alternative to Lasik especially in patients with thin Corneas and high Myopic where Lasik Laser is contraindicated. Meticulous selection of cases and good surgical skill is most important.</td>
</tr>
</tbody>
</table>
**Title of Paper**  
Dexamethasone Implants in Diabetic Macular Edema  
-Real-life data in Indian eyes

**Purpose**  
To report outcome of diabetic macular edema (DME) treated with intravitreal dexamethasone implants (Ozurdex).

**Method**  
Retrospective data analysis of DME treated with Ozurdex implants with minimum follow-up of at least 1 yr. Study eyes included those that had undergone non steroid intravitreal injections and diagnosed as persistent cases and treatment naïve eyes. Pre- and post-implant vision, CFT, IOP and cataract status were analyzed. ETDRS conversion formula was used to convert Snellen to ETDRS.

**Results**  
96 eyes (82 patients) completed 12 months follow up (Drop outs 11.8%). 66 eyes previously treated; 30 eyes naïve. Among pretreated eyes, mean interval between Ozurdex injection and any previous treatment was 4 months. Mean number of visits over 12 months was 4.8. In naïve eyes, visual acuity improvement was 7 letters, CFT change was 290.26 microns at 12 months. In pretreated eyes, visual acuity change was 3 letters, CFT change was 140 microns at 12 months. Mean number of injections in treatment naïve group was 2.13 and pretreated group was 2.90. Pseudophakic eyes had better visual outcomes. 5 eyes with increased IOP needed short term conservative management. 36% of eyes in pretreated group required cataract surgery.

**Conclusion**  
In real life scenario, Ozurdex implants could be a good long term alternative in DME. Treatment naïve eyes had better visual gain with minimal additional treatment compared to pretreated eyes even though CFT reduction was significant in both groups. Ozurdex also appeared safer in Indian eyes with minimal IOP fluctuations and cataract.
Title of Paper: Oral Propranolol for the Treatment of Capillary Haemangioma of Infancy - A case series

Purpose: To evaluate the efficacy and adverse effects of oral Propranolol for the treatment of capillary haemangioma of infancy involving the eyelids and the orbit.

Method: The study was a retrospective observational case series of five children diagnosed with eyelid or orbital capillary haemangiomas. The study was done at a tertiary eye care center. All participants were treated with oral Propranolol at the dose of 1-2 mg/kg body weight per day. The children were monitored in a neonatal ICU by a neonatologist during initiation of therapy. The size and morphology of the capillary haemangiomas were followed up at intervals of one week, two weeks, three weeks and up to one and a half years.

Results: The average age at presentation was 1.2 months. Three patients had the capillary haemangioma involving the upper lid. One patient each presented with a large mass involving the upper and lower lids, axial proptosis, coloboma of the upper lid, ptosis and swelling of the upper lid. The haemangioma was occluding the visual axis in three patients and needed immediate treatment to prevent amblyopia. All five patients were treated with oral Propranolol for a period of 6 months. Regression of the haemangioma was observed in all patients. No adverse effects were observed.

Conclusion: Oral Propranolol is effective in treating children with capillary haemangioma of infancy and preventing loss of visual acuity and amblyopia. It is a safe drug when given under close monitoring.
<table>
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<th>Title of Paper</th>
<th>Surgical Management of Massive Suprachoroidal Hemorrhage: Don’t Play It Blind!</th>
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<tr>
<td>Abstract</td>
<td>Expulsive suprachoroidal hemorrhage (SCH) is a catastrophic complication of intraocular surgery. Current management includes SCH drainage through external sclerotomies &amp; intermittent fundus evaluation by IO. We describe a novel surgical technique, utilizing chandelier-assisted wide-angled visualization of various steps of SCH drainage in 62/M. Using the wide-angle viewing system &amp; 23G extrusion cannula through a sclerotomy, active drainage of SCH was performed whereby we beautifully demonstrate separation of the kissing choroids with gradual unmasking of macula &amp; disc underneath. Post-operatively, patient improved to CF3M &amp; eye was successfully salvaged. Our educational video demonstrates that chandelier-assisted controlled drainage of SCH under continuous visualization is an easy technique to achieve excellent anatomical &amp; visual outcomes with better safety profile. It can be instrumental in training residents &amp; fellows who can simultaneously visualize surgical steps along with surgeon</td>
</tr>
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**Title of Paper**
Effect of macular photocoagulation on visual acuity and contrast sensitivity in diabetics with Clinically Significant Macular Edema: Four month outcomes

**Purpose**
To determine the effect of macular photocoagulation on the visual acuity (VA) and contrast sensitivity (CS) of patients diagnosed with clinically significant macular edema (CSME), as gain or loss from baseline, after a period of four months following therapy.

**Method**
- Prospective study (Descriptive) conducted at Department of Ophthalmology, Dr.SMCSI Medical College; between August 2015 - February 2017.
- Single arm of type 2 diabetics, diagnosed with CSME (as per ETDRS Criteria).
- Sample Size: 250 eyes.
- Received focal/ grid pattern macular photocoagulation using frequency doubled Nd:YAG Laser.
- BCVA and CS recorded using Snellen’s and "Mr.Happy" charts respectively, at baseline and four months following therapy.
- Improvement in BCVA was defined as gain by one line/more. Decrease by more than two lines was considered significant visual loss.
- Any drop/gain in CS was considered significant.
- Analysed using SPSS 16.0.

**Results**
250 eyes of 144 patients were enrolled. 148 eyes (59.2%) received focal and 102 eyes (40.8%) received grid pattern lasers. At the end of 4 months, 6 eyes were lost to follow-up, 2 patients with unilateral disease succumbed to myocardial infarction. 242 eyes were included in analysis. BCVA in 77 eyes (30.8%) was stable, improved by one line/more in 134 eyes (53.6%), decreased by less than 2 lines in 22 eyes (8.8%) and decreased by more than 2 lines in 9 eyes (3.6%). A paired t-test conducted to compare BCVA and CS before and after therapy, showed significant difference in scores (p<0.0005 and p=0.047 respectively).

**Conclusion**
This study shows that there is statistically significant improvement in visual acuity and contrast sensitivity among patients with clinically significant macular edema at 4 months following focal or grid pattern of macular photocoagulation with frequency doubled Nd:YAG Laser.
### Title of Paper
THE EFFECT OF MANUAL SMALL INCISION CATARACT SURGERY ON THE INTRAOCULAR PRESSURE " A PROSPECTIVE STUDY IN SOUTH KERALA.

### Purpose
To study the effect of manual small incision cataract surgery (SICS) on the intraocular pressure postoperatively (IOP) at one week, three weeks and three months.

### Method
Prospective longitudinal study, conducted at Dr SMCSI college from January 2016 to May 2017. Sample size: 50 eyes. Patients who underwent uneventful SICS were included. Patients with pre-existing glaucoma, on anti-glaucoma medications were excluded. Goldman applanation tonometer was used to measure IOP. Two measurements taken, if differed by more than 3 mm of Hg a third measurement taken. Preoperative IOP - mean of 2 IOP or the meridian of 3 IOP. Postoperative IOP measurements were taken at one week, three week, and three month postoperatively. All patients underwent manual SICS with PCIOL implantation by one surgeon. Analysis done using SPSS 16.0

### Results
50 eyes were included in the study. The mean age was 65 years (50-80). The mean preoperative IOP was 15.3 (SD +/- 3.039) mm Hg. The mean one week postoperative IOP was 14.36 (SD +/- 2.319) mm Hg, (p<0.001). The mean postoperative IOP at three weeks was 14 (SD +/- 2.365) mm Hg, (p<0.001). The mean postoperative IOP at three month was 13.92 (SD +/- 2.641) mm Hg, (p<0.001). Paired t-test showed p<0.001 in all groups which was statistically significant. The final mean reduction in IOP postoperative at three months was 1.38 mmHg.

### Conclusion
There was a significant reduction in the IOP in patients undergoing manual SICS. IOP is the only modifiable risk factor in the management of glaucoma. Manual SICS can aid in the management of patients with cataract and glaucoma or at risk of developing glaucoma.
Title of Paper: Risk factors in young patients presenting with cataract at a tertiary eye care hospital in Kerala- a descriptive study

Purpose: To evaluate the risk factors like age, gender and aetiology in young patients with cataract between twenty five to fifty five years of age in a tertiary eye care centre in kerala. Modification of these risk factors may prevent early onset cataract in young patients.

Method: A one year descriptive hospital based study was carried out to determine the demographic details and aetiology, among young patients. Sample size was statistically calculated as 273. pretested questionnaire was administered by a single interviewer. A detailed ocular examination (visual acuity, IOP, grading of cataract, anterior and posterior segment examination) was done in all patients and investigations like RBS, TFT and serum calcium was done. All data were coded and entered into Microsoft Excel and statistically analysed.

Results: Out of the 273 patients
Sex- Male:30.4%, female:69.59%
Age distribution, 25-35 years: 8.9 %, 36-45 years: 12.8%, 46-55 years: 79.8%
Unilateral cataract- 19.4%, bilateral cataract- 54.94%, pseudophakia in one eye- 25.6%
Aetiology:
• 44.3% Idiopathic. Males- 33%, females- 66.6% Age group- 25-35yrs- 4.9%, 36-45yrs- 20.6%, 46-55yrs- 71.9%
• 35.1% diabetes: Males- 33.3%, females- 66.6% Age group- 25-35yrs- 1%, 36-45yrs- 17.7%, 46-55yrs- 81.2%
• 9.8% hypothyroidism: Males- 11%, females- 88.8% Age group- 25-35yrs- 7.4%, 36-45yrs- 11.1%, 46-55yrs- 81.4%
• 8% systemic steroids: Males- 22.7%, females- 77.2% Age group- 25-35yrs- 9%, 36-45yrs- 27.2%, 46-55yrs- 63.6%
• 5.1% atopy: Males- 28.5%, females- 71.4% Age group- 25-35 yrs- 42.8%, 36-45 yrs- 57.1%
• 2.5% high myopia: Males- 71.4%, females- 28.5% Age group- 25-35yrs- 42.8%, 46-55 yrs- 57.1%
• 2.1% irradiation over face. Females- 100% Age group- 36-45yrs- 71.2%, 46-55yrs- 29.01%
• 1.8% retinitis pigmentosa: males- 60%, females- 40% Age group- 25-35yrs- 60%, 46-55yrs- 40%

Conclusion: Most of the patients were females in the age group 46-55 years. Though most cases were idiopathic, diabetes, hypothyroidism, use of steroids were the other most prevalent causes for cataract in young patients. Early detection and control of diabetes, treatment of hypothyroidism, and judicious use of steroids can decrease the prevalence of cataract among young patients.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>A rare case of choroideremia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To report a case of choroideremia.</td>
</tr>
<tr>
<td>Method</td>
<td>57 year old male came with complaints of blurring of vision of both eyes. He gave history of poor night vision and peripheral loss of vision beginning in his late teens. On examination, visual acuity was CF @ 1m both eyes. Anterior segment was within normal limits. Fundus examination showed patchy peripheral RPE atrophy &amp; mottling with disc pallor and arteriolar attenuation in both eyes.</td>
</tr>
<tr>
<td>Results</td>
<td>ERG showed absence of scotopic adaptation in dark adaptation curve.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Choroideremia has poor prognosis, but potential treatment through gene addition therapy is on the horizon.</td>
</tr>
<tr>
<td>Title of Paper</td>
<td>A RIDDLE WRAPPED UP IN AN ENIGMA: AN UNUSUAL CASE OF RETINITIS PIGMENTOSA ASSOCIATED WITH FUCH 'S IRIDOCYCLITIS</td>
</tr>
<tr>
<td>Purpose</td>
<td>To report a rare association between Retinitis pigmentosa and Fuch 's iridocyclitis</td>
</tr>
<tr>
<td>Method</td>
<td>48 year old lady with gradually progressive painless loss of vision in both eyes since 15 years of age with no history of night blindness, pain, redness or photophobia . Visual acuity in both eyes was PL positive with accurate PR. Anterior segment: diffuse stellate keratic precipitates seen all over cornea bilaterally with hypochromic irides and bilateral anterior subcapsular cataract with nuclear sclerosis grade 2 and posterior subcapsular cataract. Fundus examination: Right eye had pale disc with severe arteriolar attenuation, bone-spicule pigmentation in the mid periphery. No view of fundus was possible in left eye.</td>
</tr>
<tr>
<td>Results</td>
<td>Right eye cataract surgery was done first, as per patient 's choice, and vision improved to hand movements only.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Patients with RP and Fuch 's iridocyclitis show common clinical inflammatory features. Cell mediated and humoral immune responses to retinal antigens are found in RP. Inflammatory activity in RP is similar to Fuch 's iridocyclitis in being low grade and chronic.</td>
</tr>
<tr>
<td><strong>Title of Paper</strong></td>
<td>A stitch in time saves nine:- A rare case of ARN which improved with Valacyclovir</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To highlight the importance of meticulous examination in order to arrive at the diagnosis and timely intervention in a case of Acute retinal necrosis</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>Case Report&lt;br&gt;A 22 year old, otherwise healthy, male patient came with the complaints of recurrent episodes of redness in both eyes. On examination UCVA Right eye (RE)-6/24 Left eye (LE)-6/12. Anterior segment: RE-Old Keratic precipitates, Grade 1 RAPD, Posterior segment: RE Chorioretinitis inferior quadrant with disc hyperemia and edema and features of Intermediate Uveitis. No evidence of vasculitis. Investigations: Blood-CBC, Viral markers, Toxoplasma IgG &amp; IgM &quot;NEGATIVE). OCT-RNFL-increased thickness. Immediately started on Topical steroids &amp; oral Acyclovir. On follow-up, Fundus examination: New lesion (multifocal) and increased disc edema. Diagnosis of ARN was made, started on IV Steroids, Acyclovir and Oral Valacyclovir. Patient improved, RE uveitis resolved, Fundus-lesions resolved, disc edema decreased and BCVA-6/6 in 1 month</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>VA improved from 6/24 to 6/12 (BCVA-6/6). Uveitis resolved, Fundus showed resolved lesion</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>ARN is caused by Herpes simplex virus in healthy immunocompetent individuals. Prognosis is usually poor with retinal detachment, retinal and optic nerve ischemia and poor VA. With the advent of newer antivirals like VALACYCLOVIR, there seems to be a difference in treatment outcome</td>
</tr>
</tbody>
</table>
Title of Paper
ALTERATIONS IN CORNEAL ASTIGMATISM AND TEAR STABILITY IN PATIENTS UNDERGOING SURGICAL EXCISION OF PTERYGIUM: A PROSPECTIVE STUDY UNDERTAKEN IN A TERTIARY CENTRE IN SOUTH KERALA

Purpose
TO ANALYSE THE EFFECT SURGICAL INTERVENTION EXERTS ON CORNEAL ASTIGMATISM & TEAR FUNCTION IN PATIENTS WITH PTERYGIUM

Method
IN THIS PROSPECTIVE OBSERVATIONAL STUDY CONDUCTED IN OPHTHALMOLOGY DEPARTMENT, DR.SMCSI MEDICAL COLLEGE KARAKONAM, 39 EYES WITH PRIMARY PTERYGIUM ENROLLED BETWEEN JANUARY 2016 TO MAY 2017 FOR PTERYGIUM EXCISION WITH CONJUNCTIVAL AUTOGRRAFT, WERE ANALYSED. PREOPERATIVE AND ONE MONTH POST OPERATIVE UNCORRECTED AND BEST CORRECTED VISUAL ACUITY, KERATOMETRIC READINGS K1, K2 WERE RECORDED. PTERYGIA WERE graded AS Grade I , II ,III & IV. TBUT and SCHIRMER TESTS USED TO MEASURE TEAR FUNCTION.DESCRIPTIVE MEASURES WERE CALCULATED USING PERCENTAGE OR MEAN(SD). PREOPERATIVE AND POSTOPERATIVE CHANGES IN VALUES OF ASTIGMATISM AND TEAR FUNCTION TESTS WERE ASSESSED USING TEST OF SIGNIFICANCE, PAIRED T-TEST.

Results
OF THE PATIENTS ENROLLED WITH PRIMARY PTERYGIUM, 56.4% (22) WERE FEMALES AND 43.6% (17) MALES. 61% WERE INVOLVED WITH OUTDOOR WORKS OF SORTS. 56.4% HAD RIGHT EYE PTERYGIUM 43.6% IN THE LEFT. 84.3%(33) WERE NASAL, 12.8% (5) TEMPORAL AND 2.6%(1) DOUBLE HEADED. 76.9%(30) WERE GRADE II, 10.3% (4) GRADE III, 12.8% (5) GRADE IV. THERE WAS A REDUCTION IN PREOPERATIVE ASTIGMATISM FROM 2.29 +/- 1.4D TO 1.02 +/- 0.74D (P=0.052). HOWEVER, THE ALTERATION IN PREOPERATIVE AND POST OPERATIVE TEAR FUNCTION TESTS PROVED INSIGNIFICANT WITH p=0.909 FOR TBUT AND p=0.351 FOR SCHIRMERS.

Conclusion
SURGICAL INTERVENTION PROVED BENEFICIAL FOR PATIENTS WITH PTERYGIUM IN TERMS OF REDUCTION OF REFRACTIVE ASTIGMATISM . A STATISTICALLY SIGNIFICANT CHANGE WAS NOT OBSERVED WITH TEAR FUNCTIONALITY.
# A Study on the Prevalence of Posterior Vitreous Detachment in Patients Presenting with Floaters, Flashes of Light or Both

<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>A STUDY ON THE PREVALENCE OF POSTERIOR VITREOUS DETACHMENT IN PATIENTS PRESENTING WITH FLOATERS, FLASHES OF LIGHT OR BOTH</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To study the prevalence of posterior vitreous detachment (PVD) in patients presenting with floaters, flashes of light or both.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A cross sectional study was conducted over a period of one year. 113 patients who presented with floaters, flashes of light or both were included in the study after obtaining clearance of institutional ethical committee and informed consent. Patients above age of 18yrs were included in the study. Patients who underwent vitreoretinal surgeries were excluded in the study. The patients were divided into three groups: as floaters only, flashes of light only and both. Slitlamp biomicroscopy with +90D and indirect ophthalmoscopy was done in all cases.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Out of 113 patients, 51 (45%) had PVD and 62 (54.8%) did not have PVD. Out of 51 PVD cases, 29 (56.8%) were in floaters only group, 22 (43.1%) were in both floaters and flashes of light group and none were in flashes of light only group. Out of 23 patients who presented with both floaters and flashes of light, 22 (95.6%) had PVD while only 29 (33.3%) of patients with floaters had PVD (p&lt;0.001). In both floaters and flashes of light group, one patient had retinal tear. Statistically significant association was found between diabetes mellitus and PVD (p&lt;0.001), hypertension and PVD (p=0.014), age and PVD (p&lt;0.001) and duration of floaters and PVD (p&lt;0.001).</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Prevalence of PVD was more in both floaters and flashes of light group than floaters only group. Detecting PVD earlier in symptomatic patients can prevent the sight threatening complications like retinal tear and retinal detachment.</td>
</tr>
</tbody>
</table>
Title of Paper: A COMPARISON OF INTEROCULAR ASYMMETRY OF VISUAL FIELD DEFECTS IN PRIMARY ANGLE CLOSURE GLAUCOMA AND PRIMARY OPEN ANGLE GLAUCOMA.

Purpose: To compare the interocular asymmetry of visual field defects in primary open angle glaucoma and primary angle closure glaucoma patients.

Method: A study was conducted over a period from July 2016 to May 2017 at Ophthalmology Department OPD & IPD. A total of 200 eyes of 100 patients were taken into the study. Informed consent was obtained from the subjects. Demographic data taken, detailed history, ocular examination was done. Patients then underwent static automated, white on white perimetry (Humphreys field analyser), with size III stimulus, 24-2, SITA Standard. Data collection done and results were analysed.

Results: In the 100 patients assessed, mean interocular asymmetry of visual field loss was more for the PACG group. Demographic data shows not much difference between the two groups. The mean IOP was higher in PACG (30.04 +/- 3.4 mmHg) than POAG group (27.02 +/- 2.0 mmHg) at the time of diagnosis. Higher asymmetry in PACG subjects than POAG in terms of MD [PACG = 7.64 +/- 1.2 SD trial eye, 7.69 +/- 0.7 SD fellow eye], [POAG = 7.76 +/- 1.3 trial eye, 7.69 +/- 1.2 fellow eye]. PSD [PACG = 5.84 +/- 0.31 trial eye, 3.89 +/- 0.16 fellow eye] [POAG = 5.88 +/- 0.41 fellow 5.62 +/- 0.35], and total AGIS scores [PACG = 10.06 +/- 3.6 trial eye, fellow eye 7.80 +/- 1.75] [POAG=9.76 +/- 2.9 trial eye, 8.36 +/- 2.32 fellow eye].

Conclusion: There was a greater asymmetry of visual field loss between eyes, as measured by AGIS scores and MD, in Primary Angle Closure Glaucoma than that in Primary Open Angle Glaucoma.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Coexisting choroidal neovascularization and active retinochoroiditis &quot;an uncommon presentation of ocular toxoplasmosis</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of chorioretinal scar associated with choroidal neovascular membrane</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A 48 year old female presented with abrupt onset of blurring of vision and metamorphopsia in the right eye since one week. She had decreased vision in the same eye since 12 years secondary to macular scar attributed to ocular toxoplasmosis. Anterior segment - normal. Fundus showed a yellow white lesion of 1DD size inferotemporal to the fovea. Coexisting hemorrhage was at the fovea with macular thickening &amp; subretinal fluid at the posterior pole.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>OCT showed elevated foveal contour with increased retinal thickness, hyperreflectivity &amp; pockets of subretinal fluid. FFA showed hyperfluorescence in the early phase with increase in intensity &amp; size in the late phase.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Coexisting CNVM with active toxo choroiditis is an important presentation &amp; should be suspected in the presence of subretinal hemorrhage &amp; managed with a combination of anti-Toxoplasma drugs &amp; intravitreal anti-VEGF</td>
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</table>
Title of Paper

VISUAL OUTCOME AND COMPLICATIONS OF POSTERIOR IRIS-CLAW INTRA OCULAR LENS IMPLANTATION- A FOLLOW UP ANALYSIS

Purpose

1. TO ASSESS THE FINAL VISUAL OUTCOME
2. TO STUDY THE VARIOUS COMPLICATIONS ENCOUNTERED IN POSTERIOR IRIS CLAW IOL IMPLANTATION IN APHAKIC EYES WITH INADEQUATE CAPSULAR SUPPORT.

Method

Prospective case series of 30 eyes of 29 patients who underwent posterior iris claw intra ocular lens implantation in our hospital within a period of 1 year with a follow up period of 6 months. All patients with visually significant posterior segment problems were excluded from the study. All the patients had a detailed pre operative evaluation including BCVA, IOP and fundus evaluation along with keratometry and A scan. Main outcome measures were visual acuity, anterior chamber reaction, corneal oedema, stability of IOL and CME.

Results

In total, 30 eyes were enrolled in the study, of which 25 eyes were for elective secondary implantation, 5 eyes were for primary iris claw implantation where cataractous lens or IOL dislocation noticed preoperatively. The indications for posterior Iris claw IOL in our study were surgical aphakia (24/30), traumatic subluxation of cataractous lens (2/30), decentered PCIOL (2/30) and ectopia lentis (2/30). Analysis of complications showed that most common postoperative complications were iritis (36%), corneal oedema (30%), striate keratitis (26.6%), hyphema (6%), iris capture (3.33%) and CME (3.33%). Postoperative mean best corrected visual acuity was LogMAR 0.301.

Conclusion

1. Surgical aphakia is the most common indication for posterior Iris claw IOL implantation.
2. Iritis is the most common complication.
3. Postoperative mean best-corrected visual acuity is LogMAR 0.301
4. This is a relatively safe and easy procedure which can also be learned by post graduate students.
<table>
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<tr>
<th>Title of Paper</th>
<th>Vogt- Koyanagi Harada disease in pregnancy - A case report</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>To report a case of Vogt - Koyanagi Harada disease presenting for the first time in a pregnant woman.</td>
</tr>
<tr>
<td>Method</td>
<td>A healthy woman in the first trimester of pregnancy presented with sudden blurring of vision in both eyes associated with severe headache and photophobia. There were large, multiple pockets of subretinal fluid collection at the posterior pole of fundus along with non granulomatous anterior uveitis. EDI showed choroidal thickening. She was diagnosed as VKH disease. She responded well to low dose oral steroids. But the disease recurred following withdrawal of steroids. Hence she was maintained on low dose oral steroids with slow taper over 2 months.</td>
</tr>
<tr>
<td>Results</td>
<td>VKH is considered a T cell mediated autoimmune disease. VKH presenting for first time in pregnancy is very rare. Treatment with systemic steroids for the same is met with concerns regarding its effect on the foetus.</td>
</tr>
</tbody>
</table>
Title of Paper  
Prevalence of ocular fundus pathology in patients with chronic kidney disease- A hospital based study

Purpose  
1. To screen patients with chronic kidney disease for various ocular fundus findings. 
2. To measure prevalence of ocular involvement like in patients with chronic kidney disease in kannur medical college

Method  
An informed consent should be taken from the subject. A comprehensive ophthalmologic examination including visual acuity for distance vision and near vision, a thorough anterior segment examination using slit lamp biomicroscope and intraocular pressure measurement using applanation tonometry should be done. Patients both eye should be dilated with 1% tropicamide and 5-10% phenylephrine. A detailed fundus examination of both eye should be carried out by using direct ophthalmoscope and indirect ophthalmoscope using +20D lens and macula by +90D lens and by fundus camera. 
A blood investigation done as a part of the study were : CBC, S.urea, S. Creatinine, S.Calcium, S. Phosphate, S.electrolyte, urine routine and microscopy, lipid profile, FBS, PPBS.

Results  
This study was undertaken with the purpose of finding out the prevalence of ocular fundus pathology in patients with chronic kidney disease. It was conducted in the In patient and the Out patient departments of kmc for period of 1 year. 50 subjects with CKD were examined and the findings in 100 eyes were reported. Retinopathy was the majority finding found in 86% eyes while glaucoma was suspected in 7% eyes, age related macular degeneration in 3.5% eyes and other fundus findings in 7.5% eyes. Only a small percentage of eyes (8.5%) were found to have no ocular fundus pathology.

Conclusion  
If the patient has positive history of abnormal renal status, he should undergo close follow up because they are at an increased risk of visual loss. Awareness of the potential ocular complications of the disease process is needed in order to be able to diagnose, treat and prevent the development of ocular morbidity.
**Title of Paper**: DRY EYE AND CORNEAL SENSATION IN DIABETIC AND NON DIABETIC PATIENTS * A COMPARATIVE CROSS SECTIONAL STUDY

**Purpose**

i. To compare the prevalence of dry eye in diabetic and non-diabetic patients  
ii. To find out relationship between impairment of corneal sensation and diabetes

**Method**

A total of 125 diabetic and 125 non diabetic patients in the age group 20-60 years were studied. Evaluation of dry eye was done by following methods: Schirmer ’s test 1 (for reflex tearing), Schirmer ’s test 2 (for basal tear secretion), Tearfilm breakup time(TBUT) and Rose Bengal(RB) staining. Corneal sensitivity was tested using a wisp of cotton brought on to cornea in order to elicit a blink response.

**Results**

Mean age of patients in the study population was 49.13 years. Prevalence of dry eye disease (DED) according to this study was 10.4%. Among the diabetic population, 14.4% had DED compared to 6.4% in non diabetic group. The prevalence of dry eye in diabetic group was found to be positive for Schirmer 1 test -12%, Schirmer 2 test -13.6%, TBUT-14.4% and RB staining - 5.6%. The same tests are respectively positive in 4.8%, 5.6%, 6.4% and 0.8% of the patients in the non diabetic group. Also, 9.6% diabetic patients in the study had reduced corneal sensitivity compared to 3.2% non diabetic patients.

**Conclusion**

Significant association was present between dry eye disease and longer duration of diabetes, poor glycaemic control and advanced stages of diabetic retinopathy. Significant association was present between decrease in corneal sensitivity and duration of diabetes, poor glycaemic control and advanced stages of diabetic retinopathy.
# A CASE OF PLANUM SPHENOIDALE MENINGIOMA

## Purpose
To present a rare case of Planum sphenoidale meningioma.

## Method
A 57 year old female was presented in our OPD with painless loss of vision in right eye (RE) for 1 year duration and defective vision in left eye (LE) for 1 month duration. Ocular examination showed total loss of vision in (RE) and hand movements with projection inaccurate in (LE). (RE) showed Grade III RAPD, fundus examination showed secondary optic atrophy and fundus examination of (LE) showed temporal pallor of the disc.

## Results
MRI Brain showed Suprasellar centered homogenously enhancing mass : S/O Planum Sphenoidale Meningioma.

## Conclusion
Planum Sphenoidale Meningioma is a rare disease causing loss of vision.
**Title of Paper**
OPTICAL COHERENCE TOMOGRAPHY (OCT) CHANGES IN HIGH MYOPIA

**Purpose**
To study the Optical Coherence Tomography (OCT) changes occurring in the peripapillary and macular region in highly myopic eyes.

**Method**
We investigated the frequency of OCT abnormalities in the peripapillary and macular region of highly myopic eyes, defined as a myopic refractive error of –6 dioptres (D) or more. This was a prospective study of 140 eyes of 86 patients of high myopia who attended our OPD between January 2016 and May 2017. Patients with other co-existing ocular pathologies such as Diabetic maculopathy or ARMD were excluded. OCT of peripapillary and macular region were obtained by Spectral-domain OCT, Spectralis, Heidelberg Engineering Co, Heidelberg, Germany. Fundus Fluorescein / Indocyanine Green Angiography were done in relevant cases.

**Results**
Of 140 eyes, 91(65 %) were above 40 years old and 49(35%) were below 40 years. 78 eyes (56%) had myopia -6 to -10D, 51(36%) had -11 to -20D and 11(8%) had > 20D. The macular changes detected were Posterior staphyloma in 94(67%), dome-shaped macula (DSM) in 20(14%), Myopic Traction Maculopathy(MTM) in 60 (43%), CNVM in 12 (9%), and chorioretinal atrophy in 31 eyes (22%). The peripapillary changes observed were myopic conus in 110 (79%), peripapillary intrachoroidal cavitation in 11 (8%), vascular-microfolds in 88 (63%), retinoschisis in 51 (36%) and ERM in 63 eyes (45%).

**Conclusion**
OCT is indispensable in the diagnosis and management of visually impairing conditions in pathologic myopia such as myopic traction maculopathy and CNVM. Evaluation by OCT will also provide insight into unexplained visual loss in high myopia such as MTM or DSM and rarer entities such as peripapillary intrachoroidal cavitation.
Title of Paper - III NERVE PALSY WITH MIOTIC PUPIL "AN EMERGENCY"

Purpose To report a case of horners with partial third nerve palsy.

Method 54 yr old female presented with mild headache, retro orbital pain with occasional diplopia and associated with hemifacial numbness since 2wks. On examination her BCVA 20/30 in OU. Pupils were OD 2mm OS 4mm with dilatation lag in OD without RAPD. Limited abduction, adduction with mild limitation of supra and infraduction, intorsion in OD was noted. Ductions were full in OS. Palpebral fissure was OD 7.5mm, OS 10mm. corneal sensations decreased in OD. Sensations were decreased on right side of face in ophthalmic division of trigeminal nerve area.

Results - involvement of III, IV, V1, VI, HORNERS localizes the lesion to cavernous sinus. Further investigation by MRI brain with contrast showed giant ICA aneurysm, confirmed by DSA.

Conclusion - Any intracavernous lesion has a high probability of affecting the sympathetic plexus and abducents nerve more than third or trigeminal division and as a result a combination of miosis and partial third nerve palsy can help in localising the lesion "which could be an emergency!!!
### Title of Paper

A STUDY OF PROTECTIVE ROLE OF TIGROID FUNDUS IN DEVELOPMENT OF DIABETIC RETINOPATHY

### Purpose

To assess whether tigroid fundus is a protective factor for diabetic retinopathy

### Method

This was hospital based descriptive study. 200 patients, 100 each of tigroid and non tigroid fundus, 41 years and above having diabetes for 5 years and beyond were included. Diabetic retinopathy was graded following Early Treatment Diabetic Retinopathy Study. Visual acuity was recorded with Snellens chart. Anterior segment were examined with slit lamp. Posterior segment were examined with direct and indirect ophthalmoscopy after dilatation with 1% tropicamide eye drops. All cases were emmetropic, hyperopic and mild myopic with -0.5 spherical D error to avoid role of myopia as a protective factor in diabetic retinopathy. Diabetes was labelled controlled if HbA1c was <=6.5% and uncontrolled when >6.5%.

### Results

Among 100 patients of each fundus, 72% tigroid and 13% nontigroid has no DR. Among patients of >10 years duration, DR was high in nontigroid (38% tigroid and 98% nontigroid, total 69%) when compared to those with <=10 years (16% tigroid and 70% nontigroid, total 41%). Patients with duration <=10 years has no DR (84% tigroid, 30% nontigroid, total 58%) more in tigroid when compared to >10 years (61% tigroid & 2% non tigroid, total 30%). Among patients with HbA1C <=6.5%, 86% tigroid and 25% nontigroid has no DR. Also DR was more in non tigroid (75%) than in tigroid (14%). In patients with HbA1C >6.5%, 65% tigroid and 2% nontigroid has no DR. DR was more in nontigroid (98%) than in tigroid (35%). In each age group tigroid fundus has less DR compared to nontigroid (p value <0.001).

### Conclusion

Tigroid fundus was observed as a protective factor for DR and association of age, HbA1c and duration of diabetes for development of DR in both tigroid and non tigroid fundus were statistically significant (p value <0.001).
Title of Paper
Retcam based photographic screening for retinopathy of prematurity " Initial experience from Kerala; A CRADLE ROP initiative.

Purpose
To assess the initial experience of Retcam based screening for retinopathy of prematurity (ROP) in neonatology centres through the mobile CRADLE ROP screening initiative.

Method
Consecutive newborn babies who met the ROP screening criteria (NNF Guidelines) from neonatology centres (NICU) in the state who were enrolled in the mobile Retcam based CRADLE ROP screening initiative between October 2016 - May 2017 were included. Parameters evaluated included the time of first screening, risk factors, severity of ROP, treatment, compliance to follow up, differences between centres, feasibility of telescreening and final outcome.

Results
Data from 359 screening sessions involving 184 newborns from 12 neonatology centres were analysed. The mean GA at birth was 29.4 ± 3.26 weeks and mean birthweight was 1448 ± 657 grams. The mean time-to-first screen was 4 weeks. 65 babies had ROP (35.1%). Four had threshold ROP and eight had pre-threshold ROP. One had aggressive posterior ROP which managed with intravitreal anti-VEGF injections and laser photocoagulation. 12 babies underwent laser treatment. None developed retinal detachment. 96% of babies had regular follow up. Therapeutic alterations were suggested in few centres which reported higher incidence of advanced ROP. The safety of telescreening was also confirmed.

Conclusion
NICU based Retcam Shuttle screening is an effective and safe modality for early diagnosis and treatment of retinopathy of prematurity. Known the paucity of screening personnel in our state, the acceptability and feasibility of telescreening as explored in this study may help in improving neonatal care and reducing childhood blindness.
**Title of Paper**  
RETROSPECTIVE ANALYSIS OF CONJUNCTIVAL LESIONS

**Purpose**  
This study aimed at analyzing the clinical features, treatment, post operative course and prognostic aspects of the conjunctival lesions.

**Method**  
Conjunctival lesions vary with wide spectrum ranging from benign lesion to malignant. We retrospectively reviewed medical records of 30 eyes with conjunctival lesions over a time period of 1 year from 2015 - 2016.

**Results**  
31 specimens with 24 males and 7 females were analysed. Of which, 29 benign lesions and 2 neoplastic lesions were reported, with the most common lesion being pterygium 90.3% (n=28), pyogenic granuloma 3.2% (n=1) and squamous neoplasia 6.5% (n=2).

**Conclusion**  
In our case series, benign lesions were more frequent compared to malignant. And the two cases of malignant neoplasia were attributed to increased sun exposure and UV rays.
Title of Paper: Efficacy of 577 nanometer micropulse laser therapy for the treatment of chronic central serous retinopathy: Our know-how

Purpose: To assess the clinical efficacy of 577-nm micropulse laser therapy (MPLT) for the treatment of chronic central serous retinopathy (CSR)

Method: 19 eyes of 17 patients with chronic CSR (>4 months duration) subjected to complete ophthalmic examination, FAF, FFA and Spectral domain OCT. All eyes subjected to 577 nm subthreshold MPLT using the IQ 577 laser followed up after 4 weeks, 2 & 3 months. The outcome measured change in best-corrected visual acuity (BCVA), subretinal fluid (SRF) height & change in macular thickness measured by SD-OCT. The threshold power determined via a continuous-wave test burn of 200μm size & the laser switched to micropulse mode, the threshold power doubled with a 200-ms exposure duration. Areas of focal & diffuse leaks treated with multiple laser spots (Grid 5x5, duty cycle 5%) with no spot spacing.

Results: The average age & duration of leak of the patients were 40.3 years and 7 months respectively with 14 males & 3 females. The mean follow-up was at 8 weeks (4-19 weeks). All eyes responded to treatment. The mean SRF height reduced from 34.2 to 38.25μm at 3 months (P=0.0002). No evidence of RPE or retinal damage on SD-OCT or FAF noted. The mean BCVA at 3 months post laser treatment improved from 0.46logMAR to 0.26 (p=0.009). The mean central macular thickness before laser was 428μm, in comparison to 268μm after 3 months (P=0.0006).

Conclusion: Subthreshold MPLT is a cost effective and safe treatment option for patients with chronic CSR.
# TO STUDY THE ASSOCIATION OF URINE MICROALBUMINE AND THE SEVERITY OF DIABETIC RETINOPATHY AMONG TYPE II DIABETICS: A HOSPITAL BASED CROSS SECTIONAL STUDY

## Purpose
The aim of the study was to estimate the prevalence of albuminuria (micro and macroalbuminuria) among patients with type 2 diabetes and determine its role as a risk factor for presence and severity of diabetic retinopathy.

## Method
A hospital based cross sectional study was conducted in 290 patients with type 2 diabetes. Study was conducted on type II diabetic patients coming to the department of ophthalmology, DR SMCSI medical college. Study period was 2 years. All the patients underwent a comprehensive eye examination. Diabetic retinopathy was clinically graded using ETDRS scale. A morning urine sample was tested for albuminuria. Subjects were considered to have microalbuminuria if the urinary albumin excretion was between 30 and 300mg/24 hours and macroalbuminuria at more than 300mg/24 hours. The analysis was done using SPSS 16.0.

## Results
The prevalence of microalbuminuria in the study subject was 30% and that of macroalbuminuria was 18.3%. Individuals with macroalbuminuria in comparison to micro or normoalbuminuria showed a greater prevalence of diabetic retinopathy and also a greater severity of the disease (79.2%) which was statistically significant, chi square value 66.34, p value= 0.001.

## Conclusion
Microalbuminuria is a useful biomarker in predicting retinal outcome of type II diabetes patients. Patients with microalbuminuria have a higher risk of the development and progression of diabetic retinopathy.
# Title of Paper
Angle closure glaucoma as 1st feature of choroidal melanoma

# Purpose
Reporting a rare presentation of angle closure glaucoma leading onto the diagnosis of choroidal melanoma

# Method
Case report
A 62 year old male presented to casualty with pain and decreased vision in his left eye. On examination, anterior chamber was completely obliterated with mild dilated fixed pupil and no red reflex. Intraocular pressure was 81.7 mmHg. The fellow eye was normal other than early cortical cataract with IOP of 15 mmHg. Provisional diagnosis of secondary angle closure glaucoma was made and started on antiglaucoma medications. Ultrasound B scan revealed complete retinal detachment with subretinal fluid and a plaque, further evaluation was suggested. MRI orbit revealed a 4mm soft tissue lesion extending on lateral and posterior wall.

# Results
In view of painful blind eye and uncontrolled, patient was taken up for enucleation of left eye. Histopathology confirmed the diagnosis of choroidal melanoma.

# Conclusion
Any unusual case of angle closure glaucoma should be investigated thoroughly for secondary causes.
## Title of Paper
Pediatric Uveitis - Clinical Profile and treatment outcomes, a retrospective observational study.

## Purpose
To assess the demographics, etiology, clinical features, complications and visual outcomes in pediatric uveitis in a tertiary multispeciality hospital in Kerala.

## Method
All patients aged 18 and below with uveitis attending Ophthalmology OPD in Amrita from 2007 to 2017 were assessed retrospectively. Relevant clinical details were entered into an excel sheet and computed to quantify the results.

## Results
35 patients were studied out of which 37.1% were males and 62.9% were females. Among them 68.6% had bilateral presentation and 31.4% had unilateral presentation. Anterior uveitis (68.6%) was found to be the commonest type and JIA (62.9%) was found to be the commonest etiology. 17.1% had intermediate uveitis, 8.6% had Panuveitis, 5.7% had Posterior uveitis. 14.3% were found to be idiopathic, 5.7% had Sarcoidosis and Bechets, 2.9% had Hodgkins, SLE and TB. 48.6% had a time lapse of more than 1 year from the initial presentation of symptoms to the first OPD visit. 25.7% had complications associated with uveitis. 94.3% were found to have good visual outcome and 5.7% had poor visual outcome.

## Conclusion
In our study, patients with prolonged time lapse had increased risk of complications in pediatric uveitis lead to significantly poor visual outcome. Hence early detection and subspecialty management can result in improvement of clinical course of pediatric uveitis.
**Title of Paper**
The short term effect of grid laser photocoagulation in the management of diabetic macular edema

**Purpose**
To check the foveal thickness outcome and visual acuity outcome at 1, 3 and 6 months following grid laser photocoagulation in diabetic macular edema.

**Method**
This study comprised of thirty eyes of twenty patients with mild to moderate non proliferative diabetic retinopathy and macular edema who underwent grid laser photocoagulation. This study was conducted for time span of 18 months at M.N eye hospital, Chennai. Ethical committee approval was taken prior to study. Color Fundus photography, Fundus Fluorescein Angiography (FFA) and Spectral Domain Optical Coherence Tomography (SD OCT) were performed. Following grid laser photocoagulation, patients were reviewed at 1 month, 3 months and 6 months intervals to measure the change in foveal thickness and to document the change in visual acuity.

**Results**
This study comprised of 30 eyes of 20 patients with Type 2 diabetes mellitus having mild to moderate non proliferative diabetic retinopathy and macular edema who underwent grid laser photocoagulation over a period of one year between June 2015 to December 2016. There were 26 eyes for follow up at 1 month, 24 eyes at 3 months, and 25 eyes at 6 months. Statistically, there was a significant decrease in foveal thickness at 1 and 3 months. At 6 months, the decrease was not statistically significant.

**Conclusion**
In conclusion the present study on grid laser photocoagulation and its effect on retinal thickness for diabetic macular edema shows that grid laser is beneficial in improving and maintaining the visual acuity and in reducing macular thickness but may not be sustained for 6 months in our study population.
**Title of Paper**
A RARE CASE OF BILATERAL CRAO WITH NEOVASCULAR GLAUCOMA

**Purpose**
To report a rare case of bilateral CRAO with neovascular glaucoma.

**Method**
case report- 65 yr old male patient k/c/o diabetes mellitus, hypertension, CKD and CAD presented to the casualty with left sided headache and vomiting. He also c/o loss of vision of both eyes since 3 months. Ophthalmological evaluation revealed vision no perception of light in both eyes. RE- pupil 4mm with RAPD, pale disc with attenuated vessels. LE - circumcorneal congestion, corneal oedema, iris neovascularization from 7-2'O clock position, muddled and fixed pupil. fundus hazy but pale disc and attenuated vessels made out. IOP RE-12.2mmHg, LE-67mmHg.

**Results**
Diagnosis of bilateral CRAO with left eye neovascular glaucoma made. CT brain showed multiple subacute infarcts in the bilateral corona radiata. Carotid doppler revealed a small atheromatous plaque in the left carotid bulb.

**Conclusion**
bilateral CRAO as well as neovascular glaucoma following CRAO are very rare. In such cases complete cardiological evaluation including carotid doppler is necessary to look for source of emboli.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>GLAUCOMA DRAINAGE DEVICE MISDIAGNOSED AS HYDATID CYST IN THE ORBIT</th>
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<tr>
<td>Purpose</td>
<td>To present the MR imaging features of the bleb formed after aurolab aqueous drainage implant (AADI) implantation that simulated a hydatid cyst in the orbit.</td>
</tr>
<tr>
<td>Method</td>
<td>58 year old female presented with vertigo, head ache and giddiness to neuromedicine department. MRI Brain showed a septated thin walled intra conal collection posterior to right globe suggestive of hydatid cyst. Patients past history confirmed that she had undergone cataract surgery right eye following which she had pseudophakic bullous keratopathy for which penetrating keratoplasty was done. Later she had secondary glaucoma which was refractory to medical treatment and underwent GDD (AADI) placement. Examination revealed well encapsulated bleb in superotemporal quadrant of right eye.</td>
</tr>
<tr>
<td>Results</td>
<td>IN MRI, the bleb formed at the plate portion of GDDs especially if it is large, may simulate a cystic lesion of the orbit like dermoid cyst, lymphangioma, lacrimal gland cyst, and parasitic cyst. GDD bleb is seen as a thinwalled ovoid cyst located at the superotemporal aspect of the orbit near the lacrimal gland fossa. The silicone-made endplate of the implant is seen as a very dark band located at the center of the cyst on both T1- and T2-weighted MR images and it helps to differentiate bleb from other orbital cysts.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Knowledge of typical imaging appearance of GDD bleb, usual location and clinical history is vital for radiologists so that they are not mistaken for metallic foreign bodies or cysts.</td>
</tr>
</tbody>
</table>
**Title of Paper**
EFFECT OF ARGON LASER TRABECULOPLASTY AS THE PRIMARY TREATMENT IN PRIMARY OPEN ANGLE GLAUCOMA AMONG THE PATIENTS ATTENDING A TERTIARY CENTRE IN SOUTH KERALA

**Purpose**
Glaucoma is a leading cause of severe visual impairment and blindness. In Primary Open Angle Glaucoma (POAG) raised intraocular pressure (IOP) occurs due to impaired drainage through trabecular meshwork. This study aims to understand effect of Argon Laser Trabeculoplasty in reducing IOP in POAG

**Method**
Study design was cross sectional with longitudinal follow up at certain intervals. All patients with age over 40 attending Dr SMCSI Medical college, eye OPD who has been detected to be having POAG as a newly detected morbidity was the study group. Patients not willing for ALT were excluded. ALT was done under topical anesthesia; laser parameters used was noted. Goldman applanation tonometer, gonioscopy and slit lamp examination were used to measure the IOP, Peripheral anterior synechiae,Iritis, and Hyphema preoperatively and first week, first month, six month and first Year post operatively. Additional treatment was done for failed ALT cases.

**Results**
Out of the 40 subjects studied 60% of the subjects were females. Average Preoperative IOP was 25.77mmHg, after the ALT procedure it was 22.47mmHg in the first week and 16.48 mmHg in the first month and was 15mmHg during sixth month and one year. 80% patients required treatments inaddition to ALT for complete cure during one year period. Mean IOP for the ALT only group at the end of one year is 17.5 mmHg and those who received additional treatment was 14.8 mmHg. The difference in IOP was also significant statistically (p value less than 0.01, independent samples t test)

**Conclusion**
There was reduction in Mean IOP following ALT among POAG patients. 80% subjects needed an additional treatment for complete cure, this necessitates a check on using ALT alone for POAG as treatment.
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<th>SUSPICION HELPS TO SEE BEYOND THE EYE</th>
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<td>Purpose</td>
<td>To report a rare case of Devic 's disease in a young woman presenting with exclusively ocular symptoms</td>
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<tr>
<td>Method</td>
<td>A 32 yr old female patient with no comorbidities presented with unilateral, sudden, painless loss of vision of right eye associated with headache</td>
</tr>
<tr>
<td></td>
<td>ON EXAMINATION:</td>
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<td></td>
<td>Visual acuity showed PL +ve in Right eye 6/6(p) left eye</td>
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<td></td>
<td>Pupils showed Grade III RAPD and Defective colour vision in the affected eye</td>
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<td>Fundus showed features of optic neuritis</td>
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<td></td>
<td>MRI of Orbit and Cervico Dorsal Spine showed Bilateral optic neuritis( R &gt; L) and acute myelitis of Cervicodorsal spine suggestive of Devic 's disease</td>
</tr>
<tr>
<td>Results</td>
<td>Patient was started on intravenous methylprednisolone (ONTT regime) and her visual acuity improved minimally from PL +ve to HM +ve. Prognosis of her condition was explained and follow up with a neurologist was advised.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Devic 's disease is a relatively rare disease, there are no large-scale studies of treatment of the disease. Clinical examination and appropriate investigations (MRI Cervico Dorsal spine) can aid in the diagnosis, which may help the patient in reducing the symptoms though resolution of disease may not be possible.</td>
</tr>
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</table>
THE PATTERN OF CHILDHOOD VISUAL IMPAIRMENT: A CROSS-SECTIONAL STUDY FROM A TERTIARY CARE CENTRE

Purpose

1. To study the pattern of childhood visual impairment attending Ophthalmology OPD, Government Medical College Thrissur during a period of 1½ years.
2. To classify childhood visual impairment based on the anatomical site and aetiology.
3. To estimate the percentage of avoidable causes of childhood visual impairment.

Method

Cross-sectional study was conducted including children less than 16 years with best corrected visual acuity of less than 6/18 in better eye. Children with severely impaired cognition, hearing and speech difficulties and of parents not giving informed consent were excluded.

History was taken from the parent. Visual acuity was measured using picture chart. Eye examination was performed including: Hirschberg test, anterior segment examination using slit lamp, pupils, dilatation of eyes for cycloplegic refraction by retinoscopy, fundus examination.

The WHO Prevention of Blindness Eye Examination Record for Children with Blindness and Low vision was used.

Results

120 children were studied - 70 males (58%), 50 females (42%).

Mean age 8 years, age of onset 6 years

Anatomically, normal globe with Refractive errors in 66 (55%), optic nerve in 20 (16%), retina in 15 (13%), lens in 12 (10%), cornea in 1 (1%), uvea in 1 (1%), whole globe in 1 (1%), cortical blindness in 4 (3%).

Aetiologically, refractive errors in 66 (55%), hereditary in 9 (8%), intrauterine in 2 (2%), perinatal or neonatal in 24 (20%), postnatal or childhood in 11 (9%), unknown in 8 (6%).

Avoidable causes in 91 (76%) [78 (65%) treatable, 13 (11%) preventable].

Conclusion

The major cause of visual impairment was refractive errors followed by optic atrophy due to cerebral hypoxia, retinal dystrophy and cataract.

Three-fourth of the causes were avoidable.

Knowledge on patterns of visual impairment in children provides useful baseline data for planning child eye care services in a given region.
Title of Paper: OSDI QUESTIONNAIRE Vs CLINICAL TESTS OF DRY EYE (SCHIRMER TEST & TEAR FILM BREAKUP TIME) IN EVALUATION OF TEAR FILM IN DRY EYE DISEASES

Purpose: To find out whether subjective evaluation of dry eye with OSDI questionnaire correlates with clinical tests of dry eye.

Method: 111 patients between 30 & 60 years of age, coming to OPD of a tertiary care centre with symptoms of dry eye were taken for the study. The study subjects were made to fill up the OSDI questionnaire and the tear film of same subjects were analysed with Schirmer tests & TBUT. People who had previous ocular surgeries or having acute or chronic ocular surface abnormalities were excluded. Tools used are validated OSDI questionnaire, Schirmer strips, fluorescein strips and slit lamp. Data were entered in Microsoft excel for analysis.

Results: Out of 73 patients who had dry eye (low schirmer and TBUT values) 71 patients (97.26%) were having OSDI scores suggestive of dry eye. Among those 71 patients 29 patients had severe dry eye scores (40.84%), 26 had moderate scores (36.61%) and 21 had mild scores (29.57%). Out of 38 patients who did not have dry eye 20 patients had OSDI scores suggestive of dry eye and among those 20, 11 (55%), 7 (35%) & 2 (2%) had mild, moderate & severe OSDI scores respectively.

Conclusion: The sensitivity of OSDI Questionnaire as per this study is 97.26% in detecting dry eye. But the specificity of test is only 47.37%. The questionnaire can be used as a screening tool for dry eye diseases.
**Title of Paper**

PHAKOCELE PRESENTING AS LOCALISED HEMATOMA IN A SUSPECTED CASE OF TRAUMATIC OCCULT SCLERAL RUPTURE

**Purpose**

To report a case of traumatic phakocele with the aim to evaluate the clinical presentation, management and visual outcome.

**Method**

60 year old lady who is a known case of type 2 DM, HTN and dyslipidemia on treatment presented with pain and defective vision in RE following trauma with cashew. O/E RE showed 360 degree hemorrhagic chemosis with a well circumscribed hematoma of 1.5*2cm extending from 11 to 2 o’clock position. Cornea was hazy with total hyphema. Visual acuity in RE was perception of light. LE examination showed immature senile cataract, moderate NPDR with visual acuity of 6/24. B scan of RE showed superomedial dislocation of lens, choroidal detachment and vitreous hemorrhage.

**Results**

Diagnosis of phakocele was made on history of blunt trauma with a well delineated subconjunctival mass and was confirmed by B scan ultrasonography. Wound exploration was done, phakocele was detected subconjunctivally, lens was extracted and ruptured sclera was sutured. Post operative visual outcome was poor due to total hyphema, choroidal detachment and vitreous hemorrhage.

**Conclusion**

Blunt trauma can result in rupture of eyeball leading to dislocation of lens into subconjunctival space resulting in a localised mass. Common in elderly individuals due to increased scleral rigidity and hard lens. Phakocele should therefore be suspected in such cases. Visual outcome depends on timely intervention and other associated ocular complications.
Title of Paper: A STUDY ON THE ETIOLOGY OF RETINAL VASCULITIS

Purpose:
To study the etiological factors contributing to the development of retinal vasculitis in a tertiary eye care centre in Kerala.

Method:
All consecutive patients diagnosed with retinal vasculitis in a tertiary eye care centre were evaluated for ocular and systemic risk factors for developing the disease. Patients with diabetic and hypertensive retinopathy were excluded from the study. Data was collected using a pretested pro forma. Examination tools used were LogMAR chart, slit lamp, direct & indirect ophthalmoscope. Data was entered into Excel sheet for analysis.

Results:
39 eyes of 20 patients were included in the study. Defective vision and floaters were the main symptoms whereas vitritis & vascular sheathing were the most common signs. 5 patients had bilateral disease. 15 patients had retinal vasculitis associated with an infectious cause; 5 were primary. Of infectious causes, toxoplasmosis was the most common association found. One patient had Mantoux positivity with no other symptoms of TB. One patient had Eales disease. Two patients had viral aetiology.

Conclusion:
As per this study, secondary retinal vasculitis was found to be more common than primary. Toxoplasma was found to be the commonest agent for infectious retinal vasculitis.
## Title of Paper
Quantitative measurement of macular function before and after treatment of Clinically Significant Macular Edema using Humphrey field analyzer 10-2

## Purpose
1. To assess macular function before and after treatment in patients having CSME using HFA 10-2
2. To assess the correlation between macular thickness on OCT with macular sensitivity in HFA 10-2

## Method
A Total of 42 eyes of 38 patients with CSME were included in this study. In each eye, at baseline, 1 and 3rd month after Intravitreal anti VEGF injections, Logmar visual acuity, slit lamp examination, fundus examination, macular thickness on OCT, extent of sensitivity loss by counting no of abnormal stimulus locations using HFA 10-2, macular sensitivity and FFA leakage pattern were assessed. Central foveal thickness > 250Åµm in OCT is kept as criteria for treatment for CSME & for reinjection. It is also used as an adjunctive to identify edema resolution.

## Results
36 eyes had Ranibizumab & 6 eyes had Bevacizumab injections. 23 were left eyes & 19 were right eye. 18 were Males & 24 were females. 7 eyes with severe NPDR, 9 eyes with Moderate NPDR, 4 eyes with Mild NPDR, 14 eyes with Very severe NPDR & 8 eyes with PDR were included. 39 HFA were abnormal. Mean number of abnormal stimulus locations was improved from 18.81 (SD-10.942) to 14.83 (SD-10.265) at 1 month. Mean Macular sensitivity was significantly improved from baseline To at 1 month & 3rd month. Central Macular sensitivity had significant negative correlation with Central macular thickness from baseline to 1 month & 3rd month post injection.

## Conclusion
Macular function is improving after intravitreal injections & significant reduction in scotoma observed during 3 months. Central Macular thickness and Central macular sensitivity had negative co-relation. HFA is universally available that can be used for assessing macular function.
ETIOLOGY AND CLINICAL PATTERN OF OCULAR MOTOR NERVE PALSIES.

Purpose

1) To study the etiology, clinical profile and the most common nerve involved in ocular motor nerve palsies among patients attending neuro ophthalmology clinic in Government Medical college, Thrissur.
2) To find out the recovery rate of the disease among these patients during follow up.

Method

Prospective cohort study was done in 75 patients.

INCLUSION CRITERIA:
All patients attending neuroophthalmology clinic in Government medical college Thrissur were taken up for study.

EXCLUSION CRITERIA:
Myopathies & Restriction syndromes were excluded.

A detailed history, ocular & neurological examination and necessary investigations were done. Patients were reviewed after 1 month and looked for any evidence of improvement of symptoms. Recovery was defined as decrease in the degree of restriction or improvement of diplopia.

Results

75 patients with ocular motor nerve palsies were examined of which 42(56%) were males. Mean age group was 45.5 years (28%). 96% cases had unilateral involvement. Presenting complaints were double vision (50.67%), drooping of eye lid (38.67%), headache (34.67%), blurring of vision (25.33%), difficulty in eye movement (10.67%). Commonest nerve involved was 3rd (40%) followed by 6th (28%). Among the identifiable etiologies were vascular (34.67%; most common), trauma (29.34%), neoplasm (13.33%) & infections (9.33%). First evidence of recovery in 1 month follow up was noticed in 44% cases. Recovery rate was more in cases with traumatic etiology (36.37%).

Conclusion

The third cranial nerve palsy was the most common ocular motor nerve palsy. The most common identifiable etiology was vascular followed by trauma. Besides ophthalmic examination, neurological evaluation and imaging plays an important role in diagnosis. Recovery rate was more in cases with traumatic etiology.
### Title of Paper
A TURN-UP FOR THE BOOKS: A RARE CASE OF SEBACEOMA

### Purpose
To show how important histopathological examination is and meticulous in reaching at a right diagnosis

### Method
60 year old lady came to our OPD with a solitary right lower lid growth which is increasing in size over a period of 5 years.
On local examination a reddish nodular skin lesion measuring approximately 1cm×0.5cm×0.5cm which was nontender and firm in consistency found at the right lower lid margin
Surgical excision was planned under local anesthesia presuming it to be a sebaceous gland carcinoma or squamous cell carcinoma
Excised tissue was sent for histopathological examination

### Results
Microscopy shows neoplasm arising from conjunctival epithelium composed of cells with sebaceous differentiation suggestive of sebaceoma

### Conclusion
Prognosis of sebaceoma is excellent and doesn't recur after complete surgical removal nor it metastasize. Sebaceoma can be associated with Muir " Torre syndrome. A fully documented sebaceoma is rare and till date only three other cases has been reported making this fourth reported case in literature.
Title of Paper: An unusual cause of red painful eye with proptosis

Purpose: To report a case of Carotid-Cavernous Fistula presenting with acute painful non-pulsatile proptosis and complete external ophthalmoplegia.

Method: A 54 year old hypertensive female with a past history of recovered Right 3rd nerve palsy, presented with acute onset of severe headache and vomiting, followed by double vision and drooping of Left upper eye lid. Her BP was 230/200 mm of Hg, the BCVA was 6/12 RE and 6/18 LE. There was a moderate nonpulsatile axial proptosis, total external ophthalmoplegia, severe ptosis, corkscrewing of conjunctival vessels, sluggishly reacting pupil and dilated and tortuous retinal veins on the left side. There were similar but milder findings on the right with a normal appearing fundus. IOP was normal in both eyes.

Results: Ocular findings suggested a carotid-cavernous fistula (CCF) which was confirmed by Magnetic Resonance Angiography. This showed bilateral direct CCFs with communication between the intracavernous portions of both Internal Carotid Arteries and the cavernous sinus (left larger than right). Magnetic Resonance Imaging of the brain showed features of acute infarcts in the territory supplied by the left Middle Cerebral Artery. The patient was referred to the neurologist for management and was advised regular follow up but no immediate active intervention.

Conclusion: Direct CCFs are usually high flow shunts causing bruits, thrills and a pulsatile proptosis. When they occur spontaneously in the presence of atherosclerosis and hypertension they tend to be commoner in women and have a lower flow resulting in a nonpulsatile proptosis as in this patient.
# Title of Paper
AN OFFBEAT PRESENTATION OF NEOVASCULAR GLAUCOMA

## Purpose
To report a case of Ocular Ischemic Syndrome resulting from chronic ocular hypoperfusion secondary to severe atherosclerotic internal carotid artery stenosis on the same side.

## Method
A 63 year old poorly controlled diabetic male presented with progressive visual loss over a year. His BCVA was 6/6 RE and 6/9 LE. The left eye had rubeosis iridis, ectropion uveae and a fixed mid-dilated pupil. The left fundus showed generalized and focal arteriolar narrowing, dot haemorrhages and microaneurysms in the mid-periphery and hard exudates in the macula. The right eye was normal except for mild NPDR. His IOP was 18mm Hg RE and 36mm Hg LE, the angles were open in both eyes but showed neovascularisation temporally in LE. The left carotid pulsations were feeble.

## Results
An MR Angiogram showed more than 80% stenosis of left ICA at the beginning of cervical segment over a length of 18 mm with mild to moderate narrowing of cavernous segment and a small chronic infarct in left capsuloganglionic region.

## Conclusion
PDR and CRVO are the commoner causes of NVG. The ocular ischemic syndrome though a rarer cause can account for an asymmetric presentation of diabetic retinopathy and be associated with considerable risk of cerebrovascular accidents as in this patient.
### Title of Paper
Endogenous endophthalmitis- Visual and anatomical outcome.

### Purpose
To evaluate the clinical outcome, clinical profile, visual and anatomical outcome in endogenous endophthalmitis patients in a tertiary care centre.

### Method
Retrospective chart review of consecutive cases with endogenous endophthalmitis presenting from 2009 to 2016. The main outcome measure was the visual acuity at the latest follow up visit. Other outcome measures include anatomical and clinical.

### Results
41 eyes of 34 patients were included. Endogenous endophthalmitis was mainly noticed in the age group 40-70 yrs. Diabetes mellitus, Systemic Hypertension followed by Chronic liver disease were the most common associated comorbidities. Out of 41 eyes, 41.4% had increased visual outcome after treatment, 17.0% eyes had no light perception at the latest follow up visit, 14.6% eyes required evisceration and 36.5% patients expired.

### Conclusion
Endogenous endophthalmitis is a difficult disease to diagnose clinically and usually presents late to the ophthalmologist because of the associated co-morbid conditions. Much remains unclear regarding the correct ophthalmic approach particularly in relation to early surgical interventions. Prompt diagnosis and vigorous treatment plan if often required to save the patients eyes.
Title of Paper: Jevunile myasthenia gravis with uveitis- a rare combo

Purpose: Reporting a rare combination with of jevunile myasthesnia gravis and uveitis

Method: CASE REPORT

12 year old female, an athlete presented with complaints of dropping of upper eyelid both eyes (left more than right). History of uveitis and angioedema 3 weeks back. She was on oral and topical steroids. Vision 6/6 both eyes. Ophthalmic examination revealed mild and moderate ptosis in right and left eye respectively. Rest of examination within normal limits. Intraocular pressure(IOP) of right eye was 23 mmHg and left eye was 15mmHg. Provisional diagnosis of steroid induced glaucoma was made and antiglaucoma medications was started.

Results: On further evaluation of ptosis fatigubility test was positive, Icepack test was positive and lactate levels were elevated. Acetylcholine receptor antibody was negative. But patient improved with Tab. Neostigmine 60mg.

Conclusion: We thus describe this rare combination of uveitis, angioedema and myasthenia gravis previously reported in literature.
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<th><strong>Title of Paper</strong></th>
<th>Hemorrhagic hypopyon uveitis with iris infiltrates as subacute presentation of ALL relapse</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of hemorrhagic hypopyon uveitis with iris infiltrates as ALL relapse. This is to emphasise that in cases of refractory uveitis, there is a need to maintain high index of clinical suspicion as these can often be missed.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>45 year old female, diagnosed as ALL in 2016, successfully completed her chemocycles, now in remission phase, presented with redness right eye. Her best corrected visual acuity was 6/9 right eye, 6/6 left eye. Slit lamp examination revealed fine kps, hemorrhagic hypopyon 1mm, cells 1+, flare 1+; fundus examination was normal. She was given topical steroids, cycloplegics. 1 week later, examination revealed 4mm hemorrhagic hypopyon, irregular anterior chamber, as iris bulged anteriorly on nasal side, associated with localised scleral elevation. Her neck examination revealed a multiple swellings.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Ultrabiomicroscopy revealed thickened iris nasally along with adjacent ciliary body and scleral thickening, suggestive of iris infiltrates. Fine needle aspiration was done from neck swelling, peripheral smear was taken, both of which were suggestive of ALL relapse.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Intraocular inflammation presenting as hemorrhagic hypopyon may occur in hematological malignancies; as in our case, ocular relapse has been associated with malignant cells elsewhere, early diagnosis of such presentations are to be picked up as it might save sight and life.</td>
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# A case of total corneal melt

## Title of Paper
A case of total corneal melt

## Purpose
To report a rare case of idiopathic unilateral total corneal melt in an 80 year old female

## Method
Eighty year old female presented with recurrent episodes of pain, watering and progressive loss of vision in her left eye for last one year. History of cataract surgery in right eye one year back. No history of systemic diseases. Examination of right eye - anterior segment was normal except for lower lid entropion, pupillary reactions were sluggish and pciol present with central pco. Fundus within normal limits. Left eye showed normal conjunctiva, movements full, total corneal melt, no anterior chamber and pupillary area was covered with a membrane. Fundus no view. Best corrected visual acuity was, right eye 6/60, left eye no PL

## Results
Patient investigated for systemic diseases, and found to have iron deficiency anemia. Screening for collagen vascular diseases and rheumatoid were negative. Vitamin A given. Planned conjunctivoplasty. But patient deteriorated and there was impending autoevisceration. So evisceration done. Vitreous was filled with pus and culture and sensitivity showed enterococci. Post operative period was uneventful.

## Conclusion
A case of unilateral total corneal melt, with exogenous endophthalmitis, which is managed by evisceration.
ABSTRACT DETAILS : DS17-86

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<tr>
<td>Purpose</td>
<td>To report two cases of proptosis due to arteriovenous malformation.</td>
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</tbody>
</table>
**CASE2**: 12 year old girl presented with c/o headache & forward protrusion of RE since 4 months. O/E: BCVA: BE f 6/6P. Colour vision: normal BE. RE: Mild axial proptosis, dilated episcleral vessels +, pupil brisk, LE: WNL. FUNDUS: Dilated & tortuous vessels + BE. Investigation in both cases were s/o AVM. |
| Results        | Treatment given includes  
**CASE 1**: As the patient had good vision and as the feeder vessel was from ophthalmic artery, surgical embolisation was denied & was managed conservatively with which she is symptomatically better.  
**CASE 2**: She had undergone coil & squid embolisation and requires further sittings of embolisation. |
| Conclusion     | Intraorbital Arteriovenous malformations are rare, and their management represents a challenge for multidisciplinary teams. |
# Title of Paper
The bulging eye post trauma- the mystery revealed

## Purpose
To report an unusual presentation of indirect carotid cavernous fistula following a head trauma and treated with endovascular thrombosis

## Method
49 year old lady presented with redness, proptosis of her left eye for 5 month duration. it was associated with headache and tinnitus in her left ear. she had history of sustained electrocution with trauma to left side of head 2 years back. 
On examination right eye within normal limit. left eye showed mild axial proptosis, minimal abduction restriction, dilated cork-screw episcleral vessels with elevated intraocular pressure. also there was exaggerated ocular pulsation in slit lamp applanation tonometry and bruit over the eyeball. pupil brisk, fundus was normal. her best corrected visual acuity was 6/6 and color vision normal.

## Results
Patient started on antiglaucoma medication for the control of intraocular pressure. MRI with MR Angiogram done and which showed features suggestive of a left indirect carotid cavernous fistula. DSA conforms a type C indirect carotid cavernous fistula. patient underwent for transvenous coiling and squid embolisation of left cavernous sinus. postoperative period was uneventful. on follow up her redness and proptosis improved.

## Conclusion
We should suspect indirect CCF as a possibility whenever a patient presented with proptosis, elevated intraocular pressure following head trauma. for accurate diagnosis and management do MRA and DSA.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>BILATERAL LUXATION OF GLOBE IN CROUZON DISEASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To present a case of three year old boy - known case of Crouzon disease who presented with bilateral luxation of globe.</td>
</tr>
<tr>
<td>Method</td>
<td>Three year old boy who is a known case of craniosynostosis “ Crouzon disease presented to ophthalmology casualty at Thissur Medical College with sudden onset of protrusion of both globe following multiple bouts of vomiting at nursery within 40 minutes of the episode. On examination vitals were stable ,there was bilateral luxation of globe, Lid edema and minimal conjunctival congestion. MRI brain - Trigonocephaly, mild bilateral proptosis, tortuous bilateral optic nerves with prominent optic perioptic CSF signal. Partial empty sella. Ectopia of cerebellar tonsils.</td>
</tr>
<tr>
<td>Results</td>
<td>Under General Anaesthesia, bilateral repositioning of globe and lateral tarsorraphy was done. Following surgery child was symptomatically better , both globes were well reposited and lid edema resolved. Child was given topical lubricants and topical prophylactic antibiotics. Child was kept on frequent follow up.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>One month later, both globes were well reposited. But fundus showed papilloedema with early optic atrophy in left eye. Child was referred to higher centre for cranial surgery and further management .</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>a rare case of orbital cavernous hemangioma</td>
</tr>
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<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>cavernous hemangiomas usually present with slow progressing proptosis and extensive involvement in the form of globe luxation and anterior chamber collapse are relatively rare. This presentation highlights one such case</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>case of 60 year old female, known diabetic hypertensive and dysthyroid who presented with proptosis for 11 years. Initial CT was suggestive of cavernous hemangioma and patient was under follow up. But later patient was lost to follow up and she underwent multitude of non medical treatment. She now presented with severe proptosis with collapsed anterior chamber and exudative reaction. The current CT also showed large hemangioma involving the entire orbit with globe luxation and optic nerve compression.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>neglect from the patient's side has led to this devastating complication where there is no possibility of vision salvage and high risk of fatal bleed from the lesion. The treatment line left now is however prevention of infection and timely surgical approach to combat bleeding from the lesion</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>cavernous hemangiomas can occasionally present if neglected with massive proptosis and loss of salvagability of eye. Hence close follow up is needed for any case of proptosis in order to avoid a catastrophic event.</td>
</tr>
</tbody>
</table>
Title of Paper: ANALYSIS OF RISK FACTORS FOR THE DEVELOPMENT OF THYROID ASSOCIATED ORBITOPATHY (TAO)

Purpose: TO ANALYSE THE VARIOUS RISK FACTORS FOR THYROID ASSOCIATED ORBITOPATHY

Method: This cross-sectional study was conducted from November 2016 to May 2017 in a tertiary eye care hospital. 50 patients with clinical diagnosis of TAO were included in the study. Patients less than 12 years and those requiring further follow-up for diagnosis were excluded. Demographic factors, history of stress/smoking/thyroid status at the time of diagnosis were assessed and analysed. The disease severity was graded as per EUGOGO Classification. For statistical analysis patients were classified into two groups, mild (group I), moderate " severe and sight threatening (group II). Statistical analysis was done using spss software version 16.

Results: Total 24 patients come under group I and 26 in group II. Out of 50 patients, 14(28%) were males and 36(72%) were females. The mean age in mild group is 54 years, mod-severe group is 46.22 and in sight threatening group is 64.7 years. In group I, 83.3% were initially hypothyroid and in group II, 66.7% were hyperthyroid (p value of less than 0.001%). Rapid change in thyroid profile was present in 25% in group I, in 50% in group II. Family history of thyroid disorder was present in 62.5% in group I, 42.3% in group II. History of stress noted in 50% in group I, 65.4% in group II.

Conclusion: In our study TAO was more common in female patients. There is a statistically significant correlation between hyperthyroidism and severity of TAO. Even though not statistically significant, family history has a strong correlation in patients with mild TAO, whereas stress is strongly associated with mod-severe/sight threatening cases.
### Title of Paper
"Observational study of morphological changes of corneal donor tissue in McCarey and Kaufman storage medium" •

### Purpose
To analyze the morphological changes that can occur in donor corneal tissue when stored in MK media and to validate the importance of duration of storage in MK media which can significantly preserve endothelial functional.

### Method
55 Human donor eyes from the Little Flower Hospital Eye Bank were used. Donor age varied from 17 to 86 years old, with death to enucleation time of 1 to 6 hrs. Corneal button storage time of 1 to 4 days in M-K media. Tissue evaluation was done on 1st day and 4th day of storage by same corneal surgeon. Data analyzed on evaluation were corneal haze, exposure keratities, sloughing, edema, folds, striae, and cell dropouts. Analysis on each parameters were graded range from mild to severe. Specular microscopy imaging was done on 1st and 4th day and analyzed.

### Results
Compared to day 1, cornea tissue had undergone various changes within 4 days. Area of sloughing had increased, tissue edema and number of folds had increased its grade from mild to moderate - severe folds. On analysis of specular microscopy on 4th day cell dropouts had increased.

### Conclusion
Our study showed morphological changes in cornea after 4 days MK medium storage, which probably could be due to decreased functional efficiency of endothelium or due to progressive hydration of corneal tissue. Thus our study highlights the importance of reducing the upper limit of storage of donor cornea in MK media.
**Title of Paper**  
Primary Ocular Presentation of Sinonasal Carcinoma

**Purpose**  
Sinonasal carcinomas are rare neoplasms arising from paranasal sinuses and nasal cavity. They have a heterogeneous histology and are commonly diagnosed as locally advanced disease with poor prognosis. Purpose of the study is to describe two cases of sinonasal carcinoma with primary ocular presentation and to analyze the management strategies.

**Method**  
Retrospective analyses of two cases of sinonasal carcinoma. First patient presented with upper lid edema, diffuse scleritis. Ultrasound B-scan showed suspicious retro-orbital mass. Second patient had history of recurrent sinusitis and presented with watering & a non-tender, firm palpable mass in the lacrimal sac area and lower lid edema. Fundus examination was normal. Both patient has BCVA of 6/9, N6. Based on clinical evaluation, both patients were advised orbital imaging.

**Results**  
First patient was initially treated as scleritis. However based on Ultrasound B-scan findings, CT orbit was performed. It illustrated a sinonasal mass arising from the ethmoidal sinus. Based on a histopathological diagnosis of undifferentiated carcinoma, the patient underwent extended exenteration. CT scan of the second patient demonstrated a sinonasal mass arising from the maxillary sinus. The patient was referred to ENT specialist where a histopathological diagnosis of squamous cell carcinoma was made for which he underwent palliative chemotherapy as the patient refused surgery.

**Conclusion**  
Sinonasal carcinoma may occasionally present with common ocular symptoms. Such features indicate extensive and aggressive nature of the pathology. Early recognition & surgical intervention in the form of wide excision and complex reconstructive procedures is life-saving in these cases.
Title of Paper: COMPARISON BETWEEN SHORT WAVELENGTH AUTOMATED PERIMETRY AND STANDARD AUTOMATED PERIMETRY IN GLAUCOMA SUSPECTS

Purpose: The purpose of the study is to compare between short wavelength automated perimetry and standard automated perimetry in glaucoma suspects and to find out which is more sensitive in detecting early glaucoma and which test is better in early detection of glaucoma.

Method: The study was conducted on 60 glaucoma suspects after inclusion & exclusion criteria. In each patient, visual field testing was done using Humphrey Field Analyser C 24-2 with SWAP & SAP. Mean deviation and pattern standard deviation obtained from the study were compared with SWAP and SAP. All data were entered in MS-excel and statistical analysis was carried out using SPSS software. All quantitative data were summarized using mean and standard deviation. Statistical significance was done by paired t-test.

Results: Taking all glaucoma suspects into consideration, the sensitivity was highest for short wavelength automated perimetry (69%), followed by SAP (58%) with a p-value 0.034. The specificity was 82 for both SWAP and SAP. The MD and PSD followed a similar order between SWAP and SAP. There were significant differences in sensitivities at 90% specificity between SAP perimetry and SITA SWAP (P less than or equal to 0.005 for MD; P less than or equal to 0.039 for PSD).

Conclusion: The performance for early glaucoma detection was comparable between SWAP perimetry and SAP. SWAP perimetry had a higher sensitivity for detecting glaucoma than SAP at a comparable level of specificity.
**Title of Paper**
A case of visual loss following a wild boar attack

**Purpose**
To present a case of traumatic optic neuropathy with occlusion of central retinal vessels following a wild boar attack.

**Method**
A 52 year old male presented with polytrauma with loss of vision left eye, 2 days after a wild boar attack. Right eye was normal with 6/6 vision. Left eye vision was PL+ PR inaccurate with RAPD, SCH and normal IOP. Fundus showed pallid edema with features of arterial and venous occlusions. Bscan showed disc edema. FFA revealed blocked fluorescence in superotemporal region near macula, arterial filling defect and delayed filling of disc in the ischemic area with late hyperfluorescence and leakage from surrounding engorged veins. CT head showed fractures in roof of left orbit. MRI taken on a later date, showed normal optic canal and optic nerve.

**Results**
Patient was put on oral steroids in tapering doses but had no improvement in vision of left eye.

**Conclusion**
There has been instances in which blunt trauma has produced optic nerve damage. Severe ocular rotation may have produced hemorrhage in retrolaminar part of optic nerve. This may have compressed central retinal vessels. We highlight the chance for blindness due to retinal vessel occlusions beside optic nerve damage following blunt trauma.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>Mysterious Macula...!!</th>
</tr>
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<tbody>
<tr>
<td>Purpose</td>
<td>To report a case of cortical matter on macula mimicking as macular hole</td>
</tr>
<tr>
<td>Method</td>
<td>65 year old female came with complaints of defective vision in left eye since 2 months. She had undergone Small Incision Cataract Surgery with Posterior Chamber Intra Ocular Lens under Local Anaesthesia in left eye 3 months back. On examination, PCIOL was insitu with a large posterior capsule rent. Fundus examination showed pigment dispersion in the vitreous and full thickness macular hole. OCT showed a fluffy material at the macula which was found to be cortical matter of the lens</td>
</tr>
<tr>
<td>Results</td>
<td>What appeared like a macular hole was diagnosed to be cortical matter of lens on the macula</td>
</tr>
<tr>
<td>Conclusion</td>
<td>This is a unique presentation of cortical matter on the macula unlike the usual inferior settling of cortical matter. OCT was confirmatory in the diagnosis.</td>
</tr>
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</table>
**Title of Paper**: THESIS  
Ocular manifestations in patients with HIV/AIDS in the era of HAART  
A cross sectional study

**Purpose**

1. To study the ophthalmological profile of patients with HIV/AIDS.
2. To study the relationship of ophthalmic manifestations with CD4 count.

**Method**

A cross sectional study was conducted from January 2016 to June 2017 on 100 consecutive patients referred from ART clinic GMCH, Thrissur. Ocular examination included best corrected visual acuity, intraocular pressure by noncontact tonometry, slit lamp examination and fundus examination by indirect ophthalmoscopy. Treatment was given whenever necessary. Patients referred from ART clinic, GMCH, Thrissur on HAART were included. Patients who are very sick, non cooperative and those who did not give consent were excluded.

**Results**

A total of 100 patients were examined. 48 eyes were asymptomatic. Anterior segment manifestations found in 23% were conjunctival microvasculopathy (6.5%), cataract (8%), squamous cell carcinoma (0.5%), conjunctival cyst (1.5%), conjunctivitis (4%), adnexal swelling (2%) and symblepheron (0.5%). Posterior segment manifestations seen in 8% included inactive CMV retinitis (3.5%), retinal detachment (1%), cottonwool spots (3.5%), retinal haemorrhages (1.5%).

20 patients had CD4 count above 1000, 52 patients between 500-1000, 28 patients between 200-500 and none with CD4 count <200.

**Conclusion**

There was found to be a significant decrease in the ocular manifestations in patients with HIV/AIDS after the initiation of HAART.
# ABSTRACT DETAILS : DS17-97

<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>AGREEMENT BETWEEN WELSCH ALLYN SURESIGHT PEDIATRIC AUTOREFRACTOMETER MEASUREMENTS AND CYCLOPLEGIC RETINOSCOPY/ POST MYDRIATIC TESTING IN CHILDREN LESS THAN 12 YEARS OF AGE</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>To analyze the agreement between wet and dry measurements obtained from Welsc Allyn Suresight Pediatric Autorefractometer (WASPA) and cycloplegic retinoscopy/ post mydriatic testing in children less than 12 years of age and to correlate the measurements obtained with WASPA with the age of the patient</td>
</tr>
<tr>
<td>Method</td>
<td>A total of 200 children were divided into 3 groups of 4-6 years, 7-9 years and 10-12 years. Each child was examined with the WASPA for dry retinoscopy, followed by cycloplegia. After 45 minutes, both autorefraction using WASPA and cycloplegic retinoscopy were performed. Post mydriatic test was done after 2 weeks and spectacles prescribed. Agreement between dry and wet WASPA measurements with cycloplegic retinoscopy and post mydriatic values were done using Bland Altman analysis. Validity tests were used for determining the value of WASPA as a screening tool. Pearson correlation was used for analyzing the correlation of the measurements with the age groups</td>
</tr>
<tr>
<td>Results</td>
<td>Mean age was 8.6 ± 3.2 years. Excellent agreement was noted between myopia (p=0.04) and myopic astigmatism (p=0.01) in all the age groups and for hyperopia in 7-9 and 10-12 age groups. However there was no agreement for hyperopia in the 5-7 age group (p=0.54). WASPA showed a sensitivity of 78.5% and a specificity of 81.2% in 7-9 and 10-12 age groups, but sensitivity was lower in 5-7 year age group (63.9% and 78.0% respectively). WASPA measurements showed good correlation with wet retinoscopy and PMT in children older than 7 years of age (R=0.71, 0.84 respectively).</td>
</tr>
<tr>
<td>Conclusion</td>
<td>WASPA shows good agreement with cycloplegic retinoscopy and PMT in myopia and astigmatism in all groups and hyperopia children older than 7 years. High sensitivity and specificity makes it a useful tool in children more than 7 years of age, but not in children in the 5-7 year age group</td>
</tr>
</tbody>
</table>
Title of Paper: Circadian fluctuation of systolic and diastolic ocular perfusion pressure in primary open angle glaucoma

Purpose: To study the 24 hour variation of systolic and diastolic ocular perfusion pressure (SOPP & DOPP) in newly diagnosed cases of primary open angle glaucoma (POAG) at a tertiary centre in Kerala and to evaluate its relationship with age and severity of glaucoma

Method: A cross sectional study was carried out in cases of primary open angle glaucoma (n=40) who were kept under observation in the ward for 1 day.

Intraocular pressure (IOP) was measured in both the eyes using applanation tonometry, fourth hourly for 1 day. Simultaneous measurement of systolic (SBP) and diastolic BP (DBP) was taken in the right upper arm in sitting position using a sphygmomanometer.

SOPP (DOPP) at any specific time calculated, by using the standardized formula: SOPP (DOPP) = 2/3 (SBP [or DBP] – IOP) Data was entered into excel sheet for analysis.

Results:

- Age- 52.5% patients < 60 years and 47.5% greater than or equal to 60 years of age
- Severity of glaucoma- 35% with early defects, 25% moderate defects, and 40% severe defects
- Of the 16 patients greater than or equal to 60 years 75% of the patients had severe defects
- Majority of lowest SOPP was noted at 4.00AM(34%) and 8.00AM(23.4%)
- Majority of lowest DOPP was noted at 12.00AM(36.2%) and 4.00AM(34%)
- There was significant positive correlation of nocturnal SOPP and nocturnal DOPP fluctuations (p value <0.05) with age and severity of glaucoma
- No significant correlation of diurnal SOPP and DOPP fluctuations with age or glaucoma severity obtained

Conclusion: Above results imply that nocturnal dip in OPP is a factor for progression in POAG and should be kept in mind in hypertensives, who will require antihypertensive scheduling to prevent nocturnal hypotension. Since majority of elderly individuals had severe defects, there is need for more glaucoma awareness and screening programs.
**Title of Paper**
A CLINICAL STUDY IN MYOPIC PATIENTS

**Purpose**
To find out central corneal thickness and axial length in myopic patients

**Method**
A cross sectional hospital based study was carried out in myopic patients. All myopic patients between 21 to 55 year age group attending opd in a tertiary eye care centre, kerala were included. 32 number of myopic patients were analysed for attaining the required sample size. Patient who had undergone any ocular surgeries, glaucoma, contact lens use, diabetes, other corneal diseases were excluded. Patients underwent detailed ocular examination, cycloplegic refraction, central corneal thickness measurement and axial length measurement. Tools used were ultrasonic pachymeter, auto refractometer, A scan ultrasonic instrument. Data were entered in Microsoft Excel for analysis.

**Results**
Out of the 32 patients, male: 31.25 % female: 68.75%, Age group: 22 to 39 years, Refractive error ranges from -0.5 D to -16 D. Low myopic patients-59.375%, Moderate myopic patients 28.125% High myopic patients 12.5%. Central corneal thickness ranges from 466-593 microns Axial length ranges from 21.07 to 30.18 mm. Low myopic patients has 21.07 to 24.88 mm, Moderate myopic patients has 22.7 to 30.18 mm, High myopic patients has 25.25 to 30.18 mm. Central corneal thickness in low myopic patient varies from 456 to 588 microns, in moderate myopic patients 466-593 microns, in high myopic patients 535-587 microns.

**Conclusion**
A highly significant (p<0.00001) positive correlation (r = 0.8211) is found between spherical error and axial length. When central corneal thickness and axial length are correlated, a positive correlation is found (r=0.276). Also a negative correlation is noted between central corneal thickness and spherical error (r=-0.3122). However these two correlations are not statistically significant (p>0.05) in each case.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Correlation between pretreatment intra ocular pressure (IOP) and visual field loss in primary angle closure glaucoma (PACG).</th>
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</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To study the correlation of pretreatment intra ocular pressure and visual field loss in primary angle closure glaucoma at presentation in a tertiary eye care centre.</td>
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<tr>
<td><strong>Method</strong></td>
<td>A hospital based cross sectional observational study carried out to determine the correlation between pre treatment IOP measured using applanation tonometry and visual field loss as AGIS score (n=21). Newly diagnosed cases of PACG underwent detailed glaucoma evaluation including visual field testing using HFA, 24-2 pattern. AGIS score calculated from reliable visual field test result Mean deviation (MD), Pattern standard deviation (PSD) recorded from visual field test. Data collected using prepared proforma, clinical examination and visual field testing. All data were coded and entered in to statistical software, SPSS for analysis.</td>
</tr>
</tbody>
</table>
| **Results**            | Out of 25 patients, males 52%, females 48%  
Age distribution 40-50 years: 16%, 51-70 years: 72%, 70-80 years: 12%  
RE affected in 72%, LE affected in 28%  
There is significant positive correlation between IOP and AGIS score (correlation is 0.805, P value is <0.01)  
Correlation between IOP and mean deviation is statistically significant (0.812 with p value <0.01).  
The correlation between IOP and pattern standard deviation (PSD) is not statistically significant. |
| **Conclusion**         | There is significant correlation between IOP and visual field loss in PACG. This is a strong indicator that greater extent of visual field damage in PACG can be controlled with controlling IOP alone. |
**Title of Paper**
Bilateral OSSN in an immunocompetent individual- THE LETHAL INVADER

**Purpose**
1) To assess the etiology for bilateral OSSN  
2) To understand the efficacy of topical chemo-reduction agents in a case of extensive OSSN  
3) For using high resolution spectral anterior optical coherence tomography (OCT) as a prognostic and diagnostic tool

**Method**
Case report of a 76 year old male with history of orbital exenteration for OSSN (LE) with orbital spread in 2005. Patient underwent radiotherapy and was under remission  
12 years later, he noticed a growth in right eye. On examination, a fleshy conjunctival mass with corneal extension noted. Investigations done to rule out immunocompromised states and distant metastasis. Anterior OCT done to assess the extension into the cornea. Patient was started on topical 0.04% mitomycin 4 cycles 1 week on and 1 week off. Review every 2 weeks to assess the extent of the tumour and anterior OCT repeated.

**Results**
No immunocompromised state or distant metastases detected with investigations  
After 2 cycles the density of the tumour had significantly decreased  
In anterior segment OCT there was recession of the extent into the cornea.

**Conclusion**
Topical mitomycin is effective as an initial therapy for extensive OSSN especially in this one eyed patient as extensive resection will lead to limbal stem cell deficiency. High resolution OCT is a newer tool for both diagnostic and prognostic assessment of the extent of OSSN into the cornea.
Title of Paper: REFRACTIVE ERRORS AND STRABISMUS IN CONGENITAL PTOSIS

Purpose: To study the pattern of refractive error and strabismus in patients with congenital ptosis aged 1-30 years attending Regional Institute of Ophthalmology, Thiruvananthapuram.

Method: 54 patients with congenital ptosis in the age group 1-30 years were assessed for the laterality and severity of ptosis. Visual acuity was assessed using age appropriate standard methods and refraction was done, if needed with the use of cycloplegic. Squint evaluation was done where presence, laterality and type of strabismus were tested by Hirschberg test and cover uncover test. Data collected was entered in SPSS (statistical package for social sciences)-version 17. Descriptive statistics was done to study the pattern of refractive error and strabismus.

Results: 62 eyes of 54 patients with congenital ptosis were evaluated. 46 patients (85.2%) had ptosis in one eye, and 8 (14.8%) patients had ptosis in both eyes. Ptosis was mild in 32.3%, moderate in 27.4%, and severe in 40.3%. Refractive error was present in 79%. The most common refractive error was astigmatism (48.4%), of which compound myopic astigmatism was the most common type (17.7%). Hypermetropia was the second most common type of refractive error (17.7%) followed by myopia (12.9%). Strabismus was present in 27.8% patients - 60% had vertical, 6.7% convergent and 13.3% divergent squint.

Conclusion: Among 54 cases of congenital ptosis studied, refractive error was present in 79%. Most common refractive error was astigmatism, the most common subtype being compound myopic astigmatism. Strabismus was present in 27.8% and the most common type being vertical strabismus.
# Title of Paper

CHANGES IN REFRACTION AND INTRAOCULAR PRESSURE DURING NORMAL PREGNANCY AND ITS POSTPARTUM OUTCOME - A PROSPECTIVE STUDY

## Purpose

To study the changes in refraction and intraocular pressure of the eye during normal pregnancy and to study the post partum outcome of the changes in refraction and intraocular pressure.

## Method

A total of 100 women were followed longitudinally throughout the course of their pregnancy and up to 6 weeks postpartum. Tests carried out included visual acuity, near vision, keratometry, central corneal thickness, axial length, lens thickness, corneal sensation, retinoscopy, and applanation tonometry.

## Results

Base-line visual acuity was 6/6 in 136 eyes of 67 patients. On follow up, myopic shift was seen in 20 eyes of 10/71 patients. Retinoscopy revealed simple myopic astigmatism in these women. Near vision was affected in 14 eyes of 8 patients. Mean keratometric values and mean central corneal thickness increased from 1st to 3rd trimesters and decreased to the 1st trimester mean values in the postpartum period. Reduced corneal sensation was seen in 33.8% in 3rd trimester. Mean intra-ocular pressure was seen to reduce. An increase in the mean IOP from 3rd trimester to post-partum was noted. These changes reverted back to prepregnancy values at 6 week postpartum.

## Conclusion

14% had a myopic shift and 9% had defective nearvision in their 3rd trimester. Mean increase in keratometric values and central corneal thickness between trimesters noted. 33.8% showed reduced corneal sensitivity by 3rd trimester. Mean reduction in IOP value as pregnancy progressed noted. All changes reverted back to prepregnancy values at 6 week postpartum.
**Title of Paper**
Trabeculectomy versus Ahmed Glaucoma Valve implantation in Neovascular glaucoma

**Purpose**
The aim of our study was to compare surgical outcomes following trabeculectomy with mitomycin C and Ahmed Glaucoma Valve implantation in patients with neovascular glaucoma.

**Method**
Medical records of 18 neovascular glaucoma patients who underwent either trabeculectomy or Ahmed glaucoma valve implantation were analysed retrospectively. All procedures were performed by single surgeon from 2014 to 2017, and all eyes had at least 6 months of postoperative follow-up. Preoperative information included patient age, sex, glaucoma diagnosis, lens status, history of laser or surgical treatment for glaucoma, glaucoma medications, intraocular pressure measured by Goldman applanation tonometry and visual acuity. The primary outcome measures were visual acuity, number of postoperative glaucoma medications, intraocular pressure, and surgical success. Results of most recent examination were used for the analysis.

**Results**
Of the 18 eyes, 9 eyes each underwent trabeculectomy with mitomycin C or Ahmed glaucoma valve implantation. There was no significant difference in visual outcome following both the procedures. 22.2% showed visual improvement in both groups. 55.5% patients of both groups required antiglaucoma medications postoperatively for IOP control. There was statistically significant reduction in IOP in cases with glaucoma valve implantation with a p value of 0.012 whereas IOP reduction in trabeculectomy patients was not significant. The mean IOP pre and post AGV implantation was 35.11 and 18.44 as opposed to 32.89 and 27.11 in trabeculectomy cases.

**Conclusion**
The postoperative vision and the need for antiglaucoma medication following both the surgeries were comparable in the 2 groups. But there was a significant reduction in IOP following use of Ahmed glaucoma valve and hence has an edge over trabeculectomy in these cases.
Title of Paper: Role of over minus therapy in intermittent exotropia

Purpose: Intermittent exotropia if not treated either remains the same or progresses. Surgery for intermittent exotropia, has its own share of side effects like over correction leading to consecutive esotropia and recurrent exotropia. Non-surgical methods, like overminus on the other hand, are non-invasive and encourage binocular control of deviation.

Method: Prospective observational study. 53 patients in the age group of 1-5 years coming to the out patient department with complaints of intermittent squinting were recruited. History regarding frequency of squinting noticed, was recorded and cover test was performed. NCS (NewCastle control score) both home and office (distance and near) were recorded. Angle of deviation was measured with prisms. Overminus ranging from -1.00D to -3.00D were prescribed over the basic refractive error (if any). The change in NCS and angle of deviation was measured at 6 weeks, 6 months and 1 year.

Results: There were 62 patients recruited with a mean age of 1.72±1.195. Nine were lost to follow up and 53 patients analysed. There were 40 (64.1%) girls and 22 (32.25%) boys. The pre-existing refractive errors consisted of mainly consisted of myopic astigmatism-38.09%, whereas 44.4% had no refractive errors.

At 1 year, 66.03% showed a reduction in the NCS scores. The NCS reduced from a mean value of 3.83±0.894 at presentation to 2.95±0.797 at 1 year which was statistically significant. The angle of deviation also reduced from 29.22±9.588 to 27.76±9.185 which was statistically significant (p=0.026).

Conclusion: The predominant refractive error in IXT was myopic astigmatism

The was no significant correlation between control as assessed by NCS and angle of deviation

NCS scores 5-6 will not improve with non surgical methods, might need surgery. Over minus therapy definitely improved control and deviation of IXT.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>DIABETIC PAPILLOPATHY - A RARE CASE</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To report a rare case of diabetic papillopathy.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>Case report-53 yr old male k/c/o DM,HTN,CAD since 5 yrs, was admitted in the neurology dept with altered sensorium due to hyponatmia. On regular ophthalmological evaluation BCVA rt eye 6/9 lt eye 6/6. Anterior segment within normal limits except for early lenticular changes. Fundus (both eyes) - disc edematous, margins blurred &amp; hyperemic. Multiple flame shaped hemorrhages and cotton wool spots over disc and peipapillary area. FFA showed microaneurysms with leak, capillary non perfusion areas. Disc staining and leakage in the late phase. No venous filling delay.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Since vision is maintained and from the FFA findings a diagnosis diabetic papillopathy made.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Diabetic papillopathy is a rare entity. Imaging should be done in all cases to rule out intracranial pathology causing papilloedema.</td>
</tr>
<tr>
<td><strong>Title of Paper</strong></td>
<td>Characteristics of choroid using Swept Source OCT in sarcoidosis related granulomatous uveitis</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To characterise the choroidal parameters of patients diagnosed with sarcoidosis uveitis using swept source OCT.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>14 patients diagnosed with sarcoid uveitis were included in prospective study from Oct '16 to May '17. They were compared with age matched controls. Affected eyes were grouped into acute uveitis and recurrent &amp; chronic eyes. All patients were scanned using swept source OCT. Clinical and demographical characteristics were recorded. Manual segmentation of the choroidal layers was done and thickness was measured subfoveally by the software.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>No significant difference between choroidal thickness between affected eyes and control group but haller layer was significantly reduced. The Sattler’s layer at FCS in affected eyes of patients who had acute uveitis compared to normal eyes was significantly thicker (p=0.004) with no significant difference in Haller’s layer. Statistically thinner Haller’s layer at FCS was observed in affected eyes of recurrent &amp; chronic uveitis when compared normal eyes (p=0.001). The ratio of Sattler’s layer to Haller’s layer in affected eyes of recurrent &amp; chronic uveitis (0.68 ± 0.20) was not different compared to affected eyes of acute uveitis (0.63 ± 0.14) (p=0.508).</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>We conclude that Sattler’s layer is the layer of choroid which primarily gets thickened in ocular sarcoidosis but eventually in longer standing cases, it is the Haller’s layer which gets thinned out due to the pathogenesis of ocular sarcoidosis</td>
</tr>
<tr>
<td><strong>Title of Paper</strong></td>
<td>Microstructural changes in the fellow eye of patients with unilateral amblyopia: A case control study using SD-OCT</td>
</tr>
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<td>---------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To compare the fellow eye of unilateral amblyopia patients with controls in terms of macular, retinal nerve fibre layer and choroidal parameters.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>In this case control study, 30 fellow eyes of children between 5-15 years of age with unilateral non-strabismic amblyopia were compared with age and sex matched normal subjects using SD-OCT (OCT version 3.0, Zeiss Humphrey, Dublin, USA). The study was conducted in Little Flower Hospital and Research centre, Angamaly during the time period June 2016 to May 2017. Macular, retinal nerve fibre layer and choroidal parameters were compared using unpaired t-test.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Out of the total 30 patients, mean age was 7±5.12 years. There was a statistically significant difference in the optic nerve head rim area (p=0.03) and disc area (p=0.01) between the fellow eyes and controls; but there was no significant difference in the macular (p=0.71) or choroidal thickness (p=0.35).</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Fellow eyes of unilateral amblyopes show significant changes from the control group in optic nerve head parameters. These differences indicate that unilateral amblyopia is a bilateral disease.</td>
</tr>
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</table>
### ABSTRACT DETAILS : DS17-109

| Title of Paper | INFLUENCE OF CATARACT IN THE MEASUREMENT OF RETINAL NERVE FIBRE LAYER AND MACULAR THICKNESS USING OPTICAL COHERENCE TOMOGRAPHY | A PROSPECTIVE STUDY |
| Purpose | To compare retinal nerve fibre layer and macular thickness measurements by OCT in the presence of cataract and after removal of the cataract. |
| Method | When a patient comes with cataract and is posted for cataract surgery retinal imaging using cirrus OCT will be done. optic disc cube 200 x200 and macular cube 512 x 128 scans will be performed using the cirrus OCT. In each series of optic disc scans, the mean RNFL thickness and mean quadrant RNFL thickness (superior, inferior, temporal and nasal) will be analysed. In macular scans retinal thickness values will be calculated for nine areas corresponding to the Early Treatment Diabetic Retinopathy Study (ETDRS). |
| Results | Patients will be treated with antibiotic eye drops (e.g. moxifloxacin) prior to surgery. Extracapsular cataract extraction with PCIOL implantation under combined topical anaesthesia and peribulbar block will be done. OCT will be repeated when patient come for first post op review one week after surgery and second post op review 4 weeks after surgery. Average values before and after cataract surgery will be compared to analyse the effect of cataract on RNFL and macular measurements. |
| Conclusion | OCT is very useful to diagnose and follow up retinal diseases affecting the aging population like diabetic retinopathy. The influence of cataract in the measurements should be considered when following up such cases using OCT. |
Title of Paper: Safety and efficacy of Chandelier assisted versus Conventional procedure for Scleral buckling in RRD

Purpose: To assess the safety and efficacy of the 25 Gauge (G) chandelier endoillumination system (CES) versus indirect ophthalmoscopy scleral buckling (SB) surgery in primary rhegmatogenous retinal detachment (RRD).

Method: The study was designed as a prospective interventional case series. 28 eyes of 28 patients with recent primary RRD & PVR less than or equal to C2 were divided into 2 equal groups 'A' & 'B'. 'A' operated by SB using 25 G Chandelier illumination and non-contact viewing system, 'B' with conventional procedure. The preoperative demographics, success rate of retinal reattachment at 3 months, intraoperative findings, and postoperative complications evaluated.

Results: Intraoperatively 4 eyes in 'A' noted a new break. 10 eyes in 'A' on first post op day showed well attached retina. 8 eyes in 'B' had Subretinal fluid on first post op day. Vitreous prolapse from the 25 G port and port suturing for 2 cases were noted in group A. No hypotony noted in any cases of group 'A'. Although post operative BCVA & anatomical success was similar in both groups at 3 months, CES allows excellent visualisation & treatment of retinal breaks & safety during SRFD.

Conclusion: CES allows excellent visualisation & treatment of retinal breaks and safety during SRFD. It can be considered an effective alternative to vitreoretinal surgery in simple retinal detachment cases & aids in teaching purposes apart from allowing better ergonomics for the surgeon.
<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>EMBRYONAL Rhabdomyosarcoma: Atypical Presentation</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>To highlight the atypical presentation of embryonal rhabdomyosarcoma as cervical lymphadenopathy and sinonasal involvement followed by a/c unilateral proptosis and defective vision.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>14 year old female presented with 2 weeks history of rapidly progressing a/c proptosis and painless progressive defective vision RE. Past history: apparently normal child, noticed painless swelling in the right side of the neck for 6 months. Recurrent episodes of fever along with loss of appetite and weight. 4 months back, noticed fullness in right maxillary region and two episodes of epistaxis. O/E: level 2 &amp; 3 cervical lymph node palpable right side. VA - RE hand movement with inaccurate projection, VA - LE 6/12. RE showed moderate eccentric proptosis (down, out), all duction movements were restricted and RAPD, fundus examination WNL. LE WNL.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>• Orbital rhabdomyosarcoma is one of the life threatening diseases that presents first to the ophthalmologist. • Patients usually present with a/c proptosis or globe displacement because two-third of these tumors are superonasal. • Other less common presentations are ptosis, lid edema, epiphora, headache, epistaxis and pain.</td>
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</table>
# Title of Paper
Unheeded FCEs (Focal choroidal Excavations) in Recurrent CSCR

## Purpose
To analyse the prevalence and characteristics of focal choroidal excavation (FCE) concurrent with central serous chorioretinopathy (CSCR) using multimodal imaging

## Method
Prospective study with clinical features and multimodal imaging findings were investigated in eyes with CSCR and FCEs, using imaging methods including spectral domain optical coherence tomography (SD-OCT), Fluorescein angiography (FA), Infra red reflectance & Fundus autofluorescence (FAF).

## Results
5 eyes out of 19 eyes with chronic CSR had FCEs. 2 eyes in fact had distant extra macular FCEs. We noted these FCEs as hyperautofluorescent areas on FAF which corresponded to the leaks as well on FFA. In 3 months the subretinal fluid resolved completely with 577 nm micropulse laser therapy over the FCEs.

## Conclusion
FCE is not uncommon in patients with CSCR. Multimodal imaging predicts the areas of FCEs and leaks and can aid in non invasive localisation of area concerned for the laser therapy.
Title of Paper
Comparison of corneal topographic changes pre operatively and after 25 G and 23G vitrectomies and evaluation of sclerotomy wound morphology using Visante Optical Coherence Tomography

Purpose
Small gauge vitrectomy is less invasive than conventional 20-G system. Scleral incisions in PPV can influence the corneal curvature and hence the visual outcome. This study was done to compare the corneal topographic changes following small gauge vitrectomies (23G and 25G) and to study the sclerotomy wound morphologies.

Method
In this prospective comparative study, 46 eyes undergoing vitrectomy were selected and divided into two-Group 1, 23 G and Group 2, 25 G vitrectomies. Corneal topography was taken using Zeiss Atlas Corneal topography System model 9000 pre operatively and post operatively after a day, one week, one month and 3 months. The parameters studied were steep K, flat K, astigmatism, corneal irregularity measurement (CIM), mean toric keratometry (TKM), mean inferior-superior dioptic asymmetry (mean I-S). Sclerotomy wound morphology was evaluated using Zeiss Visante OCT Model 1000 on the first post operative day and one week post surgery in both the groups.

Results
Change in CIM on the first post operative day in the two groups (0.82±0.23 mcm, 2.11±0.40 mcm) were statistically significant (p=0.012). Change in CIM one week after surgery in the two groups (0±0.11 mcm, 0.03±0.71 mcm) were not statistically significant (p=0.70). Change in CIM one month after surgery in the two groups (-0.11±0.10 mcm, 0.43±0.08 mcm) were not statistically significant (p=0.30). Change in CIM three months after surgery in the two groups (-0.14±0.09 mcm, 0±0.06 mcm) were not statistically significant (p=0.416). All the other parameters, steep K, flat K, TKM and mean I-S does not produce corneal surface changes in both groups during further follow ups.

Conclusion
Both the vitrectomy systems have same effect on the optical performance of cornea. Anterior segment OCT (Optical Coherance Tomography) of sclerotomy wounds showed better wound architecture with the 25 gauge system in the first post operative day, but the difference was less apparent one week after surgery.
Title of Paper: Alarming orbital inflammation in a post cataract surgery patient

Purpose: To report a case of orbital inflammation in a post cataract surgery patient which turned out to be a parasitic granuloma on proper evaluation.

Method: 60-year-old hypertensive female who underwent phacoemulsification in her left eye 6 weeks back presented with swelling around left eye of 3 weeks duration. It started as mild puffiness in the lower lid which progressed to involve both lids. Associated itching+. No history of pain, redness, photophobia or fever. She gave history of symptoms subsiding on systemic medications (steroids) from a nearby hospital two times, but only to recur within few days of stopping the treatment. Examination revealed diffuse swelling of left eyelids. Induration present in lower lid in medial part. Skin erythematous. Minimal rise in temperature present. No palpable mass. EOM full. No proptosis. Anterior segment & fundus were normal. Pupil brisk both eyes. BCVA 6/12 both eyes.

Results: We arrived at a provisional diagnosis of preseptal cellulitis left eye. Parasitic etiology. Necessary investigations were done which revealed:
- Blood routine:
  - Hb: 12g/dl
  - TC: 15,600 cells/mm³
  - Platelet: 3.9 lakh/mm³
  - AEC: 1093 cells
  - ESR: 35 mm/hr
- Bscan: Hypoechoic tract with linear hypechoic area with in-possibility of parasitic granuloma
So a conclusive diagnosis of parasitic granuloma was arrived ruling out other causes of orbital inflammation in a post-operative case.

Conclusion: Both the surgeon and the patient will be very much alarmed if orbital inflammation sets in the postoperative period. As always a thorough evaluation is mandatory and here it turned to be a parasitic granuloma, unrelated to the surgery. Patient responded well to systemic Ivermectin, DEC, albendazole & IV steroids. Planning for exploration once it is well localised.
Title of Paper: Prevalence of Primary Angle Closure Disease (PACD) in Central Kerala – A Hospital Based Study

Purpose: To determine the Prevalence of Primary Angle Closure Disease in patients who attended a peripheral eye hospital in Central Kerala.

Method: Cross-sectional study of 400 patients 40 years or above. Conducted between March and May 2017. All patients underwent a comprehensive ophthalmic examination including best corrected visual acuity (BCVA), intraocular pressure (IOP) measurement with Goldmann applanation tonometry, slit lamp examination and stereoscopic evaluation of the optic nerve head with a +78D lens. Gonioscopy was performed with a Goldmann 2-mirror gonioscope. Angle was graded as occludable or not based on angle structures seen. If the posterior trabecular meshwork could be seen for less than 180° of the angle circumference, it was classified as "occludable." Trauma, Intraocular surgery, secondary glaucoma's excluded.

Results: 400 participants, 258 women and 142 men. Mean age group was 53.85 years. Mean IOP was 14.58 and 14.55 mm Hg in the right eye and left eye respectively. The mean Vertical Cup Disc Ratio (VCDR) was 0.358 and 0.351 in Right eye and Left eye respectively. Prevalence of PACD by age: between 40-49 yrs. was 2.6%, 50-59 yrs. was 5.9%, 60-69 yrs was 5.3, and above seventy yrs. was nil. Prevalence in Males was 5.6% and females 3.1%. PACD was more in 50-59 years age group, and in men. The overall prevalence of PACD was 4%.

Conclusion: The Prevalence of Primary Angle Closure Disease in patients who attended a peripheral eye hospital in Central Kerala was 4 percent. It was more in 50-59 years age group, and in men.
Title of Paper: EFFECT OF ANAESTETIC PREMEDICATION ON EXTRAOCULAR MUSCLE CONTRACTILITY

Purpose: To analyze the effect of anaesthetic premedication on the contractility of extraocular muscles in patients with horizontal comitant strabismus. To compare the effect of pre anaesthetic medications between comitant esotropias and exotropias and to correlate it with age and magnitude of strabismus.

Method: In this prospective observational study, 24 comitant esotropes and 24 exotropes under 12 years of age, were scheduled for strabismus surgery under general anaesthesia. Orthoptic evaluation including corneal reflex test, ocular motility, prism bar cover test and sensory tests were done pre-operative day. A standard protocol was followed for pre-anaesthetic medications and consisted of oral Promethazine 0.5 mg/kg and Midazolam 0.02 mg/kg, given 30 minutes prior to the surgery. Orthoptic evaluation were repeated on the day of surgery, 25 minutes after the premedication by an observer, blinded to the previous measurements. Pre and post PBCT and CRT measurements were analysed and correlated with age, type and magnitude of strabismus.

Results: Out the total, 48 patients, 24 had esotropia and 24 had exotropia. Mean PBCT was 35±52 PD base out for esotropes and 37±6.5 PD base in for exotropes. There was a statistically significant difference (Wilcoxon rank sum test) in PBCT measurements among comitant esotropes (p=0.04), where as there was no significant difference among exotropes (p=0.71). There was correlation between the difference in PBCT measurements pre and post pre-anaesthetic medication with age or magnitude of strabismus (Pearson correlation coefficient).

Conclusion: Pre anaesthetic medications significantly change the contractility of medial rectus muscle and influence the motor status in comitant esotropia. This does not correlate with age or magnitude of esotropia. However, contractility of lateral rectus is not significantly changed; thereby not significantly altering the motor status in comitant exotropias.
<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>EVALUATION OF OCULAR MORBIDITY IN CHILDREN WITH STATIC ENCEPHALOPATHY AND ITS CORRELATION WITH VISUAL EVOKED POTENTIAL</th>
</tr>
</thead>
</table>
| **Purpose**        | • To evaluate the ocular morbidity in children with static encephalopathy (SE).  
• To compare the visual evoked potential (VEP) parameters between patients with SE and matched controls.  
• To correlate VEP parameters with visual function and the type of SE static in these patients. |
| **Method**         | In this observational comparative study, 47 cases of SE, between 5-15 years of age were included. Detailed history and comprehensive ophthalmic examination including cycloplegic refraction and orthoptic evaluation were done in all the patients. Flash/ pattern VEP (EP Standard-1000) was done in 20 co-operative patients and was compared with age and sex matched normal controls using unpaired t-test. Multiple regression analysis was used to analyze the association between types of SE and visual parameters. |
| **Results**        | The prevalence of ocular comorbidity in our sample was 74.53% and included refractive errors (76.99%), strabismus (24.53%), nystagmus (17.11%), optic atrophy (7.15%), cerebral visual impairment (18.26%). Quadriplegic SE patients showed significant visual morbidity (p=0.04) than hemiplegic and diplegic patients. In comparing VEP parameters among cases and controls, there was statistically significant difference between latency of P100 wave and amplitude of N75 wave (p=.01, p =0.03 respectively). There were no statistically significant difference observed between amplitude of P100 wave and latency of N75 wave (p=0.74, p=0.64). |
| **Conclusion**     | Patients with static encephalopathy have a high prevalence of ocular morbidity, with quadriplegic type accounting for greater visual disability. VEP parameters have a significant difference in patients with static encephalopathy, when compared to controls. |
**Title of Paper**  
Intravitreal antiVEGF in stage 3 retinopathy of prematurity-a prospective study

**Purpose**  
To assess the results of use of antiVEGF in patients with stage 3 retinopathy of prematurity in zone 1 and zone 2 posterior with plus disease with respect to disease regression, recurrence, and full vascularisation.

**Method**  
32 premature babies-all with stage 3 ROP with plus disease in zone 1 (APROP) or zone 2 posterior were included in the study. They received antiVEGF injection (bevacizumab 0.625 mg/0.025ml or ranibizumab 0.025ml). They were followed up at weekly intervals till full vascularisation. Those babies who developed late recurrence-stage 2 or stage 3 any zone were treated with laser (double frequency Nd:YAG by indirect laser delivery) and followed up till regression. All babies were examined each visit after dilatation with diluted tropicamide plus phenylephrine combination with the indirect ophthalmoscope and 28D lens. The demographic details and results were computed.

**Results**  
64 eyes of 32 babies were included in the study. The gestational age ranged from 25 weeks to 33 weeks and the maximum number of babies who required antiVEGF were in the age group 25-27 weeks (28 eyes) and birth weight less than 1kg (34 eyes). 6 eyes had zone 1 disease (APROP) and 58 eyes had zone 2 posterior. The average time for full vascularisation (to reach temporal ora) after antiVEGF injection was 56 weeks PCA. 4 eyes developed recurrence in zone 3 stage 2 and required laser therapy.

**Conclusion**  
Intravitreal antiVEGF is an important tool in treatment of zone 1 and 2 ROP and this study furthers our knowledge of the changes occur following the injection that is invaluable in the practice of ROP. Further follow up study is planned to know the longterm outcomes of these babies.
**Title of Paper**: VKH Masquerade???

**Purpose**: To report a rare presentation of Vogt Koyanagi Harada syndrome in a 34-year-old male

**Method**: A 34-year-old male with no known comorbidities was seen by the ENT specialist for tinnitus and mixed hearing loss in his right ear three months previously. Six weeks later he underwent a stapedotomy, but ten days later developed a right sided LMN facial palsy. The palsy recovered on treatment with systemic steroids but four days after stopping treatment, he presented with sudden loss of vision of both eyes. Ocular examination revealed BCVA of CF 1m RE and CF3m LE with minimal anterior chamber reaction and multiple, localised bullous neurosensory retinal detachments in both eyes.

**Results**: On OCT the central subfoveal thickness at presentation was 1273 microns RE and 943 microns LE. Fundus fluorescein angiography showed multiple areas of leak including at the optic disc. A diagnosis of VKH syndrome was made and intravenous steroids were started. Five days later, the vision improved to 6/12 in both eyes. Repeat OCT showed a decrease in CST to 450μm RE and 511μm LE and steroids were tapered. With continued steroid use the vision improved to 6/6 in each eye. He is currently on a low maintenance dose of steroids and continues to be free of symptoms.

**Conclusion**: VKH syndrome usually presents with ocular symptoms. Neurological manifestations described include facial nerve palsy. In this patient the ocular findings were initially masked by the steroid use and presented dramatically once these were stopped. The initial auditory symptoms though typical of VKH did not of themselves warrant the diagnosis.
### Title of Paper
SPECTRUM OF ACUTE ACQUIRED COMITANT ESOTROPIA (AACE) IN CHILDREN

### Purpose
To study the clinical features of Acute Acquired Comitant Esotropia (AACE) in children and analyse the course and outcome.

### Method
A retrospective, clinical study of all patients under 18 years with acute onset, non-accommodative comitant esotropia in a tertiary eye care centre from September 2013-December 2016. Parameters studied were age, sex, eye involved, age of onset, precipitating event, amount of deviation, presence or absence of amblyopia, cycloplegic refraction, systemic involvement, surgical or non-surgical intervention, course and outcome. All patients underwent MRI Brain and Orbits and systemic evaluation was done in suspicious cases. Minimum follow up period was 6 months.

### Results
Out of twelve patients, eight were males. Average age of onset was 7.9 years. Mean esodeviation was 33.75 PD and mean age of onset was 6.14 years (Range: 2-15 years). There was left eye preponderance. Three patients (25%) had a history of a precipitating event. Cycloplegic refraction ranged from +0.50 DS to -6.75 DS, with majority having less than +2.00 DS. Amblyopia was noted in 8 (66.6%) patients. Systemic involvement was seen in three patients in the form of Ocular Myaesthenia, CNS Glioma, Viral Fever respectively. Esotropia disappeared in one patient with overcorrected, high myopia following atropinisation and change of glass. Eight patients (66.6%) underwent strabismus surgery with good postoperative alignment and the rest were managed conservatively.

### Conclusion
Acute, acquired, comitant esotropia (AACE) is an unusual ocular alignment disorder characterized by a non-accommodative esodeviation which can occur in older children, adults, and even the elderly. Systemic diseases, especially CNS diseases, must be considered and ruled out by neuroimaging. Prompt amblyopia therapy and timely surgery can result in a satisfactory outcome in those without systemic involvement.
Title of Paper: PSEUDOACCOMODATION IN PATIENTS WITH POSTERIOR IRIS CLAW INTRA OCULAR LENS IMPLANTATION: A RETROSPECTIVE COHORT STUDY

Purpose: To compare the anterior chamber angle parameters and anterior chamber depth measurements during induced accommodation in eyes with posterior iris claw lens implantation with the fellow eye that has undergone in the bag IOL implantation.

Method: In this retrospective cohort study, 6 patients who had undergone posterior iris claw lens implantation for aphakia in one eye and in the bag IOL implantation in the fellow eye were studied. All patients underwent automated refraction on undilated pupils using Welsch Allyn handheld autorefractometer, anterior chamber depth (ACD) and angle parameters were analyzed using anterior segment OCT imaging with artificial induction of accommodation using -3.00 D lenses. Angle parameters, ACD, monocular estimation method (MEM) of retinoscopy values and autorefractometer readings were compared between the two eyes of the same patient using Wilcoxon rank sign test and Chi square test.

Results: 12 eyes of 6 patients were included in the study. In the iris claw lens eyes, mean angle opening distance (AOD) changed from 38.43± 0.12 mm in the non-accommodated state to 35.90± 0.67 mm in the accommodated state (p=0.02). In the in the bag IOL eyes, mean angle opening distance (AOD) changed from 45.63± 0.02 mm in the non-accommodated state to 43.94± 0.64 mm in accommodated state (p=0.04). There was significant difference between the iris claw group and in the bag IOL group in mean AOD in the accommodated state (p=0.002). The change in MEM (p=0.80) and AR values: not significant (p=0.65).

Conclusion: Significant difference seen in angle parameters and ACD measurements in patients with retropupillary iris claw lens implantation, when compared to the fellow eye which had undergone in the bag PCIOL implantation suggests existence of pseudoaccommodation in iris claw lenses, which is significantly more than that with in the bag PCIOL.
ABSTRACT DETAILS : DS17-122

<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>THE DARKNESS AFTER THE POKE</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>A 42 year old lady who underwent abdominal hysterectomy for fibroids developed sudden diminution of vision in both eyes following epidural analgesia.</td>
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<tr>
<td><strong>Method</strong></td>
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<tr>
<td><strong>Results</strong></td>
<td>Her visual acuity in both eyes was 3/60 and 5/60 in right and left eye respectively and on fundus examination had multiple pre-retinal and sub retinal haemorrhages in posterior pole of both eyes. On literature review there has been a few case reports of similar findings following epidural analgesia.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>In this poster we would like to discuss this unusual case, its etiopathogenesis, clinical course so that awareness can be increased regarding the possibility of this complication in an otherwise normal epidural analgesia.</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>RELATIONSHIP BETWEEN FULLY CORRECTED AMETROPIAS AND NEAR STEREOACUITY</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To examine the relationship between fully corrected ametropias and near stereoacuity (NSA) in terms of magnitude of ametropia, and duration of spectacle wear (DW) in children between 5-15 years of age</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>In this comparative observational study, 266 children, with ametropias corrected to 6/6 were enrolled through simple random sampling. Amblyopia, strabismus, media opacities were excluded. Visual acuity, refraction, orthoptic evaluation, NSA (TNO chart) were done. NSA values were correlated with magnitude of ametropia and duration of optical correction using Pearson correlation. Influence of type and magnitude of ametropias, duration of optical correction with NSA was analyzed using univariate and multivariate regression analysis.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Out of the total 266 children, 89 were myopes, 32 were hyperopes and 145 were simple astigmats. Significant correlation between NSA and magnitude of myopia (R=0.68; p=0.0001), astigmatism (R=0.51, P=0.01) and hypermetropia (R=0.90, p=0.0001) was seen. In the regression analysis, interocular difference and NSA was significant in (p&lt;0.00001) in anisometropic ametropias. Age (p=0.49) and duration of optical correction were not significantly associated with NSA (p= 0.61).</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>NSA correlated with magnitude of ametropias and interocular difference in anisometropic ametropias. There was no correlation between age/ duration of correction and NSA.</td>
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<tr>
<td>Title of Paper</td>
<td>Handheld Electroretinogram-a worthy contender to the throne.</td>
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<tr>
<td>Purpose</td>
<td>The handheld ERG is reliable, convenient and accurate and compares well with the full field ERG in all aspects.</td>
</tr>
<tr>
<td>Method</td>
<td>The handheld ERG was used in a clinical setting and normative data collected for 30 subjects. The results were compared to existing full field ERG data and was found to be comparable in all aspects.</td>
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<tr>
<td>Results</td>
<td>The poster highlights the advantages, disadvantages of the handheld ERG and comparison with a full field ERG.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>The handheld ERG is a worthy contender to the throne of full field ERG and is an easy partnership of convenience and affordability with accuracy and specificity.</td>
</tr>
<tr>
<td><strong>Title of Paper</strong></td>
<td>INFLUENCE OF AGE OF THE PATIENT ON INTRA OCULAR LENS PREDICTION ERROR: A PROSPECTIVE COHORT STUDY</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To examine if there is a relationship between intraocular lens (IOL) power prediction error (PE) after cataract surgery and age of the patient.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>112 eyes of 99 patients who underwent phacoemulsification with PCIOL implantation by a single surgeon were included. Eyes were grouped as 20-29 years, 30-39, 40-49, 50-59 and 60-69. Biometry performed using IOL-Master and the SRK-II/SRK-T formulae and axial length &lt; 21 mm and &gt; 24 excluded. Subjective refraction was done 1 month after surgery, mean prediction error (MPE), median absolute PE (MAPE) were compared among age groups. Multiple regression analysis done to analyse influence of axial length, anterior chamber depth and keratometry on IOL prediction accuracy.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>The mean IOL power was 21.75 in 20-29 age group, 21.33 in 30-39, 20.5 in 40-49, 20.8 in 50-59 and 22.33 in 60-69. MPE was -1.125 in 20-29 years, -0.15 in 30-39, -0.125 in 40-49, 0.06 in 50-59 and 0.24 in 60-69 years. The mean preoperative refractive error predicted by the IOL formulae was similar among age groups (p=0.78). The mean postoperative spherical equivalent at 1 month was significantly more myopic in patients less than 49 (p=0.01). MPE positively correlated with age (p=0.02). Multiple regression analysis revealed that age, axial length, average corneal curvature, anterior chamber depth were independent predictors of the age-related difference in MPE.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Prediction error was more myopic in patients younger than 49 years, indicating that patient age is a significant factor affecting post-operative IOL prediction accuracy, in addition to the other biometry parameters like axial length, anterior chamber depth, keratometry and A-constant.</td>
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<tr>
<td>Title of Paper</td>
<td>A novel technique for safe phacoemulsification in posterior polar cataracts.</td>
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<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Purpose</td>
<td>To evaluate the safety and efficacy of a new phacoemulsification technique for posterior polar cataracts and to validate the usefulness of a newly designed phaco needle to suite this technique.</td>
</tr>
<tr>
<td>Method</td>
<td>Prospective case series of 23 consecutive cases of posterior polar cataracts identified by slit-lamp examination. No hydroprocedure or nucleus rotation was performed. A novel technique of peripheral coring of central nucleus, with a specially designed phaco needle, was employed. The central nucleus was then emulsified without rotation. The remaining epinucleus and cortex were dissected by manual as well as visco assisted techniques. The newly designed phaco tip and the technique will be demonstrated by videos. Intraoperative complications, post operative corneal oedema, iritis, specular microscopy and best corrected visual acuity at three weeks post operative were noted.</td>
</tr>
<tr>
<td>Results</td>
<td>There were 10 males 13 females. Successful phacoemulsification with IOL implantation was achieved in all cases. Intraoperative complications included one capsulorhexis tear during nucleus emulsification and one posterior capsule rupture at the end of epinucleus/cortex aspiration. For both these cases, multipiece hydrophobic IOL was implanted in the sulcus. There was no case of nucleus drop. Post operative corneal oedema and iritis were minimal in all cases. The mean endothelial cell count pre and 3 months post operative were 2342 ±35 and 2276 ±29 cells/mm³ respectively. Best corrected visual acuity was 6/6 in all cases after three weeks.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>This novel technique for phacoemulsification of posterior polar cataracts is a safe and efficient method to prevent nucleus drop, which is a dreaded complication in such cases. The newly designed phaco needle suites well in performing this technique effectively.</td>
</tr>
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</table>
Effects of chronic smoking on retinal nerve fibre layer (RNFL) and Ganglion cell complex (GCC) thickness - a comparative cross sectional study from a Quaternary care centre in Kerala, South India

**Purpose**
1. To assess retinal nerve fibre layer (RNFL) and Ganglion Cell Complex (GCC) thickness of chronic smokers using SD-Optical Coherence Tomography and to compare it with controls (non-smokers).
2. To study the effects of chronic smoking on visual acuity, colour vision, contrast sensitivity and visual fields and to compare it with controls (non-smokers).

**Method**
An observational cross sectional study was done of 40 eyes of 20 smokers and compared with 20 eyes of 10 non-smokers whereby the retinal nerve fibre layer (RNFL) thickness, Ganglion Cell Complex (GCC) thickness, visual acuity, colour vision, contrast sensitivity, and visual fields were assessed and compared between the two groups. All cases studied were male chronic smokers above 40 years, while all controls were male non-smokers above the age of 40 years.

**Results**
The average GCC thickness was 75.45 ± 13.15 in cases compared to 81.95 ± 3.993 in controls, which was statistically significant (p=0.036).
The average RNFL thickness of cases was calculated to be 87.30 ± 12.00 microns and 90.00 ± 8.61 microns in controls which was not statistically significant (p=0.375). Among the secondary parameters, contrast sensitivity compared between the cases and controls was statistically significant (p = 0.035). Mean deviation of visual field loss compared between cases and controls was also found to be statistically significant (p=0.011).

**Conclusion**
Comparison of GCC thickness, contrast sensitivity and mean deviation of visual field loss between smokers and non-smokers was statistically significant. There was no statistical significance observed between the average RNFL thickness of smokers and non-smokers. However, the significance cannot be correlated at present due to inadequate sample size.
Title of Paper: Unilateral tubercular nodular non-necrotizing anterior scleritis

Purpose: To report a case of unilateral nodular non-necrotizing anterior scleritis of tuberculous etiology.

Method: 65 year old with pain, watering, redness, and blurring of vision right eye for 2 weeks. He had tuberculosis empyema 6 years back and took ATT. Examination (RE) showed a 5mm x 4 mm yellowish nodule on infero-nasal quadrant of sclera 3 mm away from limbus. TC 11,300 cumm, ESR 60 mm/Hr. ANA, RA factor, Mantoux and sputum AFB were negative. CXR normal. In view of elevated ESR, history of tuberculosis and high endemicity of tuberculosis a diagnosis of the tubercular scleritis was made.

Results: Category II Anti-Tubercular Therapy (ATT), Isoniazid (H), Rifampicin (R), Pyrazinamide, Ethambutol and Tab. Ofloxacin (patient was allergic to inj. Streptomycin) was started. Along with ATT topical antibiotic was also given. Patient showed response within one week of starting treatment as his pain and redness decreased and nodule started resolving. Presently patient is on regular follow-up with no ocular or systemic complication of ATT.

Conclusion: Tuberculosis is a rare cause of anterior nodular non-necrotizing scleritis. It may be very difficult to diagnose. However good history, detail clinical evaluation, appropriate and timely management shows a good response to the disease.
Title of Paper: Case of spontaneous total hyphaema - a diagnostic dilemma

Purpose: To report a case of spontaneous total hyphaema in an elderly patient presented in our outpatient department, which created a lot of diagnostic difficulties and after 4 months of waiting period, case diagnosed as neovascular glaucoma with iris neovascularisation and probable etiology was venous occlusion.

Method: 70 yrs old male presented with h/o gradual onset defective vision 2 months duration and which rapidly progressed over 2 weeks and not associated with pain/flashes/floaters/coloured halos. There was no history of trauma/bleeding manifestations/recent weight loss. No history of any significant sytemic illness and not on any anticoagulants. His BCVA RE6/36 and LE PL+ PR inaccurate. His RE anterior segment examinationion was within normal limit except for grade 2 nuclear sclerosis. LE anterior segment examination showed corneal edema with total hyphema and rest of the details couldn't make out. His IOP was more than 80 mm of hg LE and 14 in LE.

Results: His coagulation profile was within normal limits. His B-scan LE showed cataractous lens and vitreous detachment. Sickling test and peripheral smear were also within normal limits. His USG abdomen, CT-head and chest x-ray were within normal limits. Patient was treated symptomatically with oral acetozolamide, topical anti glaucoma medications, atropine ointment and topical steroids. He lost follow up for 4 months, and he was on self treatment with same medication. Hyphaema cleared after 4 months, and there was neovascularisation of iris and angle, but fundus view was limited due to cataract and IOP was normal.

Conclusion: Traumatic total hyphaema is very common in ophthalmology casualty, but spontaneous total hyphaema is rare. In case of spontaneous total hyphaema, we have to rule out malignancy before making a diagnosis of neovascular glaucoma and raised intraocular pressure to be controlled to prevent blood staining of conea.
### Title of Paper
COMPARISON BETWEEN OCTOPUS POLAR ANALYSIS AND OPTICAL COHERENCE TOMOGRAPHY RETINAL NERVE FIBRE LAYER THICKNESS ANALYSIS FOR EARLY DETECTION OF GLAUCOMA

### Purpose
1) To evaluate the ability of octopus perimetry using its polar analysis to detect early stages of pre-perimetric glaucoma.
2) Also to compare efficacy of octopus perimetry over OCT retinal nerve fibre layer thickness analysis for screening glaucoma in our sample population.

### Method
This was a prospective observational comparative study done among glaucoma suspects attending the glaucoma clinic during the period from July 2016 to March 2017, in a tertiary eye care centre in Kerala. The sample size of 198 eyes were calculated. All selected patients underwent detailed history taking, visual acuity assessment, slit-lamp biomicroscopic examination, applanation tonometry, gonioscopy, pachymetry, dilated fundus examination with +90 D, Octopus perimetry and OCT RNFL thickness analysis. Diagnostic evaluation of different methods were assessed by sensitivity, specificity, positive predictive value, negative predictive value and accuracy. Agreement between two methods of diagnosis was analysed by Kappa coefficient.

### Results
Octopus polar analysis was having higher sensitivity and PPV than clinically detectable RNFL defects and OCT. But, these were statistically poorly agreeing (I< 0.1). On comparison with clinical findings, OCT RNFL thickness analysis was more specific in detecting early glaucoma, which was also with poor agreement (I<0.2). Thus OCT RNFL thickness analysis was found to be highly specific over Octopus polar analysis in diagnosing pre-perimetric glaucoma, but with lower sensitivity. Polar graph was found to be having very low sensitivity in picking up defects corresponding to OCT RNFL thickness maps.

### Conclusion
Polar analysis is poorly agreeing with OCT RNFL thickness analysis. Both are poorly correlating with clinical findings. Hence, clinical suspicion by an experienced surgeon is more important in diagnosing and monitoring glaucoma suspects. High PPV of Octopus polar analysis would possibly identify a subset of patients who need closer follow-up.
**Title of Paper**
Epidemiological profile, clinical features and therapeutic outcome of orbital infections at a tertiary eye care centre of Kerala- A descriptive study

**Purpose**
To evaluate the epidemiological profile of the patients with orbital infections, to analyse its clinical features and therapeutic outcome, with an emphasis on the variables like age gender, clinical presentation, source of infection, therapeutic outcome and its complications and to compare it with other studies in the literature

**Method**
A descriptive hospital based study was carried out to determine the demographics, aetiology, clinico radiological features and therapeutic outcome among patients who presented with orbital infections at a tertiary eye care centre in Kerala.
The duration of the study was one year
These patients underwent a detailed ocular examination to assess the visual acuity, color vision, pupillary reaction, ocular motility assessment and periocular area examination for any foci of infecton. Radiological findings were noted. Data was collected using a prepared proforma, clinical examination and collection of radiological investigation data. All data were coded and entered into Microsoft excel for analysis

**Results**
Out of 100 patients, males 53% females 47 %.
Age distribution 0-15years 31%, 16-35 years 18%, 36-60years 43%, >60 years7%

Preseptal celulitis 68%, Orbital cellulitis 14%, preseptal abscess 7% and a case of orbital apex syndrome.

Aetiology-sinusitis (80%) (2 cases of which were fungal), dacryoadenitis (10% )and dental infections (10%)

40% of patients with orbital cellulitis underwent surgery (one sinus surgery & 3 orbital decompression )and 60% were managed with intravenous antibiotics.

66% of patients with preseptal cellulitis had to undergo surgical curettage and drainage for the control of the disease.

Lid abscesses were surgically drained (80 % yielded gram positive cocci)

**Conclusion**
Patients were mostly aged between 35-60 years, sinusitis being the leading cause for postseptal cellulitis and localised infective foci for preseptal cellulitis.
Imaging was necessary to localise the source in postseptal cellulitis.
Early management with intravenous antibiotics and surgical measures in the presence of abscess formation was necessary.
**Title of Paper**: Atypical peripapillary uveal melanoma  

**Purpose**: To report a case of choroidal melanoma  

**Method**: A 65 year old male presented with headache, right eye pain and gradual progressive diminution of vision in the right eye of 3 months duration. On examination, visual acuity (RE)-6/18, (LE)-6/9. Intraocular pressure - normal. Fundus examination revealed a solid hyperpigmented mass involving the temporal disc margin with multiple exudative lesions surrounding the lesion and around the macula.

**Results**: B scan showed low internal tumour reflectivity & a dome shaped nodular lesion arising from the choroid was found. Fundus fluorescein angiography show intrinsic tumour circulation, extensive leakage with progressive fluorescence, late staining of the lesion and multiple pinpoint leaks at the level of retinal pigment epithelium.

**Conclusion**: Malignant melanomas of the uvea are frequently seen in the choroid & ciliary body in comparison to iris. Treatment in current scenario is conservative & should be tailored to individual patient's symptomatology.
### Title of Paper
FACTORS AFFECTING PUPILLARY SIZE AND DILATATION IN SUBJECTS WITH DIABETIC RETINOPATHY

### Purpose
To study changes in pupillary diameter in diabetic subjects with respect to the following factors:
1) stages of retinopathy
2) duration of diabetes
3) glycemic status

### Method
This is an observational study of 40 eyes of diabetic patients. Subjects are enquired for duration of diabetes. Subjects with previous ocular surgery, laser treatment and posterior synechiae were excluded. Pupillary diameter is measured before instilling mydriatic using opticians ruler. One drop of tropicamide (0.8%) + phenylephrine (5%) is instilled in both eyes. After 40 minutes, pupillary diameter was again measured. Fundus was examined and type of retinopathy noted. Blood investigation for glycemic status was sent. Pupillary diameter was compared between patients with different stages of retinopathy, duration of diabetes and glycemic status.

### Results
Mean age of subjects were 56.88 years. 10 were females and 10 were males. Mean duration of diabetes was 13.8 years. 25% of subjects had poor glycemic control and 75% had good glycemic control. Mean pupillary diameter before dilatation was 2.9 mm. Mean pupillary diameter after dilatation was 6.83 mm. Pupillary diameter was significantly reduced in subjects with longer duration of diabetes & poor glycemic control. Pupillary diameter also showed significant reduction as the severity of retinopathy increased. All subjects showed a pupillary diameter > 5 mm following dilatation.

### Conclusion
Diabetic pupil dilate poorly due to sympathetic dysfunction as a part of autonomic neuropathy in diabetes. Present study showed that pupillary diameter showed a significant inverse relationship with increasing duration of diabetes, severity of retinopathy and poor glycemic status.
**Title of Paper**
A RARE CASE OF ADULT ONSET BLEPHAROCALASIS WITH OPTIC DISC COLLATERALS.

**Purpose**
TO REPORT A CASE OF UNUSUAL PRESENTATION OF PTOSIS WHICH WAS FOUND TO BE BLEPHAROCALASIS AFTER WORKUP.

**Method**

**Results**
INVESTIGATION-CAROTID DOPPLER-WNL.NEOSTIGMINE TEST-NEGATIVE. THUS A DIAGNOSIS OF BLEPHAROCALASIS WAS MADE.

**Conclusion**
PATIENT ON FOLLOW UP,PLANNING BLEPHAROPLASY
Title of Paper: Role of Non Contact Infrared Meibography in the evaluation of meibomian glands

Purpose: To study the utility of Non Contact Infrared Meibography for the assessment of the morphology of meibomian glands.

Method: 100 patients who attended the Ophthalmology Outpatient department between the time period January 2017 and June 2017 who presented with symptoms and/or signs of blepharitis and dry eye were included in the study. Patient details and anterior segment examination findings specifically, anterior and posterior lid margins, meibomian gland orifices and corneal surface were noted. Tear film assessment was made using Tear Break Up Time (TBUT). Non contact Infrared meibography was done using Visucam 500 in the upper and lower lids in both eyes of all the patients and results evaluated using Meiboscale of Pult.

Results: Of the 100 subjects, 53% were males and 47% females. Majority (39%) of the patients were in the age group 61-70 years followed by 51-60 years (19%). Distortion of meibomian gland and gland dropout percentage increased with age and was more in males and in the lower lids. Meiboscale degree 4 was seen in patients with chronic blepharitis accounting to 16%. Meiboscale degree 3 was seen in majority (38%) of the patients followed by scale reading 2 (26%). 14% of the patients who presented with symptoms of dry eye but with normal TBUT belonged to degree 1.

Conclusion: Infrared meibography is a non-invasive in vivo study that facilitates the evaluation of meibomian glands over a greater surface area in a short duration with minimal discomfort. An understanding of the morphology of meibomian glands helps to increase our knowledge about meibomian gland-related diseases and provide helpful information for patient education.
<table>
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<tr>
<th>Title of Paper</th>
<th>An encounter with a worm in the anterior chamber</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>To present an interesting case of worm in the anterior chamber of eye in a 48 yr old female.</td>
</tr>
<tr>
<td>Method</td>
<td>48 year old female presented to ophthal OPD for hydroxy chloroquine toxicity check up for eye. O/E LE showed a worm in the anterior chamber which was non motile. Pupil was dilated due to application of atropine eyedrops from local hospital. BCVA was 6/36 in LE. Ocular movements, intraocular pressure fundoscopy, and ultrasound biomicroscopy (UBM) of both eyes were normal. After peribulbar block side port incision was made, pilocarpine and viscoelastic substance were put and worm was removed through the side port incision. The worm was put in saline 0.9% and was sent for the microbiological examination</td>
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<tr>
<td>Results</td>
<td>Morphological examination showed a white, cylindrical, thread-like worm, with both ends tapering. On microscopy, it had a translucent, smooth external cuticle and was devoid of any chitinous exoskeleton. Blunt rounded head end a and pointed tail end with two spicule-like structures were visible. The worm had a length of 9 mm and a breadth of 0.08 mm, which identified it as a growing adult male W. bancrofti. Postoperatively, the patient was given topical steroids, antibiotics, and systemic steroids.</td>
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<tr>
<td>Conclusion</td>
<td>An adult worm in the anterior chamber is apparently rare and can present even with a quiet eye. Surgical removal is essential. However, visual prognosis is good.</td>
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# ABSTRACT DETAILS: DS17-137

<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Comparison of Bleb Morphology in Early and Late Post-Operative Periods using Slit Lamp Biomicroscopy and Anterior Segment Optical Coherence Tomography</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To study early and late morphology of trabeculectomy bleb in slit lamp biomicroscopy and AS OCT and the changes that occur with time in the bleb. The purpose of the study is to evaluate the prognostic value of the early and late postoperative blebs for the long term outcome of trabeculectomy.</td>
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<tr>
<td><strong>Method</strong></td>
<td>Prospective observational case study Complete ophthalmological examination including 1) best corrected visual acuity, 2) assessment of intraocular pressure by applanation tonometry, 3) anterior segment examination with slit lamp biomicroscopy, 4) fundus examination, and glaucoma evaluation with OCT and HFA 30-2.</td>
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<tr>
<td><strong>Results</strong></td>
<td>20 eyes were evaluated with a follow up of more than one year. Mean age of the patients was 54 +/-9 years. Mean preoperative IOP was 26.4mmHg with a mean of 3.08 medications. Mean IOP at 6 months was 15.22mmHg with mean 0.44 medications. Mean bleb height decreased from 1.41 +/-0.38mm at one month to 1.22+/-0.22mm at 6 months to 1.17+/-0.19mm at one year. However the significance cannot be correlated at present due to inadequate sample size.</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>Changes in bleb morphology over time can be quantified using ASOCT. The posterior extent, total bleb height decreases over time.</td>
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Title of Paper: A RARE CASE OF SPONTANEOUS GLOBE RUPTURE AND PANOPHTHALMITIS IN A PATIENT WITH DENGUE HEMORRHAGIC FEVER

Purpose: To report a rare case of spontaneous globe rupture and panophthalmitis in a patient with dengue hemorrhagic fever

Method: 72 year old male had fever with thrombocytopenia, developed sudden onset of retroorbital pain, defective vision, forward bulging of left eye 4 days after developing fever. 3 days later developed sudden onset of bleeding from left eye and pain got relieved. No history of trauma. Dyslipidemia present, on medications. No significant past and family history. On examining left eye extraocular movements restricted, complete ptosis present, periorbital oedema, erythema, hemorrhagic chemosis present. Full thickness defect at limbus from 3-6O 'clock position. Altered blood came through it. Cornea hazy, altered size and shape. Anterior chamber collapsed. IOP low. Topical and systemic antibiotics given. Next day he developed exudates in anterior chamber, cornea sloughed off with extrusion of intra-ocular contents. Right eye normal.

Results: Blood investigations showed low platelet count 70,000, NS1 Ag " positive
MRI showed features of retinal detachment with vitreous hemorrhage (before globe rupture)

Conclusion: Even though many cases of ocular manifestations of dengue fever were reported, only a few cases of spontaneous globe rupture has been reported.
**Title of Paper**
Incidence and Risk Factors of Retinopathy of prematurity in a tertiary care center in northern Kerala.

**Purpose**
Retinopathy of prematurity is a vasoproliferative disorder of retina among premature low birth weight infants, leading to permanent visual loss. The objective of the study was to find out the incidence of Retinopathy of prematurity in preterm babies and to identify risk factors for its development.

**Method**
A retrospective study was conducted at neonatal intensive care unit (level 2) at ACME, Pariyaram medical college from June 2016 to June 2017. Premature babies were screened for Retinopathy of prematurity using indirect ophthalmoscope with 20 diopter lens. Maternal risk factors like diabetes, pregnancy induced hypertension, premature rupture of membranes, mode of delivery and antenatal intake of steroids were assessed. Neonatal risk factors assessed were gestational age, birth weight, APGAR score, respiratory distress syndrome, apnea, sepsis, heart disease, anemia, thrombocytopenia, intra ventricular hemorrhage, assisted ventilation, exposure to oxygen, necrotizing enterocolitis, blood transfusion, surfactants, hypoglycemia and polycythemia.

**Results**
Total of 249 preterm babies screened, 49 had Retinopathy of prematurity with 27 female and 22 male. The incidence of Retinopathy of prematurity in study group was around 20%. Among positive Retinopathy of prematurity babies 16 were in stage 1, 17 were in stage 2 and 7 were in stage 3 with plus disease. Babies with plus disease underwent laser treatment. The main risk factors associated with Retinopathy of prematurity were lower gestational age, lower birth weight, exposure to oxygen, Respiratory distress syndrome, apnea, sepsis, Patent ductus arteriosus, anemia, Intra ventricular hemorrhage and assisted ventilation.

**Conclusion**
Timely screening and prompt treatment are essential in the prevention of blindness in preterm babies. There is a need for the obstetricians, neonatologist and ophthalmologist to work in close co-operation to achieve this purpose.
# Title of Paper
Clinical correlates and Multimodal imaging analysis of Retinal Angiomatous Proliferation (RAP)

# Purpose
To evaluate the prevalence, clinico-demographic features & morphometric analysis of RAP

# Method
Retrospective clinical chart review study of 112 eyes with neovascular age related macular degeneration who underwent multimodal imaging Spectral domain optical coherence tomography (SD-OCT) Enhanced depth imaging (EDI), Fundus auto fluorescence (FAF), Indocyanine green angiography and Digital fundus angiography (ICGA & DFA) between June 2015 to Jan 2017

# Results
Fourteen eyes had features of RAP (prevalence:12.5%) with mean age of 72.1 years (+11.6) & equal sex ratio. Reticular pseudodrusen (78.5%), intraretinal fluid (IRF;78.5%) & hyperreflective PED (45.5%) were most consistent features on SD-OCT. Focal hot spot with late leakage on ICGA was illustrated in all eyes (100%), with presence of feeder vessel documented in 10 of 14 eyes (71%). Simultaneous eye-tracked SD-OCT with ICGA demonstrated RPE erosion corresponding to the point of leak in all eyes (100%)

# Conclusion
RAP represents an important variant of neovascular AMD (12.5% of cases) with distinctive features including reticular pseudodrusen, IRF, RPE erosion & focal hotspot with late leakage on ICGA
Title of Paper: RISK FACTORS OF DIABETIC RETINOPATHY AMONG PERSONS WITH DIABETES MELLITUS IN THE AGE GROUP OF 20-60 YEARS ATTENDING TERTIARY EYE CARE CENTER IN KERALA

Purpose: To evaluate the risk factors of diabetic retinopathy in patients with diabetes mellitus in the age group of 20-60 years.

Method: Hospital based cross sectional study was done in patients with Diabetes mellitus in the age group of 20-60 years. Those with cataract, glaucoma and previous surgeries are excluded. Questionnaire was used to obtain details regarding various systemic factors, family history, dietary habits, physical activity and addictions. Dilated fundus evaluation with indirect ophthalmoscopy was done to assess presence of Diabetic retinopathy and to grade according to ETDRS classification. Laboratory values including hemoglobin, HbA1C, Urine microalbumin levels, Serum cholesterol and RFT are obtained from previous records. Data entered in Excel sheet for analysis.

Results: Total 100 subjects were studied. Diabetic retinopathy was diagnosed in 47 patients. 15 with mild NPDR, 16 moderate NPDR, 8 severe NPDR, 5 PDR and 3 with ADED. Among patients with DR 20 were males. Duration of diabetes >10 years has got statistically significant association with DR (P value <0.05, odds ratio 8.145). Insulin use and HbA1C >7% has significant positive association (odds ratio 5.43 and 2.42 respectively; P value <0.05). Smoking is significant risk factor (odds ratio 9.1; P value 0.01).

No significant association was found with gender, Hypertension, dyslipidemia, Chronic kidney disease, CAD, microalbuminuria, family history of DR, BMI, dietary habits or physical activity.

Conclusion: Among factors studied duration of diabetes >10 years and habit of smoking has got significant association with DR and are risk factors for development of retinopathy. Insulin use and HbA1C >7% indicating poor glycemic control are also risk factors for DR. Other factors studied doesn't have significant association with DR.
<table>
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<tr>
<th>Title of Paper</th>
<th>Ocular biometry to screen angle closure patients attending a glaucoma camp</th>
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<tr>
<td>Purpose</td>
<td>To evaluate measurable biometric parameters like axial length, anterior chamber depth, lens thickness, lens axial factor and relative lens position of participants who attended a glaucoma camp.</td>
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<tr>
<td>Method</td>
<td>A total of 125 participants in the age group of 21-90 years attended a glaucoma camp in the month of March 2017. All participants underwent a thorough clinical examination which included intraocular pressure measurement, gonioscopy, anterior segments evaluation and fundus examination. Ocular biometric parameters like axial length, anterior chamber depth, lens thickness, lens axial factor and relative lens position were evaluated. Data analysis was carried out using Statistical Package for Social Science (SPSS, V10.5).</td>
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<tr>
<td>Results</td>
<td>Axial length was comparatively less in angle closure (22.2 mm) participants when compared to open angles (24.15 mm) and normal (22.99 mm) participants. Thickness of lens in angle closure participants (4.31) was significantly more than in open angles (3.71) and normal (3.85) participants. Anterior chamber depth was significantly low in angle closure participants (2.56) when compared to open angles (3.65) and normal (3.38). Lens was detected to be anteriorly placed in angle closure compared to open angles.</td>
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<tr>
<td>Conclusion</td>
<td>Angle closure participants in this study seem to be associated with shallow anterior chamber, thicker crystalline lens, anteriorly placed lens and shorter axial length compared to open angles and normal participants.</td>
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<td><strong>Title of Paper</strong></td>
<td>Awareness of glaucoma in people attending an ophthalmic camp</td>
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<td><strong>Purpose</strong></td>
<td>Glaucoma is the Silent thief of sight. Individuals need to aware of the condition glaucoma in order to diagnose the condition early. This study was conducted to assess the awareness of glaucoma among people attending a glaucoma camp.</td>
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<tr>
<td><strong>Method</strong></td>
<td>A descriptive questionnaire based study was conducted among 125 participants in the age group of 21-90 years. Written informed consent was taken from these participants. Data on demographics and awareness of glaucoma were collected through face to face interview using a pretested structured questionnaire. Data was analyzed using Microsoft excel, descriptive statistics and chi-square test.</td>
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<td><strong>Results</strong></td>
<td>Among 125 participants 51 were females and 74 were males. 79.2% of the respondents have finished secondary level of education followed by 15.2% were graduates and 5.6% were illiterates. 9.6% of participants have a positive family history of glaucoma. 29.6% respondents did not know glaucoma causes blindness and 32% of the respondents do not know glaucoma increase with age. Very few respondents (59.2%) knew the various treatment options available for glaucoma. Only 52.8% respondents have undergone ocular examination. Majority of the respondents (60.8%) have obtained knowledge of glaucoma through mass media. Hospital based awareness is only 24%.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Awareness and knowledge of glaucoma is poor and a focused community health education campaign will raise awareness and impart adequate knowledge of glaucoma. Ophthalmologists should make use of use of every opportunity to convey information of glaucoma to patients.</td>
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# Multiple unilateral retinal artery macroaneurysms following vein occlusion: A 10 year follow-up

<p>| Title of Paper | Multiple unilateral retinal artery macroaneurysms following vein occlusion: A 10 year follow-up |
| Purpose | To report a case of unilateral multiple retinal artery macroaneurysm following retinal vein occlusion |
| Method | A 52/F presented with defective vision in OS of 3 days duration. BCVA was 6/24 with presence of intraretinal and submacular hemorrhage with retinal artery macroaneurysm (RAM) confirmed on FFA. She refused treatment and came back after 10 years with defective vision in OS of 2 months duration. BCVA was CF2M with extensive hard exudates at posterior pole, extending beyond arcades. SD-OCT revealed vitreomacular traction with intraretinal cystoids and increase in CMT to 512µm. Widefield DFA showed presence of extensive RAMs with significant retinal ischemia and tortuous veins. The patient was advised PRP with intravitreal steroids, and is yet to follow-up. |
| Results | Patient was documented to have multiple widespread retinal artery macroaneurysms in the eye post retinal vein occlusion. She was lost to follow up 10 years post the vein occlusion and presented with extensive exudation in the retina due to the leaking macroaneurysms. |
| Conclusion | Literature review of RAM documents occurrence of single MA in 86% and double MA in 14% of cases, with maximum reported being three. Our case report is unique since for the first time in literature, we illustrate occurrence of widespread RAMs following retinal vein occlusion over a long follow-up. |</p>
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>OCULAR MELANOMA OF LEFT EYE WITH EXTRA SCLERAL EXTENSION MANAGED WITH LID SPARING ORBITAL EXENTERATION AND RADIOTHERAPY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Orbital exenteration is a mutilating procedure with long process of wound healing. Eye lid sparing exenteration, results in early healing and has good cosmetic outcomes. This study highlights the results and advantages of eyelid-sparing orbital exenteration for ocular melanoma with extra scleral extension.</td>
</tr>
<tr>
<td>Method</td>
<td>A 40 year old female presented with blurring of vision left eye for six months with eye pain and unilateral headache. A blackish lobulated mass from 1 o’clock to 5 o’clock position from limbus with an ill-defined lateral extent was seen. Cornea was hazy, AC was shallow, iris pattern lost with neovascularisation, fixed nonreacting pupil with high IOP and vision HM+. B Scan showed well defined lobulated hyper-echoic lesion involving all layers of posterior and left lateral wall of globe with endophytic extension to vitreous. MRI showed heterogeneous intraocular mass with mild extraocular infiltration. Histopathology showed features of malignant melanoma.</td>
</tr>
<tr>
<td>Results</td>
<td>Lid sparing exenteration was done followed by radiotherapy. Patient experienced rapid post operative recovery. Patient have a healthy socket with no metastasis and recurrence with one year followup.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Long term prognosis of uveal melanoma is poor with 50% mortality. Malignant tumors of orbit often require exenteration, a morbid surgery with long process of wound healing. Advantages of eyelid-sparing method is rapid healing allowing early fitting of prosthesis, thus reducing morbidity and gratifying cosmetic results.</td>
</tr>
</tbody>
</table>
**Title of Paper**
Accommodation and convergence in subjects with non proliferative diabetic retinopathy

**Purpose**
Among diabetics, fluctuations in blood sugar values have known to change the refractive index of lens. However, studies concerning accommodation and convergence with severity of retinopathy, duration of diabetes are a few in literature. So, in our study, we look for any correlation of accommodation and convergence with age, gender, duration, glycemic control, severity of diabetic retinopathy, maculopathy.

**Method**
This is an observational study done in 15 diabetic patients of age more than 40 years. Subjects were enquired on duration of diabetes, their near point of accommodation, near point of convergence were calculated with RAF ruler, amplitude of accommodation was calculated. Subjects also underwent dilated fundus examination to grade retinopathy according to ETDRS classification. Recent blood sugar values were also collected. Statistical analysis was done with SPSS.

**Results**
Total of 15 cases were taken (9 males and 6 females), of which 46.7% belonged to mild NPDR, 26.7% moderate NPDR, 26.7% severe NPDR. 86.7% were without maculopathy, rest 13.3% with maculopathy. Mean age was 53, mean duration: 6.4 years, mean FBS value obtained as 146.67. Average NPA, NPC, accommodation amplitude were 24.73, 18, 4.5 respectively. On analysis, we obtained statistically significant relations of NPA, NPC, AA with age, duration. However, no significant relation was obtained with these parameters and severity of retinopathy, presence of maculopathy.

**Conclusion**
Fluctuations in NPA, NPC, AA occurs with age, duration of diabetes and blood sugar levels.
Changes in corneal haze after accelerated corneal collagen crosslinking in keratoconus.

To assess the changes in corneal haze after accelerated corneal collagen crosslinking

A retrospective observational study assessing the demographical factors, best corrected visual acuity, astigmatism, maximum keratometry values and corneal densitometry obtained from Scheimplug imaging (Wavelight Oculyzer II) at pre op, post procedure 1 month, 6 months and 1 year respectively among keratoconus patients undergoing corneal collagen crosslinking from May 2014 to June 2016.

40 eyes of 32 patients were included. Mean age was 20.7 years (+/- 4.9). Mean corneal densitometry pre CXL was 34.37 (+/-8.34), post procedure 1 month and 6 month values were 52.32(+/-22.35) and 50.04(+/-22.42) which showed a steady decline. At post CXL 1 year this value was 36.7(+/-55.4). There is a statistically significant correlation between change in Kmax(+0.53) and change in densitometry(+17.6) at 1 month post CXL (p = 0.007) and also between change in astigmatism(+0.58) and change in densitometry(+2.34) at 1 year post CXL (p = 0.015).

Corneal haze significantly increases post CXL in the immediate post CXL period but shows a steady decline thereafter and attains almost pre CXL baseline value at 1 year.
<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>&quot;Clinical profile of Normal tension glaucoma (NTG) in a tertiary care centre&quot;</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>To study the clinical profile and prevalence of NTG in a tertiary care centre</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A prospective cross sectional study was done on 178 suspects of glaucoma in our OPD from October '15-March '17 during which 48 patients were diagnosed as NTG. A detailed history with ocular, fundus examinations, applanation tonometry, gonioscopy and automated perimetry were done.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Out of 48 NTG patients males were 28 (58.3%) and females 20 (41.6%), with maximum patients in the age group of 50-59 years. 12 NTG patients had a family H/O POAG. Mean diurnal IOP in NTG eyes was 14-14.9 mm Hg (27%) with positive diurnal variation in 58.3% and CD ratio of 0.6 - 0.7 and 82 eyes had visual field defects. Peripapillary atrophy and superior arcuate scotoma were the most common findings.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>NTG changes the definition of glaucoma and necessitates the importance of early diagnosis and management which will prevent the patients from further damage that it can cause.</td>
</tr>
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</table>
# Title of Paper
**EFFECT OF ND:YAG CAPSULOTOMY ON IOP AND ANALYSIS OF COMPLICATIONS POST PROCEDURE**

## Purpose
To evaluate the IOP changes and complications following ND: YAG capsulotomy

## Method
An analytical observational study was done in the tertiary care centre from October 15 " March 17 during which 100 patients were included in the study. Visual acuity, intraocular pressure and slit lamp examination were done to the patients having PCO and were advised ND: YAG laser, subsequently. Routine ophthalmological examination was performed on day 1, 2 weeks and 6 weeks after laser in all the patients.

## Results
Increased IOP is seen in at the end of 1 hour and at the end of 2 weeks in 17 and 8 cases, respectively. Complications noted are raised IOP in 8 cases followed by intraocular lens pitting in 6 cases and cystoid macular edema in 2 cases.

## Conclusion
The IOP change or rise after ND:YAG laser capsulotomy is not significant in the acute 2 weeks period. Though not significant it is the most common complication noted followed by intraocular lens pitting in our study.
# Title of Paper
A case report on stickler syndrome

## Purpose
Primary juvenile onset glaucoma is a rare, potentially blinding disease occurring due to trabeculodysgenesis. In Stickler syndrome, defects in type II or type XI collagen are commonly associated with craniofacial anomalies, hearing loss, hypermobile joints vitreoretinal abnormalities and trabeculodysgenesis leading to glaucoma.

## Method
A 14 year old myopic boy who is diagnosed to have stickler syndrome came with sudden onset of diminution of vision in RE. His initial NCT was re 14.3/le 23.3 mm hg. On examination a diagnosis of fresh retinal detachment in re and radial lattice in le was made for which he underwent TPPV+EL+SOI in re and laser barrage in le. At 1 week his AT was re46/le26 mmHg. After detailed evaluation a diagnosis of RE secondary OAG and LE primary juvenile onset glaucoma with maximal antiglaucoma medication in re and prostaglandin analogue in le.

## Results
Due to persistent high IOP in re the patient underwent oil tap followed by trabeculectomy. After 3 months post op due to persistent high IOP he underwent silicon oil release. Due to uncontrolled IOP (32 mmHg) patient underwent re ahmed valve surgery. Now post operative period of 1 week, his condition is stable.

## Conclusion
The idea of reporting this case is to become aware of stickler syndrome and its ocular associations. Regular monitoring with prompt intervention will improve the quality of life in these children.
<table>
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<tr>
<th>Title of Paper</th>
<th>Trabeculectomy with ologen versus mitomycin C &quot; A retrospective study</th>
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<tr>
<td>Purpose</td>
<td>to evaluate the long term outcome of trabeculectomy with the use of ologen versus mitomycin C.</td>
</tr>
<tr>
<td>Method</td>
<td>Retrospective review of trabeculectomy with ologen implant versus mitomycin C done on 168 eyes was evaluated. All the surgeries were performed by the same surgeon in the year 2014. Patients who had &lt;6 months of follow up after surgery were excluded. Demographic characteristics of the study population, visual acuity, intraocular pressure (IOP), glaucoma medications, bleb characteristics and early and late postoperative complications were recorded. Complete and qualified IOP control success, less than or equal to 15 and less than or equal to 18 mm Hg, was calculated with the Kaplan-Meier analysis.</td>
</tr>
<tr>
<td>Results</td>
<td>under evaluation</td>
</tr>
<tr>
<td>Conclusion</td>
<td>under evaluation</td>
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</table>
Title of Paper: Technique and Safety of Eye Drop Instillation in Patients Requiring Topical Medications: Hospital Based Study

Purpose: To evaluate the technique and safety of eye drop instillation in patients who had used eye drops in the past.

Method: Cross sectional observational study. Study was conducted in the outpatient clinic of a tertiary eye care centre in Kerala. 300 patients who had previous experience with eye drops were recruited for the study. The awareness of eye drop instillation technique was assessed in detail by giving a questionnaire to all patients which included their educational status, prior awareness regarding eye drop instillation technique, eyelid closure, punctal occlusion and safety measures which they are following. All of them were instructed to demonstrate the technique they follow, which was observed by two trained optometry residents.

Results: Of the study population, 107 (35.6%) patients were instilling the drops correctly but eyelid closure and punctal occlusion were not adequate. 51 (17%) patients followed proper drop instillation and eyelid closure. 14 (4.6%) patients followed proper eye drop instillation technique which includes correct instillation, eyelid closure and punctal occlusion. Instillation technique was already taught to 40 patients at the time of recruitment into the study and 14 (35%) of them followed correct technique. Among study population, 174 (58%) patients were graduates and 12 (6.89%) of them followed proper technique. Regarding the safety, 233 (77.7%) patients were instilling the drops without direct ocular contact.

Conclusion: In spite of high educational background and prior training, majority of patients were following wrong technique. This highlights the need for demonstration of correct technique at the time of prescribing medications and re-evaluation and repeat demonstration of technique at follow up visits until the patient learns correct technique.
**Title of Paper**  
Topical anaesthesia for penetrating trabeculectomy

**Purpose**  
To evaluate the efficacy and clinical practicability of topical anesthesia in comparison with peribulbar anesthesia for penetrating trabeculectomy.

**Method**  
The prospective single-surgeon clinical interventional trial included 30 consecutive patients, who were randomly distributed into a topical anaesthesia group and a peribulbar anaesthesia group. In the topical anaesthesia group, patients received preoperatively proparacaine 0.5% eye drops and intracameral lidocaine (1%). The patients of the peribulbar group received 5 ml bupivacaine (0.75%) and lignocaine (2%) along with hyaluronidase was injected into the peribulbar space. To assess intraoperative pain, each patient was asked immediately after surgery to quantitate his/her pain using a 10-point pain rating scale.

**Results**  
underevaluation

**Conclusion**  
underevaluation
<table>
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<th>Title of Paper</th>
<th>Prognostic indicators of traumatic open globe injuries in paediatric population in tertiary care centre</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>To determine the prognostic indicators of visual outcome in children with traumatic open globe injury and to determine demographic characteristics.</td>
</tr>
<tr>
<td>Method</td>
<td>Study design is retrospective chart analysis. Paediatric population of those children presenting to Little Flower Hospital, Angamaly with traumatic open globe injury who underwent surgical repair for the same was studied from January 2010 to October 2016 with follow-up ranging from 1-6 years. Information retrieved from patients' charts. Mode of injury, visual acuity at presentation, type of open globe injury, zone of injury, grade of injury, surgical interventions were studied and how these affected the outcome were studied. Around 200 patients (male and female). Data was entered in Excel spreadsheet and significant prognostic factors were studied.</td>
</tr>
<tr>
<td>Results</td>
<td>Around 200 patients were studied. Open globe injuries in children was found more in males than females. Most common mode of injury was stick followed by pencil. Grade 4 injury was found to have the worst prognosis. All zone 3 injuries were found to have worse prognosis. Most of open globe injuries with zone 1 injury had good prognosis. Grade 1 injury had good prognosis.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Traumatic open globe injury in paediatric population was seen more in holiday season. Most of the patients who underwent surgical care were found to have good prognosis.</td>
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</table>
**Title of Paper**  
OCULAR MANIFESTATIONS IN TUBEROUS SCLEROSIS COMPLEX - A CASE REPORT

**Purpose**  
TO STUDY THE RETINAL CHANGES IN TUBEROUS SCLEROSIS COMPLEX

**Method**  
Here we report the case of a 7 year old boy with history of epilepsy, developmental delay who presented with complaints of reduced vision in both eyes and abnormal head posture. On examination he had adenoma sebaceum, shagreen patches over the back, subungual nodules.

**Results**  
On ophthalmological examination, left divergent squint, refractive error (simple hypermetropia), fundus examination showed grade 2 papilloedema both eyes with achromatic patch on nasal side of optic disc of right eye. MRI brain showed multiple subcortical tubers in bilateral fronto-parietal lobes

**Conclusion**  
Early diagnosis of TSC is necessary to improve the quality of life. Clinical diagnosis complementing with DNA testing allows precise genetic counselling, which is important.
## Title of Paper

RARE PRESENTATION FOLLOWING BLUNT TRAUMA TO EYE

## Purpose

to report the case of an uncommon manifestation of blunt trauma to eye

## Method

55 year old male patient presented with history of head injury, sustained blunt trauma to right eye two months back following which patient had loss of vision of same eye.

## Results

On examination right eye: vision - no perception of light, total hyphaema, a firm, non tender swelling measuring 1x1cm on temporal aspect 1cm from limbus (?lens) with scleral thinning and prominent vessels in adjacent area. IOP was 8mmHg. Ultrasound reported vitreous haemorrhage, total retinal detachment and lens not visualised. Left eye normal with vision 6/9. Neurological evaluation normal. Differential diagnosis considered were scleral tear, foreign body granuloma, lens displacement, staphyloma

## Conclusion

Abnormal ocular findings in blunt trauma may pose as a challenge to treating physician.
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<th><strong>Title of Paper</strong></th>
<th>EYE STROKE- AN USUAL SUSPECT</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>TO REPORT A CASE OF BRANCH RETINAL ARTERY OCCLUSION WITH MACULAR EDEMA.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>57 YEAR OLD MALE PRESENTED WITH SUDDEN ONSET OF LOSS OF VISION. O/E VA IN RIGHT EYE WAS CF@2M, ANTERIOR SEGMENT SHOWED RAPD IN RIGHT EYE AND FUNDUS SHOWED A PALE RETINA ALONG THE INFEROTEMPORAL VASCULAR ARCADE ASSOCIATED WITH DIFFUSE MACULAR EDEMA.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>ALL LAB INVESTIGATION WAS NORMAL. OCT SHOWED HUGE MACULAR EDEMA</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>BRANCH RETINAL ARTERY OCCLUSION CAN OCCUR IN HEALTHY PATIENTS WITHOUT ANY SYSTEMIC AND OCULAR DISORDER, DESPITE N EXTENSILE EVALUATION.</td>
</tr>
</tbody>
</table>
**Title of Paper**  
CLINICAL PROFILE OF MACULAR AND PERIPAPILLARY POLYPOIDAL CHOROIDAL VASCULOPATHY IN INDIAN EYES AND VISUAL OUTCOME AFTER TREATMENT

**Purpose**  
To present the demographic, clinical, OCT and indocyanine green angiography (ICGA) features of Macular and peripapillary polypoidal choroidal vasculopathy (PCV) in Indian eyes and visual outcome after different treatment strategies.

**Method**  
Forty three eyes of thirty eight patients with PCV underwent complete ocular examination, OCT and ICGA. Treatment was advised for patients with macular involvement and progressive loss of visual acuity. Demographic, clinical, OCT, ICGA features, central foveal thickness, subfoveal choroidal thickness and BCVA gain after different treatment strategies were analyzed. 43 eyes underwent treatment which included Monotherapy with anti-VEGF (strategy-1, n=22), Anti-VEGF till fovea is dry followed by combined therapy with PDT & Anti-VEGF followed by anti VEGF PRN (strategy-2, n=11) and 10 eyes received treatment strategy-3 (Primary combined therapy with PDT & Anti-VEGF followed by Anti-VEGF PRN). Mean follow up was done for 12 months.

**Results**  
88.3% and 11.7% participants had macular and peripapillary PCV respectively. While 55.3% of macular PCV were male, peripapillary PCV showed a female preponderance (60%). Subretinal fluid was seen in 89.6% and 80% participants of macular and peripapillary PCV respectively. Though Peaked PED & RPE duplication (31.6% each) was common OCT finding in macular PCV, no typical OCT finding was seen in eyes with peripapillary PCV. 50% of macular PCV had polyps while the rest had predominantly BVN. In comparison 80% of peripapillary PCV had polyps while the rest 20% had predominantly BVN. Subgroup analysis following various treatment strategies showed better visual outcome in treatment strategy-2 for Macular PCV.

**Conclusion**  
Macular PCV is more common than peripapillary. 50% of Macular and 80% of peripapillary PCV had predominant polyps. A modified strategy involving initial Anti-VEGF till fovea is dry followed by combined therapy with PDT & Anti-VEGF followed by anti VEGF PRN was superior in terms of visual improvement, central retinal/choroidal thickness reduction in Macular PCV.
### Title of Paper
A RARE CASE OF OPTIC NERVE HEAD MELANOCYTOMA

### Purpose
POSTER PRESENTATION ON A CASE OF OPTIC NERVE HEAD MELANOCYTOMA

### Method
22 year old male from assam presented with complaints of swelling since 5 years of age, defective vision right eye for the past one year
O/E - Both eyes anterior segment within normal limits
pupil reactions normal
Fundus shows elevated pigmented lesion 2 DD size at the site of disc

### Results
Differential diagnosis are:
- Optic nerve melanocytoma
- Primary optic nerve melanoma
- Juxtapapillary choroidal melanoma
- Choroidal hemangioma
- Metastasis to optic nerve head
Investigations done:
- B scan - 2*2 mm size of optic nerve head mass with internal echoes of moderate to high intensity,
- OCT, FFA, HFA, MRI

### Conclusion
TREATMENT
Conservative management
Follow up
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<th>Title of Paper</th>
<th>how to perform topical trabeculectomy</th>
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<tbody>
<tr>
<td>Abstract</td>
<td>Trabeculectomy under augmented topical anesthesia provides adequate analgesia for acceptable patient and surgeon comfort with favorable outcomes. Preoperative instillation of 0.5% proparacaine solution 5 minutes before surgery and this was supplemented after draping and insertion of the lid speculum. Patients were asked to look down and a traction suture passing through partial thickness of the cornea was placed at the superior limbus using a 6-0 silk suture to position the eye so that the superior scleral surface was exposed. Limbus-based conjunctival flap was designed and standard trabeculectomy was done with the outer scleral flap measuring 4 x 4 mm on the surface and depth measuring one third to one half of the scleral thickness. Intracameral anesthetic solution (1.0% preservative-free lignocaine solution) was delivered after puncturing the anterior chamber. Full thickness inner window measuring 2 x 2 mm was designed at the anterior base of the scleral flap. Peripheral iridectomy was done and the scleral flap and conjunctiva both were closed using 10-0 nylon sutures.</td>
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</table>
# Title of Paper
Ahmed glaucoma valve: Surgical technique

## Abstract
The Ahmed glaucoma valve is commonly used in the treatment of recalcitrant glaucoma. Patients were given intravenous mannitol 2 days prior to surgery to reduce the corneal edema. Under peribulbar anesthesia, corneal traction suture is made with 8-0 vicryl. A fornix based conjunctival flap is created in the supero-temporal quadrant. Two vertical cuts on either side are given to expose the sclera. AGV was primed with balanced saline solution to check the valve mechanism. About 8.5-9 mm from the limbus, insert the Ahmed valve in the supero-temporal quadrant and it is sutured with 9-0 nylon sutures. Box sutures are also placed on either side of the tube with 9-0 nylon. Paracentesis is made and viscoelastic is injected into anterior chamber. The tube is trimmed at the desired level with the bevel facing the corneal endothelial side and then inserted through a needle track made with a 23-gauge needle about 2mm away from the limbus. The tube is checked whether it has entered the anterior chamber and it is not touching the cornea or iris. Anterior Chamber is formed with viscoelastic. Scleral patch/clear cornea graft is placed over the tube and sutured with 9-0 nylon sutures. the conjunctiva was sutured and apposed well.
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<tr>
<th>Title of Paper</th>
<th>PATTERN VEP IN GLAUCOMA</th>
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<tr>
<td>Purpose</td>
<td>To study the utility of PVEP across varying grades of glaucoma severity.</td>
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<tr>
<td>Method</td>
<td>This is a prospective study done at a tertiary centre during July 2015 - December 2016. Patients were categorized after a comprehensive ophthalmic evaluation into 3 groups named glaucoma suspects, early-moderate glaucoma and advanced glaucoma. They were compared with normal individuals. All patients underwent PVEP as per ISCEV guidelines using two different check sized stimuli (1 deg and 15 min) and the waveform responses were analysed. Comparison of quantitative variables between 2 groups by independent t test and multiple groups by ANOVA and post hoc test was done with p value &lt;0.05 significant. Their association was assessed by Pearson correlation.</td>
</tr>
<tr>
<td>Results</td>
<td>26 eyes in each group were analysed. P100 wave in PVEP showed a statistically significant latency prolongation (p=0.011) and amplitude reduction (p=0.015) to large check stimuli in advanced glaucoma. In early glaucoma, small check latency prolongation with a mean difference -7.73 was significant (p=0.017). In glaucoma suspects, P100 latency prolongation to both large and small checks was noted with a highly statistically significant mean difference of -6.72 (p=0.008) only to large checks. P100 latency abnormality correlated well with OCT- RNFL in high risk glaucoma suspects and HFA global indices in early glaucoma.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>PVEP is a useful adjunct to clinical assessment in glaucoma diagnosis. Differential response to large and small check size stimuli in PVEP helps to identify glaucoma suspects at risk of conversion.</td>
</tr>
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</table>
Title of Paper | Plexiform neurofibroma misdiagnosed as a persistent chalazion—a case report.
---|---
Purpose | To present a case of a patient with previously undiagnosed NF-1 presenting with upper eyelid plexiform neurofibroma as a persistent chalazion.
Method | 10 year old girl came to our department with one year history of swelling at lateral end of right upper eye lid. On examination right upper eye lid showed two mobile firm lumps underneath the skin extending from middle of the lid to the lateral orbital rim. Lisch nodules noted bilaterally. General physical examination revealed Café-au-lait spots.
Results | MRI scan revealed mildly enhancing irregular T1WI hypointense and T2WI hyperintense lesion in right orbit extending into right upper eyelid.
Conclusion | Number of different benign, premalignant and malignant conditions may clinically masquerade as chalazion. Plexiform neurofibroma needs to be borne in mind as a possible differential diagnosis of a chronic orbital or lid swelling.
**Title of Paper**  
A case report on persistent hyperplastic primary vitreous.

**Purpose**  
To report a case of persistent hyperplastic primary vitreous.

**Method**  
A 7 year old girl was brought to the OPD with defective vision of both eyes since birth. She also had delayed milestones of development. Visual acuity RE -1/60, LE - 6/24 no improvement with glasses. On examination - Right eye anterior segment showed clear lens with posterior lenticous & fibrous attachment to the posterior capsule. Fundus showed fibrovascular stalk between optic disc and posterior capsule.

**Results**  
PHPV (RE)

**Conclusion**  
PHPV results from arrested development & failed regression of fetal vascular system with consequent proliferation of associated embryonic connective tissue. Unilateral PHPV is associated with poor outcomes due to difficulty in long term management of progressive anisometric amblyopia.
Title of Paper | POSTER  
| Lebers miliary aneurysm  

Purpose | To present a case of Lebers miliary aneurysm detected on routine examination in a male patient who came to the OPD for change of glasses  

Method | 56 year old male patient came to the OPD for change of glasses with no h/o any systemic illness. On examination, BCVA was 6/6 in both eyes. Anterior segment within normal limits. Fundus examination showed exudates temporal to macula and inferiorly in the right eye. Left eye fundus examination was normal.  

Results | Blood investigations within normal limits. Carotid doppler normal. Fundus fluorescein angiography showed multiple vessels with aneurysmal dilatation and intraretinal shunts in right eye. Left eye was normal. OCT- Mild retinal thickening temporal to macula in right eye  

Conclusion | Localised microaneurysms do not effect vision and can be managed conservatively
**Title of Paper**  
Utility of diagnostic endoscopy in evaluating the posterior segment of the eye for definitive prognostication.

**Purpose**  
To evaluate the efficacy of video-endoscopy in prognosticating the visual outcome in eyes with media opacity obstructing fundus visualization.

**Method**  
41 eyes of 41 patients who received diagnostic ophthalmic endoscopy procedure were included. All eyes also underwent conventional B- scan. Optic disc findings, anatomical integrity of retina and condition of the retinal blood vessels were recorded. The principal outcome was the determination of whether the results of the video endoscopic study led to the establishment of change in the management plan: accordingly they were classified considered either " contributory " • or " non-contributory " •.

**Results**  
The video endoscopy findings were found " contributory " • in 39 of 41 eyes. The remaining 2 eyes had vitreous haemorrhage; endoscopic vitrectomy was done in them to detect an inoperable retinal detachment in one eye. Based on the endoscopic findings 16 of 41 (39%) eyes underwent further complicated procedures. This included 7 (17%) patients with corneal procedure and 9 (21.9 %) patients with endoscopic vitreo-retinal procedures. In 25 of 41 (61.1%) eyes further complicated procedures could be avoided

**Conclusion**  
Videoendoscopy is a minimally invasive effective diagnostic tool to assess status of retina and optic nerve where other conventional procedure cannot be utilized before a complicated anterior segment reconstruction is planned.
Title of Paper: Anti- Vascular Endothelial Growth Factor in Treatment of Choroidal Osteoma not associated with CNVM.

Purpose: Successful treatment of subretinal fluid in Choroidal Osteoma not associated with CNVM with anti VEGF.

Method: A 52 years female with recent diminution of vision associated with a well defined depigmented lesion in the macula in right eye. She had past history of surgery for pituitary microadenoma and breast lump excision. Based on spectral domain OCT, FFA, ICG, and B-scan, a diagnosis of right eye choroidal osteoma was made. Subretinal fluid (SRF) was noted in the absence of obvious CNV. The patient was given monthly intravitreal Ranibizumab injection over 3 months. Visual acuity (VA) was 20/80 pre-injection which dramatically improved to 20/20 after the injections without any additional treatment.

Results: We report an interesting case where subretinal fluid was noted in the absence of evident choroidal neovascularization in choroidal osteoma. Here intravitreal anti- VEGF effectively reduced the subretinal fluid and led to vision restoration.

Conclusion: Anti- Vascular Endothelial Growth Factor in Treatment of Choroidal Osteoma not associated with CNVM.
Title of Paper | SPECTRAL DOMAIN OCT IN PRE-PERIMETRIC GLAUCOMA
---|---
Purpose | To determine the diagnostic ability of the parameters in Glaucoma Module Premium Edition (GMPE) in Spectral Domain OCT (SD-OCT) in early glaucoma detection
Method | We conducted a prospective study from December 2016 to May 2017 in a tertiary eye care centre. 50 eyes with preperimetric glaucoma were enrolled which included 26 high and 24 low risk suspects and compared with normals. All patients underwent OCT on Spectralis as per GMPE software by a single examiner. Retinal nerve fiber layer thickness (RNFLT), Bruchs membrane opening based Minimum Rim Width (MRW), Macular Retinal and Ganglion cell thickness parameters were analysed after derivation of mean +/-SD, area under the receiver operating characteristic (AUROC) curve, sensitivities and specificities for each parameter using SPSS software.
Results | 50% of the high risk glaucoma suspects had correlating OCT RNFL changes while 58% (29/50 eyes) showed a hemifield retinal thickness asymmetry in the posterior pole. MRW was noted to be the most statistical significant parameter in discriminating normals from glaucoma suspects. The best AUROC for RNFLT (0.741) was for inferotemporal meridian followed by total RNFLT (0.651) and in MRW, 0.847 for inferonasal thickness followed by 0.808 for total MRW. Moderate specificity and sensitivity in early glaucoma detection was noted for retinal average thickness hemifield difference of >1.5 and GCL hemifield difference of >0.5 respectively.
Conclusion | SD-OCT with the newer neuroretinal rim based bruchs membrane opening - minimum rim width and macular parameters are likely to facilitate early glaucoma detection.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>The clinical profile of newly diagnosed diabetic retinopathy cases and their visual outcome after one year</th>
</tr>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To stage and describe the clinical profile of newly diagnosed diabetic retinopathy cases and their visual outcome after one year</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A prospective study conducted among the newly diagnosed diabetic retinopathy cases of Govt Medical College from June2016.a Comprehensive examination and biochemical evaluation was done and patients were staged according to ICDRS classification.the people were investigated and treated accordingly and followed up every 3,6and 12 months.the visual outcome and stage of retinopathy is measured and the results are analysed.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Majority of newly diagnosed retinopathy cases presented with mild-moderate degrees of retinopathy the clinical profile of the patients were also described.those with mild-moderate retinopathy has better metabolic control and better visual outcome than those with severe retinopathy on detection.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Majority of newly diagnosed diabetic retinopathy cases presented with mild-moderate degrees of retinopathy.the visual outcome after one year depended on initial vision.stage of retinopathy,metabolic parameters and the treatment taken.</td>
</tr>
</tbody>
</table>
**Title of Paper**
"THE ANGEL DROPS" FOR THE DEVIL DISEASE
"JUST SOME DROPS TO CURE CANCER!!!"

**Purpose**
Efficacy of topical interferon IFN-a2b drops in the treatment of Ocular Surface Squamous Neoplasia (OSSN)

**Method**
A 65 year old man, came with "growth" in both eyes-3 years duration.
On examination, multiple fleshy vascular conjunctival masses encroaching onto cornea with keratinisation.
Impression cytology showed neoplastic cells with diagnosis of OSSN.
Immunotherapy with topical IFN-a2b drops (3 million IU/mL) applied four times daily.

**Results**
By 4 months, there was complete resolution in both eyes confirmed by cytological study.
The IFN-a2b is low-molecular weight glycoprotein, produced by leukocytes, has antineoplastic and antiviral properties. It works through a number of mechanisms, like slowing the cellular growth cycle and promoting the body's immune and antitumor response.
Advantages - Treats multi focal and microscopic disease throughout ocular surface.
Disadvantages - Longer duration of treatment.

**Conclusion**
Topical interferon drops is very effective, convenient and safe in the treatment of OSSN, especially in bilateral and multifocal lesions. Limbal stem cell toxicity is minimum. Also avoids surgery and reduces recurrence.
### Title of Paper
Effect of residual astigmatism following cataract surgery on near vision

### Purpose
To determine the preoperative and surgically induced astigmatism in patients undergoing phacoemulsification cataract surgery.
To determine the amount and type of astigmatism 6 weeks and 3 months after cataract surgery.
To determine the effect of uncorrected astigmatism on distant and near vision both subjectively and objectively.

### Method
Study site: Comtrust Eye Hospital, Calicut
Study population: patients posted for cataract surgery in the hospital between December 2015 and June 2016.
Study design: prospective study.
Sample size: 300
Inclusion criteria: all patients undergoing phacoemulsification cataract surgery with monofocal IOL.
Exclusion criteria: paediatric and traumatic cataract, more than 1.5D of preoperative astigmatism, Patients with pre-existing corneal or retinal pathologies, Intra operative or postoperative vision affecting complications.

Preoperative keratometry values noted using IOL master. All underwent clear corneal temporal incision phacoemulsification.
Sphere corrected visual acuity and keratometry noted at 6 weeks and 3 months postoperatively.
SIA calculated.
Modified NEI questionnaire administered at 3 months postoperatively to assess the quality of near vision.

### Results
Mean age of presentation was 65.24.
50% had with-the-rule astigmatism (WTR) followed by against-the-rule (ATR) (34%), neutral (NTR) and oblique (OBL) were only 13 and 3% respectively.
Mean SIA 0.43.
70% had better than 6/9 sphere corrected vision.
39% had better than N12 sphere corrected vision.
100% of astigmatically neutral patients had sphere corrected vision of 6/6.
Whereas only 45% of WTR and 23% of ATR had sphere corrected 6/6 vision.
None of the Patients with no astigmatism had better than N10 sphere corrected vision. 16% of WTR and 67% of ATR had N10 or better sphere corrected near vision.

### Conclusion
ATR up to 1D gave good near vision acuity and fairly good distant vision.
WTR astigmatism more than 0.5D caused a drop in distant vision acuity with no added benefit in near vision.
Overall patient satisfaction was better and hours of spectacle use was less for ATR astigmatism.
**Title of Paper**
EFFECT OF INTRAOPERATIVE TRYPANBLUE ON LENS EPITHELIAL CELLS - HISTOMORPHOLOGICAL AND QUANTITATIVE ANALYSIS

**Purpose**
To analyze the histomorphological and quantitative effects of trypan blue on Lens epithelial cells (LECs) on direct exposure by staining the internal surface of the anterior lens capsule during SICS.

**Method**
Analytical Cross sectional case control study. Anterior capsule specimens of 12 Patients undergoing small incision cataract surgery at Department of Ophthalmology, Govt Medical College Hospital, Thrissur were studied. Two specimens of anterior capsule from the same eye form the case and control. Control specimen (sample A) is removed first, after the routine external staining with trypan blue for 10 seconds. Case specimen (sample B) is obtained after direct contact of trypan blue to the internal surface (lens epithelial cells) of the anterior capsule for 1 minute. Histomorphologic examination and quantitative analysis of both specimens done.

**Results**
Qualitative data analysis by EPI INFO SOFTWARE. Intactness of LECs throughout the length was statistically significant in the control group (P=0.000027). Partial and complete detachment of LECs, degeneration of LECs and nuclear smudging were significantly higher in the case group. Qualitative analysis of the basement membrane showed significant difference in thickness of basement membrane between the groups (P=0.00005). Basement membrane splitting was not statistically significant. Quantitative data analysed using independent t test. There was a statistically significant decrease in cell density in sample B with p value less than 0.05.

**Conclusion**
Our study demonstrated that direct staining of the internal surface of anterior capsule with trypan blue affected LECs and the basement membrane. There was reduction in cell density, irreversible degeneration of LECs and basement membrane oedema. This can possibly reduce incidence of Posterior capsular opacification (PCO) postoperatively.
### Title of Paper
The pachychoroid spectrum-a peep into the choroid

### Purpose
Pachychoroid diseases benefit from a multimodal imaging, to avoid misdiagnosis like AMD, pattern dystrophy, punctate. Central serous chorioretinopathy, pachychoroid pigment epitheliopathy, pachychoroid neovascularopathy, and Polypoidal choroidal vasculopathy are included in pachychoroid spectrum. Here various features of pachychoroid spectrum were studied to avoid any misdiagnosis.

### Method
This poster shows three representative cases in pachychoroid spectrum namely Central serous chorioretinopathy, pachychoroid pigment epitheliopathy and Polypoidal choroidal vasculopathy. One case each of the spectrum is represented in the study. Their clinical picture, Fluorescein angiogram, ICG and EDI OCT pictures were studied. Subfoveal choroidal thickness and choroidal vascular hyperpermeability were evaluated.

### Results
- **Imaging in CSC**: Indocyanine green angiography shows dilated choroidal vessels. Areas where FA shows leakage at the level of RPE, ICGA shows choroidal hyperpermeability. OCT shows increased choroidal thickness and localizes dilated vessels on ICGA to the outer choroid.
- **In PPE OCT imaging**: Shows RPE hyperplasia and sub-RPE drusen-like deposits. Small serous PEDs are present. OCT shows a thick choroid directly beneath the clinically apparent RPE change. Indocyanine green angiography reveals choroidal hyperpermeability.
- **In PCV, examination of the choroids reveals features of pachychoroid**: Thicker choroids than AMD, pachyvessels with inner choroid attenuation.

### Conclusion
The pachychoroid phenotype features: 1) reduced fundus tessellation 2) increased choroidal thickness 3) pathological dilation of outer choroidal vessels 4) loss of choriocapillaris. Retina specialists should be aware of pachychoroid diseases and to evaluate the choroid carefully using multimodal imaging in atypical AMD.
Title of Paper
VISUAL OUTCOMES AFTER SURGICAL CORRECTION OF INTERMITTENT EXOTROPIA

Purpose
To analyse the visual outcomes, ocular alignment and sensory status after surgical correction of intermittent exotropia in patients between 2-18 years of age
To analyse the factors associated with poor sensory outcome.

Method
A retrospective study was performed in 80 patients, 2-18 years of age, who underwent surgery for intermittent exotropia (IXT) and had at least 1 year follow up. The patient’s age, corneal reflex test, PBCT, grade of IXT (New Castle Score), refractive status , binocularity, anatomical location of the muscle from limbus, the amount of recession/ resection done and repeat surgeries performed was assessed. Surgical outcomes were grouped as success, recurrence or overcorrection according to the angle of deviation at postoperative 1 year. The final outcome at 1 year were analysed using univariate and multivariate regression analysis.

Results
Of the 80 patients, 83.37% had success, 14.63% had recurrence and 2.00% had overcorrection. Binocularity improved in 34.87% , remained same in 63.26% and deteriorated in 1.87% of cases. Surgery done at less than 4 years of age had better binocular outcomes (p=0.03). Age below 3 years, reduced distance from limbus and pre-operative New Castle score below 3 was associated with poor alignment at 1 year. There was no significant change in refractive error following IXT surgery at 1 year follow up (p=0.81). The percentage of re-operations was low (8.36%).

Conclusion
IXT is associated with satisfactory alignment and sensory outcomes following surgical correction. Age below 3 years at the time of surgery, reduced distance from the limbus and pre-operative New Castle score below 3 were associated with less predictable outcomes in terms of alignment and binocular status.
Title of Paper: A descriptive study on macular changes in hypertensive retinopathy as evidenced by Optical coherence tomography (OCT)

Purpose: To describe the macular changes in hypertensive retinopathy, using OCT and to find correlation between clinical grade of hypertensive retinopathy and OCT findings.

Method: Hypertensive patients attending OPD are subjected to refraction, blood pressure recording, slit lamp and dilated fundus examination using 90D and indirect ophthalmoscopy. Diabetic patients are excluded by history and blood sugar measurement. Those found to have hypertensive retinopathy are taken into study after excluding macular diseases by history and fundus examination using 90D and indirect ophthalmoscopy. Clinical grading of hypertensive retinopathy will be done as by Wong and Mitchell's classification into mild, moderate and malignant. OCT macula is done using CirrusTM HD 7 OCT with spectral domain technology and findings recorded.

Results: 62 eyes of 31 patients were studied. The morphological findings in macular OCT in patients with hypertensive retinopathy clinically were hyper reflective dots in vitreous (19.4%), ERM (4.8%), PVD (12.9%), ILM folds (8.1%), ILM disruption (21%), sub ILM cystoid spaces (17.7%), RNFL Hyperreflectivity (45.2%), hyper reflective echoes in inner layers (67.7%), hyper reflective echoes in outer layers (24.2%), ISOS disruption (35.5%), RPE disruption (19.4%), intraretinal fluid (22.6%) and subretinal fluid (21%). 66.1% were having mild retinopathy, 17.7% moderate and 16.1% malignant retinopathy clinically.

Conclusion: We have been successful in describing characteristic morphological patterns in OCT in macula of patients with hypertensive retinopathy. These typical OCT findings are seen more frequently with higher grades of retinopathy.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>choroidal thickness and myopia: a case control study</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To determine the distribution of choroidal thickness in young adult myopes &amp; compare the results with emmetropes using EDI spectral domain SD-OCT</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>76 patients of age 18-31 years attending OPD at Little Flower Hospital for a duration of 1 year were included in this study. All the patients had normal anterior segment findings. 38 patients were controls and had a spherical equivalent (SE) of +1D to +1D. cases consisted of 38 patients with SE &gt; 6D. All the patients underwent routine examination with visual acuity, axial length recorded. All the patient then underwent an EDI-SDOCT scan. The choroidal thickness was calculated at 3 locations: subfoveal, 3mm nasal and 3mm temporal by a single operation. The results of cases and controls were then compared</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>In the Emmetropic group 67 eyes of 38 patients and in the myopic group 38 patients whose 68 eyes were included in this study. The mean subfoveal choroidal thickness in emmetropic group was 374.89 ± 2.74 μm and 244.63 ± 22.5 μm in the Myopic group. The mean subfoveal choroidal thickness was significantly thicker in the emmetropic group. The mean CT was thinnest nasally in both Myopic and Emmetropic group and whereas thickest 3mm temporally in Myopic group as compared to subfoveal in the emmetropic group. Presence of peripapillary atrophy and lacquer cracks showed good correlation with predicting subfoveal Ct thinning.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>The choroidal thickness is thinnest nasally and thickest temporally in highly myopic eyes. This is different to the choroidal thickness profile seen in Emmetropic eyes. Presence of lacquer cracks and peripapillary atrophy could predict the presence of choroidal thinning.</td>
</tr>
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</table>
# Title of Paper
Management of Congenital Severe Microphthalmos with Microblepharon

## Purpose
To evaluate the role of cosmetic rehabilitation by staged prosthetic-surgical management in congenital microphthalmos (with no visual potential) with microblepharon.

## Method
This is a retrospective, interventional case series of 6 consecutive patients with severe microphthalmos with no visual potential. All patients underwent expansion of the eyelids and fornices with serial conformers, followed by enucleation by the myoconjunctival technique with silicone orbital implant to achieve orbital expansion. Socket expansion was continued with serial customized conformers until the horizontal palpebral fissure and the vertical eyelid height matched with the contralateral eye. A customized ocular prosthesis was then fitted.

## Results
Eyelid and socket expansion with excellent static cosmesis and good prosthetic motility was achieved in all the patients.

## Conclusion
Staged prosthetic-surgical management provides excellent static and dynamic cosmesis in patients with congenital severe microphthalmos with microblepharon.
<table>
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<tr>
<th>Title of Paper</th>
<th>A MANIFESTATION OF KERATITIS CAUSED BY SPECIES OF ASPERGILLUS FLAVUS</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>A case of central corneal ulcer caused by Aspergillus flavus.</td>
</tr>
<tr>
<td>Method</td>
<td>A 55 year old male presented with pain, redness, watering, and diminision of vision right eye since 15 days with history of trauma to RE with bagasse. Ocular examination showed lid edema, circumciliary congestion, central corneal ulcer with well-defined margins, thick hypopyon, Visual Acuity CF at 1 metres. Routine haematological investigations followed by Grams stain, KOH stain, and culture swab were sent for HPE examination.</td>
</tr>
<tr>
<td>Results</td>
<td>HPE report showed Aspergillus Flavus. Patient was treated with anti-fungal agents and BCVA was restored to 6/60.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Mycotic keratitis is one of the causes of corneal blindness, prognosis of which is worse compared to bacterial keratitis. Owing to the variable pathogenecity and antifungal susceptibility, speciation of Aspergillus strain causing keratomycosis is significant.</td>
</tr>
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</table>
# ABSTRACT DETAILS : DS17-181

<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Threat to vision turns threat to life and vice versa</th>
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</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To study the progress of a case with bilateral orbital cellulitis</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A case of orbital cellulitis, spread from a scalp wound post RTA, turns cavernous sinus thrombosis, septicemia with bilateral proptosis, facial palsy. A bilateral tarsorhaphy was done for the exposure keratitis developed corneal ulcer progressed to panophthalmitis for which left eye was eviscerated. Right eye developed exposure keratitis, decemetocoele, salvaged with tarsorhaphy, BCL, patient responded to change of iv antibiotics presently ambulant with 6/12 vision in right eye</td>
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<tr>
<td><strong>Results</strong></td>
<td>An untreated infective focus on the head or face may progress to orbital cellulitis. Once it progresses to cavernous sinus thrombosis, it should be considered a medical emergency. Extreme care should be taken to protect the eyes as such patients may have associated facial palsy.</td>
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<td><strong>Conclusion</strong></td>
<td>An untreated infective focus on the head or face may progress to orbital cellulitis. Once it progresses to cavernous sinus thrombosis, it should be considered a medical emergency. Extreme care should be taken to protect the eyes as such patients may have associated facial palsy.</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>Cyanoacrylate Glue Emboloization of Eyelid Arteriovenous Malformation</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To evaluate the efficacy of cyanoacrylate glue embolization of the eyelid arteriovenous malformation and cryoprobe-assisted excision biopsy.</td>
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<tr>
<td><strong>Method</strong></td>
<td>Patients with a clinical diagnosis of eyelid arteriovenous malformation were managed by cyanoacrylate glue embolization of the tumor followed by cryoprobe-assisted excision biopsy. All patients were operated by the same surgeon.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>There were 12 patients over a period of 6 months. The mean age of patients was 31 years (range: 15-44 years). The presenting symptoms were growing eyelid mass (n=8, 67%) and recurrent bleeding (n=4, 33%). All patients had a single surgery, with minimal bleeding on-table. There was no recurrence at the final follow-up. All patients had a satisfactory cosmetic outcome.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Cyanoacrylate glue embolization of the eyelid arteriovenous malformation provides an effective and safe method with minimal bleed to excise the otherwise highly vascular tumor.</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>ISOLATED OCCULOMOTOR NERVE PALSY SECONDARY TO PITUITARY APOPLEXY</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To report a rare case of isolated occulomotor nerve palsy due to pituitary apoplexy</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A male patient with no comorbidities presented with acute onset diffuse, progressive bilateral headache since 2 days, associated with acute onset drooping of right upper eyelid since 1 day, on Ocular examination was found to have BCVA of 6/12 RE not improving with pinhole and 6/6 LE with 15O right exotropia and restriction of adduction, levoelevation and levodepression, complete ptosis and mid-dilated pupil with absent direct and indirect light reflexes and senile immature cataract in RE and no signs of raised intracranial tension in fundus examination of RE</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>MRI BRAIN confirmed multiple hyperintense areas within enlarged pituitary gland adenoma. Tumour excised via endoscopic transnasal-transsphenoidal approach. Gross specimen showed hemorrhagic areas within specimen and HPR confirmed pituitary adenoma with extensive areas of hemorrhagic necrosis. Uneventful immediate Post-operative period with improvement in ptosis and extraocular movements in 2 weeks and complete recovery in 6 weeks post-op</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Isolated occulomotor nerve involvement in pituitary tumour apoplexy is a rare complication where patient can have signs of complete palsy with or without other CN involvement and also be associated with pituitary endocrine deficiencies which needs further management and most cases are asymptomatic until acute vascular complications</td>
</tr>
<tr>
<td>Title of Paper</td>
<td>Post avastin endophthalmitis - an unsuspecting culprit!!</td>
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<tr>
<td>Abstract</td>
<td>since the rise in number of intravitreal injections, there has been an increase in the number of post injection endophthalmitis. Though majority of cases are infective, possibility of sterile inflammation has to be kept in mind. We hereby discuss the unusual causes of endophthalmitis especially inadvertent lens injury causing severe inflammation. We also discuss the correct technique and precautions to be kept in mind during intravitreal injections.</td>
</tr>
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</table>
**Title of Paper**
Retinoblastoma with Neovascular Glaucoma-Can These Eyes be Salvaged?

**Purpose**
To study the clinical features contributing to failure of eye salvage in retinoblastoma group E eyes with neovascular glaucoma (NVG)

**Method**
Comparative case series of 59 retinoblastoma group E eyes with NVG

**Results**
Primary enucleation was performed in 22 (37%). Of 37 (63%) eyes managed with intravenous chemotherapy (IVC), 21 (57%) needed secondary enucleation. Eyes that failed IVC were compared with those salvaged (n=16, 43%). Clinical risk factors predictive of secondary enucleation were age at diagnosis is >6 months (p=0.0554), duration of symptoms >10 weeks (p=0.0031), IOP>26 mm Hg (p=0.0453), buphthalmos (p=0.0135), and sterile orbital inflammation (p=0.0230). At a mean follow-up of 24 months, none of the patients developed extraocular extension or systemic metastasis.

**Conclusion**
Chance of eye salvage is better if the age at diagnosis is <6 months, duration of symptoms <10 weeks, IOP<26 mm Hg, and in the absence buphthalmos and sterile orbital inflammation. Recognizing these high-risk clinical features in retinoblastoma presenting with NVG can help categorize patients for treatment aimed at possible eye salvage.
Title of Paper | A rare case of bilateral complete loss of vision with disc edema and hemorrhages following hyperemesis gravidarum
---|---
Purpose | To report a case of bilateral complete loss of vision with disc edema and hemorrhages following hyperemesis gravidarum which recovered completely with high dose steroids
Method | 28yrs old female presented with sudden onset painless loss of vision both eyes for 2days. She was 19wks pregnant with history of hyperemesis gravidarum since 6wks of gestation. No history of flashes, diplopia, floaters, transient loss of vision or fever. On examination, vision was no PL in right, PL+ in left eye. Anterior segment was within normal limit. RAPD in right eye. IOP was normal. Fundus examination showed pale disc with blurred margins with superficial hemorrhages over disc superiorly and inferiorly and along superior and inferior arcades.
Results | A provisional diagnosis of immune mediated acute optic neuropathy was made. Differential diagnosis was Atypical Wernicke's encephalopathy. MRI brain was normal. Blood investigations showed serum potassium level - 2.7mEq/L. Other parameters were normal. Patient was treated with inj. methyl prednisolone 1g intravenously daily for 3days followed by tab. Prednisolone 40mg which tapered over 2weeks. Patient was also given thiamine and oral potassium supplements
Conclusion | Patient recovered her vision completely with 6/6 in both eyes within 3 days...
# Title of Paper
ETIOLOGICAL FACTORS AND MORPHOLOGICAL FEATURES OF CONGENITAL CATARACT IN KERALA

## Purpose
1. To study the etiological factors of congenital cataract with emphasis on preventable factors.
2. To analyse the distribution of morphological types and laterality of cataract among various etiological groups.
3. To evaluate whether there is a change in trend of etiological factors over years with implementation of current primary preventive strategies.

## Method
In a cross sectional observational study conducted in a tertiary care centre, 83 children with congenital cataract were included. Patient data was collected which included age at presentation, sex, mode of presentation, presence of family history and consanguinity, vaccination status of mother, history of antenatal infections or systemic illness in mother, drug intake during pregnancy, perinatal insults, associated ocular and systemic conditions, morphological type of cataract and relevant investigations. After evaluation the cases of congenital cataract were classified according to their etiology and proportion of cataract caused by antenatal infection was estimated.

## Results
Out of 83 children included in the study, 65 (78.3%) had bilateral cataract. Lamellar variant of zonular cataract was the most common morphological type of cataract observed (N=22, 26.5%). Etiology of cataract could be established only in 40 (48.2%) children. Among them, maternal infection was the major cause of cataract in 14 (16.87%) children followed by hereditary cataract in 11 (13.25%) children. Zonular cataract was the most common morphological form observed in cataracts associated with antenatal infection, metabolic and systemic condition and in the idiopathic group. In hereditary cataracts and cataracts associated with maternal hypothyroidism/drug intake the most common morphological form observed was total cataract.

## Conclusion
Even with implementation of current vaccination programme the number of congenital cataracts caused by antenatal infections have not reduced. This study serves to create an awareness among healthcare workers and policy-makers regarding the need for further strengthening of existing primary preventive strategies so as to reduce childhood blindness due to cataract.
<table>
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<tr>
<th><strong>Title of Paper</strong></th>
<th>&quot;Etiology and prognosis of lateral rectus palsy&quot; • &quot;A prospective study.&quot;</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>To understand the various etiologies of lateral rectus palsy and to assess the recovery.</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A prospective study was done on 23 patients with lateral rectus palsy, in our hospital from October 2015 to March 2017. Detailed history, ocular and fundus examination, extraocular movements, assessment of deviation, diplopia charting and binocular function tests, CT/MRI scan were done. The patients were followed up at 6 weeks, 3 and 6 months.</td>
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<tr>
<td><strong>Results</strong></td>
<td>Out of the 23 cases, all had esotropia - 100%, diplopia - 73.9%, abnormal head posture - 69.5%. The causes were raised intracranial tension - 43.4%, microvascular -26%, idiopathic - 17.39%. 73.9% recovered fully at the end of 6 months. 26% did not show the signs of recovery at 6 months.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>The leading causes of lateral rectus palsy were raised intracranial pressure and microvascular in our study. It may be the initial manifestation of a neurological disease. Hence it necessitates the need for thorough evaluation.</td>
</tr>
</tbody>
</table>
Title of Paper | Prevalence Of Dry Eye In Post Refractive Surgery Patients In A Hospital
---|---
Purpose | To study the prevalence of dry eye in post refractive surgery patients with both LASIK and PRK in a hospital.
Method | 60 patients recruited for refractive surgery in Comtrust Eye Hospital with defective vision were included in this study during June 2016 to May 2017. Patients with history of dry eye, trauma and ocular surgery were excluded. Patient on long term medication like antihistamine, beta blocker, anti depressant, diuretics were also not included. Preoperatively Schirmer 1, TBUT, Oxford grading of ocular surface were done and McMonnies questionnaire were analyzed. All these tests were repeated at one week, one month and six months post operatively.
Results | Before surgery Schirmer 1, TBUT and Oxford grading were normal. After six month 48 eyes showed abnormal Schirmer value. Preoperatively the mean value was 18+3.2 mm. It was 11.3mm at six months postoperatively. 42 eyes showed abnormal TBUT values at six month. At six months Oxford grading revealed minimal changes in 55 eyes, mild changes in 19 eyes and 42 normal eyes. Questionnaire analysis showed 34 pathological dry eyes, 38 marginal dry eyes and 44 normal eyes.
Conclusion | Study showed 41.4% dry eyes based on Schirmer 1 and 36.2% dry eyes based on TBUT. Oxford grading revealed 47.4% minimal dry eyes and 16.4% mild dry eyes. Dry is one of the commonest complication and cause of patient dissatisfaction after surgery.
### Title of Paper
The hitch with VKH

### Purpose
Presenting an interesting case of VKH with disc edema

### Method
A 67-year-old male came with c/o diminution of vision since 3 weeks. On examination anterior segment was within normal limits. Posterior segment showed exudative retinal detachment involving the macula with multiple small serous detachment. Patient was treated with tapering dose of oral steroids for one month with full recovery. After two weeks of stopping steroids patient presented with blurring of vision. On examination there was bilateral disc edema with exudative retinal detachment. It was treated with I/V steroids. After two weeks patient came with similar history along with bilateral disc edema and exudative RD and was started on immunosuppressive drugs.

### Results
FFA showed multiple punctate hyperfluorescent lesions with leakage in to sub-retinal space.

### Conclusion
The intention of this case report is to be aware of an atypical presentation of VKH
**Title of Paper**
Proportion and risk factors for development of posterior capsular opacification following small incision cataract surgery with intraocular lens implantation in senile cataract

**Purpose**
To estimate the proportion of PCO at 2 months, 6 months and 1 year in patients with Small Incision Cataract surgery (Manual/phacoemulsification) with Posterior Chamber Intraocular lens implantation at Govt. Medical College, Kottayam between 01-04-2016 and 31-07-2017. To find out the association between diabetes mellitus and development of PCO.

**Method**
- **Type of Study**: Prospective Study.
- **Period of Study**: 01-04-2016 to 31-07-2017
- **Location**: Department of ophthalmology, Govt Medical College, Kottayam.
- **Study Population**: Patients undergone Small Incision Cataract Surgery for senile cataract.
- **Sample Size**: 429.
- **Sampling Method**: Simple Random Sampling.
- **Inclusion criteria**: Patients with senile cataract undergoing uncomplicated surgery (Small Incision Cataract Surgery or Phacoemulsification) with PCIOL implantation.
- **Exclusion criteria**:
  - Patients younger than 50 yrs.
  - Patients with cataract other than senile cataract
  - Patients undergone previous intraocular surgeries
  - Patients with primary PCO detected during surgery.
  - Patients with significant corneal opacity with hinders the visibility and grading of PCO.

**Results**
Following 2 months SICS 37.74% patients did not develop PCO. 9.3%, 30.19% and 22.64% patients developed slight, mild and moderate PCO respectively. This value was increased to 18.87%, 37.73% and 28.30% after 6 months of duration.
In case of Phacoemulsification 29.03% patients didn’t develop PCO after 2 months. 22.58% and 48.39% patients developed slight and mild PCO respectively. The same value have got increased to 22.58% and 58.06%. Also, 6.45% patients developed moderate PCO.

**Conclusion**
Now with the advent of microsurgical procedures with operating microscope, better quality of intra-ocular lenses and recent advances in surgical technique, the complications of cataract surgery have been reduced significantly (including PCO). Though some patients developed PCO, it is evident that the requirement of treatment with YAG capsulotomy is very less.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>SICS- A Safe method for managing subluxated cataract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>Subluxated cataract poses great challenge for the surgeon as there is risk of grave complications such as nucleus drop, aphakia, vitreous disturbance etc. Phaco-emulsification, which is now standard modality of treatment for removing cataract, causes increases vitreous hydration, chamber instability and vitreous disturbance in subluxated cases. Manual SICS is less fluid dependent and consequently causes less hydration and vitreous loss in such cases. Also in supra hard cataracts, which we encounter quiet often in India, SICS is more safe option. This video shows few such cases and its appropriate management using SICS technique</td>
</tr>
<tr>
<td><strong>Title of Paper</strong></td>
<td>ROP SCREENING IN A MULTISPECIALITY SETUP-THE ROLE OF GENERAL OPHTHALMOLOGISTS</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>TO STUDY THE INCIDENCE, ASSOCIATION AND PROGRESSION OF RETINOPATHY OF PREMATURITY IN PRETERM BABIES AND THEIR FOLLOWUP</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>CAREFUL HISTORY TAKING AND OCULAR EXAMINATION INCLUDING INDIRECT OPHTHALMOSCOPY OF 56 PRETERM BABIES AT A TERTIARY CARE NEONATAL INTENSIVE CARE UNIT WAS DONE UNDER THE SUPERVISION OF A PAEDIATRICIAN. BASED ON THE STAGING OF ROP, TREATMENT WAS DECIDED. ASSOCIATED RISK FACTORS WERE NOTED. A VITREO-RETINAL CONSULTATION WAS TAKEN FOR ALL CASES REQUIRING TREATMENT. ALL THE PATIENTS WERE FOLLOWED UP AFTER 2 WEEKS TILL 2 MONTHS AND THEN TILL 3YRS.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>OUT OF THE 56 PRETERM BABIES SCREENED, 42 PATIENTS HAD RISK FACTORS LIKE HYPOXIA, SEPTICEMIA, JAUNDICE ETC. STAGE 3, ZONE ONE DISEASE WAS PRESENT IN 10 PATIENTS. TWO CHILDREN RECEIVED INTRAVITREAL ANTI-VEGF. PAN RETINAL PHOTOCOAUGULATION WAS DONE IN 20 CASES. 2 OF OUR BABIES DEVELOPED CATARACT WHICH WAS OPERATED. RETINAL DETACHMENT OR TRACTION WAS NOTED IN NONE OF OUR BABIES.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>ROP SCREENING CAN BE DONE ON A ROUTINE BASIS BY A GENERAL OPHTHALMOLOGIST AT A TERTIARY CARE SETUP. HOWEVER A CONSTANT MONITORING AS WELL AS CONSULTATION BY A VITREORETINAL SURGEON IN CASES WITH PROGRESSIVE DISEASE IS A MUST.</td>
</tr>
</tbody>
</table>
### Title of Paper
Acute Bilateral Angle Closure Glaucoma precipitated during de-addiction care

### Purpose
To report a case of bilateral acute narrow angle glaucoma during deaddiction treatment regimen which included topiramate

### Method
Bilateral acute narrow angle glaucoma is rare. A 33 year old man being treated for alcoholic de addiction in a psychiatric hospital came with acute blurring of vision. His VA was 4/60 in RE and 5/60 in LE. Anterior chamber was shallow in both eyes. RE showed minimal corneal haze and pupil was sluggish. IOP was 48mm Hg in RE and @20 mm of Hg in LE. Gonioscopy showed closed angles. His treatment details were not available & was admitted.

### Results
IV mannitol given, IOP measured after 1 hour showed IOP of 44 mm Hg in BE as. Antiglaucoma medications were started with acetazolamide 500 mg tablet orally. Next day, IOP came down to 30s in BE. Cornea was clear, but vision did not improve. Refraction showed myopia of _3.0D. On enquiry with his admitting doctor, history of taking Topiramate for 5 days before presentation was obtained. OCT & Bscan showed choroidal effusion & ciliary body oedema. 4 days after presentation his IOP came down to lower teens and after 6 days, VA improved to 6/6 and 6/6. Angles were open.

### Conclusion
A high index of suspicion in case of bilateral acute narrow angle glaucoma can avoid unnecessary intervention like peripheral iridotomy in case of drug induced glaucoma which occurs due to choroidal effusion and forward rotation of the iris-lens diaphragm.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Reversible night blindness</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To report on two interesting cases of adult onset night blindness</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>2 patients presented with decreased visual acuity and night blindness, over 6 months to 2 years, with associated gastrointestinal disorders. Clinical examination, ERG and serum vitamin assay were done.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Both patients had abnormal ERG, decreased serum Vitamin A and clinical gastrointestinal predisposing factors suggestive of Vitamin A deficiency. Both patients had drastic subjective as well as ERG amplitude improvement post Vitamin A supplementation.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Vitamin A deficiency is a rare but important reversible cause of night blindness. Gastrointestinal disorders must be ruled out in adult patients.</td>
</tr>
<tr>
<td>Title of Paper</td>
<td>Mobile Apps for Smart Ophthalmologists</td>
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<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>Abstract</td>
<td>Smartphones are ubiquitous now and almost everybody now has a mobile as powerful as a decent computer in their pocket.</td>
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<td></td>
<td>Apps are now available to check visual acuity, contrast sensitivity, color vision and more.</td>
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<td></td>
<td>Even advanced tests like Farnsworth Munsel 100 hue test and Optokinetic Nystagmus can be done.</td>
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<td></td>
<td>In addition to tests, calculations required by the doctor, like IOL power calculations, corrected IOP, glaucoma risk, transpositions, conversion between vision in metres/feet and logMAR can be done.</td>
</tr>
<tr>
<td></td>
<td>There are patient education and medication reminder apps too.</td>
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<td>Welcome to the world of smartphones.</td>
</tr>
</tbody>
</table>
Title of Paper - Analysis of major complications and outcomes during manual small incision cataract surgeries by postgraduate resident trainees in a tertiary eye care institute

Purpose - The aim of this study is to analyse the incidence and types of intra operative complications encountered during the supervised cataract surgery training for residents and to assess the final visual outcome.

Method - The medical case records of 154 eyes of 154 consecutive patients who underwent cataract surgery done by trainees in a tertiary eye care centre over a period of 20 months were analysed retrospectively. Eyes with any corneal and retinal pathologies, vitrectomised eyes, pseudoexfoliation, eyes detected to have zonular dialysis on table were excluded. Demographic details, grade of cataract, intraoperative incidence of complications like posterior capsular rent, zonular dialysis, preoperative and postoperative uncorrected and best corrected visual acuity (BCVA) were assessed. The operation notes and videos of cases with intraoperative complications recorded were analysed to critically identify step where complication occurred.

Results 120 eyes were analysed. Intraoperative complications occurred in 78 eyes. Of these 39.2% were males 39.2% were females. Grade of cataract with maximum frequency was Grade 3 Nuclear sclerosis (47.5%). The preoperative visual acuity was < 6/60 in 62.5%. Complication rates were significantly higher in eyes with higher grade of cataract (NS3). 19.2% had posterior capsular rent, 3.3% developed zonular dialysis 28.3% had premature entry and 1.7% had DM stripping. Incidence of PCR was found to occur most during Cortical Aspiration. Postoperatively, the number of patients having BCVA 6/6 was 74.2%. Average time taken was 1 hour and 40 minutes in surgeries where complications occurred.

Conclusion Having uniform standards of training which is supervised, good visual outcomes are ensured inspite of varied incidence of complications, irrespective of whether it is the trainee who performs surgery.
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>Iatrogenic Injuries during Tonometry, Gonioscopy and Iridotomy and how to prevent them</th>
</tr>
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<tbody>
<tr>
<td>Purpose</td>
<td>To study the iatrogenic injuries during tonometry, gonioscopy and iridotomy and learn how to prevent them</td>
</tr>
<tr>
<td>Method</td>
<td>Tonometry and gonioscopy are essential procedures for all glaucoma patients. But improper technique or poorly maintained instruments can cause injuries to the otherwise healthy subjects. We discuss the common iatrogenic injuries, the reason for the injury and tips to prevent them. We use tonometry day-in and day-out as part of regular evaluation for glaucoma in screening healthy patients. Schiotz tonometer has been gradually phased out in most eye hospitals and it was well known for causing corneal injury when used without care. Even the spirit used for sterilizing the tip will damage the cornea if not dried out completely.</td>
</tr>
<tr>
<td>Results</td>
<td>Gonioscopy can also cause corneal epithelial defects if there is a broken sharp edge on it, especially when it is a GM1M, GM2M or GM3M which all have to be rotated.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Therefore, new residents have to be taught the importance of proper handling of instruments and their correct usage, in addition to checking and maintaining the instruments before and after each use.</td>
</tr>
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</table>
**Title of Paper**
Calibration of Tonometers: GAT, Perkins, Schiotz, NCT, Tonopen

**Abstract**
Measuring Intra Ocular Pressure is essential for every visit of a glaucoma patient. There are various methods for measuring IOP, some methods more accurate than the rest.

But, if the machines are not calibrated, even the gold standard will give wrong measurements.

In this video, we demonstrate how to use and calibrate these IOP measuring devices.

We need to know when the instrument is out of calibration and know how to calibrate them.

With properly calibrated instruments, we can get correct and reliable values.
# Title of Paper
Taking Measurements in Ophthalmology

## Purpose
In many situations in ophthalmology, we need to measure and follow up the change in size of corneal ulcers, epithelial defects, conjunctival nevi, disc size, retinal lesions and other measurable parameters.

## Method
We did a literature search of the various methods to do measurements in ophthalmology including ulcer area, pupil size, hemorrhage size, blood vessel size, corneal thickness, AC depth.

## Results
There are various methods to measure in ophthalmology using various devices. We need to carefully do the measurements to ensure reliability. Good measurements are very helpful in diagnosis, prognosis and followup. Automated measuring techniques are helpful in faster and more accurate measurements.

## Conclusion
We need to be aware of the different techniques of measurement and use them properly for proper diagnosis, treatment and prognosis.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Demonstration of usage of Eye Handbook App</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>Eye Handbook is an allrounder app for eye testing and many other things required for ophthalmologists. In this video, we give a demonstration of the usage of this app for patient testing and doctor calculations. By the end of this video, you should be able to confidently use this app to its full potential. Once more people start using this app, we could make validating of this app easy.</td>
</tr>
<tr>
<td>Title of Paper</td>
<td>DRIL: A robust predictor of visual acuity in center involved diabetic macular edema</td>
</tr>
<tr>
<td>Purpose</td>
<td>To determine whether disorganization of retinal inner layers (DRIL) and other spectral-domain optical coherence tomography (SD-OCT) derived variables are predictors of visual acuity (VA) in eyes with center-involved diabetic macular edema.</td>
</tr>
<tr>
<td>Method</td>
<td>Retrospective study of 186 eyes of 177 patients at a tertiary referral eye center for retinal diseases. The medical records of all patients with DME from January 2012 to December 2015 were reviewed. The baseline center involving diabetic macular edema with at least 3 months of follow-up were included. Central subfield thickness (CSFT), foveal DRIL and disruption of outer retinal layers [external limiting membrane (ELM) &amp; ellipsoid zone (EZ)] were determined within the 1-mm central subfield. These morphological features on OCT were correlated with VA at baseline and follow-up visits.</td>
</tr>
<tr>
<td>Results</td>
<td>Mean age was 60.37 years and mean BCVA was 0.68 logMAR. DRIL was present in 51 patients, outer layer disruption in 35 patients and mean CSFT was 521.28 Âµm. BCVA at final visit was 0.60 logMAR with mean CSFT of 402.7 Âµm. Over follow-up of 13.45 months, mean number of injections were 2.89. Greater DRIL extent at baseline correlated with worse baseline VA. An increase in DRIL during follow-up was associated with VA worsening. Presence of DRIL and absence of EZ and ELM was associated with lower BCVA at third month and at final visit (p &lt; 0.001).</td>
</tr>
<tr>
<td>Conclusion</td>
<td>In the era of SD-OCT based management of center involved DME, DRIL is a robust, repeatable and non-invasive bio-marker of VA. This study suggests that specific OCT features apart from the most frequently documented CSFT, may have prognostic value in predicting the response in patients of DME.</td>
</tr>
</tbody>
</table>
Title of Paper: Outcomes of triangular 3-snip punctoplasty in acquired punctal stenosis

Purpose: To study the clinical profiles of acquired punctal stenosis and outcomes with triangular 3-snip punctoplasty.

Method: Retrospective chart review of all patients who underwent triangular 3-snip punctoplasty, over a period of one year was performed. Data retrieved include demographics, symptomatology, prior interventions and outcomes. A minimum follow-up of 6 months following punctoplasty was considered for analysis. Success was defined as resolution of symptoms.

Results: 43 eyes of 30 patients were studied. The mean age at presentations was 54 years. 19 out of 30 were female patients. Epiphora was the commonest presenting symptom noted in 95.3% (41/43) of the eyes. At a minimum follow-up of 6 months after triangular 3-snip procedure, complete resolution of symptoms was achieved in 62.79% (27/43) of eyes. Three out of 43 eyes (6.97%) failed to show any improvement secondary to lacrimal obstructions distal to the puncta. 6 out of 43 (13.15%) eyes showed punctal restenosis whereas 23.25% (10/43) of the eyes had functional epiphora post punctoplasty.

Conclusion: Although triangular 3-snip punctoplasty is an effective, safe and commonly done procedure for acquired punctal stenosis, a higher percentage of functional epiphora and punctal restenosis after the procedure should propel further investigations into developing a better treatment modality.
# ABSTRACT DETAILS : DS17-204

**Title of Paper**  
THE MASK BEHIND THE MASK

**Purpose**  
A 42 yr old lady with decreased vision in both eyes was detected to have both eyes Central Serous Retinopathy[CSR] with left eye Pigment Epithelial Detachment.

**Method**

**Results**  
On examination along with history of amenorrhea and recent weight gain she also had Cushingoid features . Hence endocrinology consultation was given and found to have increased cortisol levels. MRI brain revealed PituitaryMicroadenoma. 2 weeks post Pituitary Microadenoma excision, the cortisol was normal and CSR completely resolved in left eye and minimal Sensory Neural Detachment was present in right eye.

**Conclusion**  
This case highlights the importance that any increase in presence of endogenous or exogenous steroids can cause bilateral CSR and a thorough history and clinical examination gives a clue to the underlying cause.
# ABSTRACT DETAILS : DS17-205

<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>THE INTRUDER !</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To evaluate retrospectively the features, treatment and outcome of diffuse unilateral subacute neuroretinitis or DUSN</td>
</tr>
<tr>
<td>Method</td>
<td>38 year old male presented with defective vision and floaters in left eye for one week, anterior segment was normal except 2+ anterior vitreous cells in LE, pupil brisk BE, BCVA was 6/6(RE), 6/6P(LE). LE showed vitritis, edematous disc, peripapillary exudates, multiple retinitis lesions in posterior pole with macular edema and vasculitis. FFA showed hypofluorescence of lesions with later staining, disc capillaries showed leakage of dye. Advanced stage showed loss of pigment from RPE. All blood investigations were normal except positive IgG toxoplasma. Patient was initially treated with azithromycin and acyclovir, no improvement was seen and lesions increased. Later started on albendazole and prednisolone and the lesions got resolved</td>
</tr>
<tr>
<td>Results</td>
<td>Visibility of motile worm is the gold standard in diagnosis of diffuse unilateral subacute neuroretinitis or retinal wipe out syndrome. Appearance of sub retinal pigment epithelium serpiginous tract, peripheral retinal pigment epithelium hypopigmentation and good response to anthelmintics support the diagnosis. Toxocara canis, baylisascaris procyonis are some of the worms responsible. Their byproducts cause local retinal toxicity</td>
</tr>
<tr>
<td>Conclusion</td>
<td>This is a case of diagnostic dilemma. High index of suspicion of DUSN is needed when a patient presents with vitritis, papillitis and recurrent crops of retinitis lesions. The role of combination of laser treatment, systemic steroids and anthelmintics is proposed</td>
</tr>
</tbody>
</table>
### Title of Paper
THE BABY WITH A FIERCEFUL EYE!

### Purpose
TO EVALUATE RETROSPECTIVELY FEATURES, TREATMENT AND OUTCOME OF 'PERSISTENT TUNICA VASCULOSA LENTIS' IN A PRETERM INFANT

### Method
33 week old infant was born out of emergency LSCS (for PIH) as preterm at 32 weeks of gestation with birth weight 1.4 kg. Postnatally he needed resuscitation and further ventilation. His systemic examination was normal. On ocular examination, cornea was cloudy with bright red vascularisation present around 360 degree of pupillary margin in BE and anterior lens surface had numerous blood vessels. Fundus showed vascularisation till zone 2 with no plus or ROP. After weekly follow up with no surgical intervention, cornea became clear and vascularisation around pupillary margin reduced.

### Results
Persistence of tunica vasculosa lentis is mistaken for iris vascular engorgement suggesting plus disease and high risk prethreshold retinopathy of prematurity. Differentiation between these is critical for appropriate treatment. Tunica vasculosa lentis is an extensive capillary network, spreading over posterior and lateral surface of lens of eye. Usually it disappears shortly after birth. Persistent tunica vasculosa lentis is a congenital ocular anomaly due to failure of embryological primary vitreous and hyaloid vasculature to regress. Usually it is unilateral and first noticed in neonatal period. Diagnosis is confirmed by USG, CT or MRI in which a cone shaped retrolental density is seen.

### Conclusion
The case reported here is peculiar because of rare presentation. Persistent tunica vasculosa lentis is a form of persistent hyperplastic primary vitreous, associated with microphthalmos, cataract, blurred vision, squint, painful red eye, nystagmus, raised intraocular pressure with elongated ciliary process visible through dilated pupil.
**Title of Paper**  
A rare case of solitary retinal astrocytoma

**Purpose**  
To study the clinical features, complications, treatment and sequele of solitary retinal astrocytoma.

**Method**  
A case study of 42 year old male presented with hemi CRVO RE who is a newly detected diabetic and hypertensive on fundus examination showed inferior hemi CRVO with cystoid macular oedema with SRF and a white well circumscribed lesion with overlying retinal and choroidal atrophy and with calcified degeneration suggestive of solitary retinal astrocytoma. Patient was advised intra vitreal ranibizumab and follow up for retinal astrocytoma. Follow up fundus photographs were taken.

**Results**  
Follow up showed a decrease in the CME and SRF. Retinal astrocytoma remained status quo.

**Conclusion**  
Retinal astrocytoma are benign retinal neoplasia usually seen associated with tuberous sclerosis and neurofibromatosis. Diagnosis is clinical. Treatment is observation with exception of growing lesions where photo dynamic therapy is effective. Rare occasions show progressive growth and cause vitreous seeds, vitreous hemorrhage, and exudative RD which can stimulate retinal blastoma or choroidal melanoma.
**Title of Paper**  
A GRIM FACADE: BEHIND THE LIES OF A PSEUDOTUMOR

**Purpose**  
Presenting two cases, both of which were initially diagnosed as orbital pseudotumors. Purpose of this poster is to acknowledge the wide spectrum of the symptoms and anatomical and morphological diversity of a pseudotumor.

**Method**  
A 63 year old lady recently diagnosed as right Orbital Pesudotumor with secondary Glaucoma, presented with pain, redness and proptosis with restricted ocular motility in right eye since 3 months. She was started on systemic steroids. She improved symptomatically, only to revisit us with recurrence.  
The second, a 25 yr old female patient with complaints of headache and diplopia since 8 days, with no visual impairment, referred from outside as a diagnosed right orbital pseudotumor and was already on systemic steroids. On examination, she was found to have a subcutaneous lesion changing in shape, size and position.

**Results**  
Further investigation of the first case showed it to be a Right carotico cavernous fistula.  
The second case with a shape shifter in situ, turned out to be a Dirofilaria on exploration!

**Conclusion**  
Hence, even pseudotumors play masquerading games which need to be unveiled judiciously!
<table>
<thead>
<tr>
<th>Title of Paper</th>
<th>SEBACEOUS CARCINOMA SMACK DOWN</th>
</tr>
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<tbody>
<tr>
<td>Purpose</td>
<td>Hereby presenting two rare cases with nodular lid lesion. The purpose of this poster is to highlight the grimness of sebaceous carcinoma of eyelids, its systemic associations and its early and adequate management.</td>
</tr>
<tr>
<td>Method</td>
<td>First case, a 79 year old lady with left lower lid lesion with lid margin involvement, of 6 months duration. Second case, a 53 old gentleman with right upper eyelid nodular lesion involving lid margin, since 1 year. Both lesions were biopsied and sent for histopathological examination.</td>
</tr>
<tr>
<td>Results</td>
<td>Histopathological examination revealed poorly differentiated carcinoma favouring sebaceous carcinoma. For both the cases, we did a wide local excision followed by reconstruction of lid margin.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Sebaceous carcinoma is a rare, highly malignant, and potentially lethal tumor, which is commonly misdiagnosed as an inflammatory condition. Early and judicious treatment is important to smack down the tumour!</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>ATYPICAL PRESENTATION OF ADENOCAARCINOMA SIMULATING PRE SEPTAL CELLULITIS</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of adenocarcinoma which was misdiagnosed as pre septal cellulitis clinically and as lymphoma radiologically</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>66 yr old female with no other systemic comorbidities, presented with swelling left upper lid 2wks duration, associated with dull aching pain, redness over eyelid. Diagnosed as pre septal cellulitis from outside, was not responding to maximal antibiotics. O/E complete ptosis LE due to upperlid swelling of 5*3 cm, firm, smooth surface, regular margins, non tender. Skin over the swelling was erythematous with dialated veins. Retraction of the lower lid showed phisical eye. RE WNL. No LNE other system WNL.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Blood parameters were n/l except a high a ESR of 75. CT orbit with PNS was taken, reported lymphoma Left upper lid. FNAC was taken from the centre of the swelling and report came as adenocarcinoma.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Eye lid malignancies are often misdiagnosed. So a high clinical suspicion is to be maintained in similar cases. And the incidence of malignancy in a chronic degenerated eye has not been studied much. similar studies are to be undertaken</td>
</tr>
</tbody>
</table>
### Title of Paper
An Atypical Presentation of Dacryocystitis due to Rhinosporidiosis

### Purpose
To evaluate the clinical features, treatment and the outcome of the disease

### Method
26 year old male presented with chief complaints of swelling in the left eye near to the nose for 1 year duration which is increasing on blowing nose and and sneezing not associated with pain or redness, then patient was evaluated and asked to review if there is any pain or redness of the swelling after 4 months patient presented with pain and redness of the swelling associated with fever and patient was evaluated and diagnosed as acute dacrocystitis left eye

### Results
Otolaryngology opinion was sought and diagnostic nasal endoscopy findings were suggestive of rhinosporidiosis, CT scan also revealed findings suggestive of rhinosporidiosis, patient was started on systemic antibiotics and dapsone, patient improved clinically and symptomatically

### Conclusion
Rhinosporidiosis commonly seen in India compared to western countries, the presentation of this case was atypical compared, and its response to dapsone was suggestive of rhinosporidiosis
<table>
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<tr>
<th>Title of Paper</th>
<th>OCULAR HAVOC A TENNIS BALL CREATES IN A GAME OF CRICKET !!!</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>Case report of a concussive closed globe injury of the eye in a 19 year old male following blunt trauma.</td>
</tr>
<tr>
<td>Method</td>
<td>A prospective and descriptive case report based on data from clinical records, patient observation and analysis of diagnostic tests.</td>
</tr>
<tr>
<td>Results</td>
<td>19 year old boy presented with blunt trauma to right eye with tennis ball. His vision was CFCF with PR accurate in all quadrants NIP. Anterior segment showed stromal oedema, organized minimal hyphema, uveitis, sphincter and iris tears and posteriorly subluxated lens. Fundus showed sub-hyaloid haemorrhage with intraretinal oedema involving macula. He was started on IVMP, topical steroids and lubricating eye drops. 1 week after IVMP, vision improved to 3/60 NIP as the hyphema resolved. 3 weeks after IVMP vision was still 3/60 NIP only in down gaze, explained by the choroidal ruptures inferiorly and temporally with an underlying macular hole.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Presenting a case of traumatic macular hole with choroidal ruptures and retinal ischaemia caused by a blunt trauma with dramatic visual loss. The vision improved after systemic and oral steroids. Nevertheless, the inferior retinal ischaemia and disruption of IS/OS junction secondary to traumatic macular hole limited the overall visual gain.</td>
</tr>
</tbody>
</table>
**Title of Paper**
PREDICTORS OF RECURRENCE AFTER PRIMARY RHEGMATOGENOUS RETINAL DETACHMENT REPAIR

**Purpose**
To evaluate functional and anatomical outcomes in eyes with retinal redetachments (re-RD) after surgery for primary rhegmatogenous retinal detachment.

**Method**
Medical records of eyes undergone primary rhegmatogenous retinal detachment surgery between March, 2016 to February, 2017 (1 year) were retrospectively evaluated at a tertiary eye centre in Kerala. Minimum follow-up period was 6 months. Data included preoperative and postoperative clinical findings, best-corrected visual acuity, number of surgical procedures, and complication rates.

**Results**
Out of 135 eyes segmental buckle, buckle with vitrectomy and vitrectomy alone was done in 38, 71 and 26 eyes respectively as the primary surgery. 22 developed a recurrent RD (16.29%) out of which 15 eyes had primary inferior breaks and 16 eyes (72.72%) had only one recurrent RD (re-RD), whereas 6 eyes (27.27%) had more than 2 recurrences. Primary inferior break had risk of re-RD with relative risk ratio of 2.59 (CI of 1.13 * 5.96) (P = 0.024). Number of surgeries and presence of PVR were significantly correlated (p<0.001). Best-corrected visual acuity deteriorated with every additional re-RD (P<0.001).

**Conclusion**
Multiple recurrent RD is an infrequent complication after primary rhegmatogenous retinal detachment surgery. Presence of primary inferior break and proliferative vitreoretinopathy increase chances of multiple re-RDs. Final visual outcome reduces further with multiple re-RD surgeries.
<table>
<thead>
<tr>
<th><strong>Title of Paper</strong></th>
<th>Tips and tricks for budding V-R surgeons</th>
</tr>
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<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>As we all know vitreo-retinal surgeries are challenging surgeries with steep learning curves. This educational video is showing practical tips for budding VR surgeons to make the understand how to make simplify complex steps. Inducing posterior vitreous detachment, proper placement of ports, intraoperative visualisation tips, chromovitrectomy with various retinal dyes and careful instrument handling while a vitreoretinal surgery can make life of beginner lot easier.</td>
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<tr>
<td>Title of Paper</td>
<td>PREVALENCE AND PATTERN OF REFRACTIVE ERRORS AMONG SCHOOL CHILDREN IN KERALA: A POPULATION BASED CROSS SECTIONAL STUDY</td>
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<td>Purpose</td>
<td>To analyze the prevalence and patterns of refractive errors among school going children, 6-17 years of age in Kerala and to provide treatment. To analyze the cost effectiveness of the interventions.</td>
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<td>Method</td>
<td>In this population based cross sectional study, 1,20,000 children aged 6-17 years, from a single district in Kerala evaluated through school screening camps were included. Visual acuity, flash light examination were done in all cases. Orthoptic evaluation, subjective/autorefractio/cycloplegic refraction and dilated fundus examination were done in required cases. Data analysed for prevalence of refractive error, amblyopia, strabismus and other ocular pathology and represented as percentages and bar/pie charts. Subgroup analysis for type of refractive error and influence of age, sex, rural-urban location on the pattern of refractive error were analyzed using multiple regression analysis.</td>
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<tr>
<td>Results</td>
<td>Out of the 1,20,000 children screened, 1.2% had refractive errors requiring optical correction. Commonest refractive error was simple myopic astigmatism (82.43%), followed by simple myopia (10.81%) and compound myopic astigmatism (5.83%). Prevalence of amblyopia was 0.53%, strabismus was 0.26%. Multiple regression analysis showed a higher prevalence in urban areas when compared to rural areas (p=0.02), higher in males (p=0.04) and in high school children (p=0.04). The interventions were found to be cost effective.</td>
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<td>Conclusion</td>
<td>Kerala has a relatively high prevalence of refractive errors among school going children, with higher proportion of myopic astigmatism and myopia. Active screening with optical correction provides a cost effective model for tackling preventable blindness due to refractive errors and amblyopia in our State.</td>
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<tr>
<td><strong>Title of Paper</strong></td>
<td>Corneal Melting and perforation in severe Dengue fever</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To report a case of Dengue fever who had eye problems to start with and progressed to severe form of Dengue fever and went on to develop corneal melting, perforation and loss of eye</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>A 52 year old man was admitted in the ICU of a multispeciality hospital with high fever and vomiting and later lab work proved Dengue fever...He had history of redness and irritation to start with, but later his general condition deteriorated. He was a cardiac patient and diabetic. He was brought to OPD with complaints of not seeing with that eye and pain</td>
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<tr>
<td><strong>Results</strong></td>
<td>On examination, he had a totally melted cornea with no evidence of bacterial infection. He had NOPL. He was treated conservatively. After 2 days, he had to undergo evisceration due to extrusion completely of the ocular contents</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>Panophthalmitis due to Dengue fever is reported only once in literature. We report a case of complete corneal melting following Dengue fever.</td>
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**Title of Paper**  
Pterygium surgery with glue free sutureless limbal conjunctival autograft - a case series. "Cut and Paste -It works!"

**Purpose**  
Evaluation of the benefits of glue free sutureless conjunctival autograft in pterygium surgery with respect to the adherence of graft, post operative pain, cost of surgery and associated complications.

**Method**  
Patients with indication for pterygium excision were subjected to Pterygium surgery with glue free sutureless limbal conjunctival autograft adhered to sclera with autologous blood. Post operative pain was graded according to visual analogue scale once daily on the day of surgery, 1st post op day and at 1 week post op. The cost of surgery was calculated and compared with the cost of pterygium excision with sutured autograft. The operated eye was watched for graft adherence & complications on the 1st post op day, at 1 week post op, 1 month post op and 1 year post op.

**Results**  
Pain was mild on the day of surgery and 1st post op day in two patients. The remaining three patients had no pain on the day of surgery and complained of mild pain on the 1st post op day. None of them had pain at 1 week post op. There was no graft dislodgement or complication in any patient. Cost of surgery was less when compared to sutured autograft.

**Conclusion**  
Pterygium surgery with glue free sutureless limbal conjunctival autograft - using autologous blood is a simple and promising alternative to sutures/glue. It is economical, has better patient comfort, good graft adherence, saves surgery time and is not associated with significant complications. One can also avoid the possible complications of sutures and tissue adhesives.
### ABSTRACT DETAILS : DS17-218

<table>
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<th><strong>Title of Paper</strong></th>
<th>Role of Visual field index [VFI] in the progression of Glaucoma</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To Study usefulness of Visual Filed Index in detecting the progression of Glaucoma</td>
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<tr>
<td><strong>Method</strong></td>
<td>A non invasive hospital based descriptive study was done in a group of 93 patients with early to moderately advanced visual glaucomatous field loss at baseline. We studied the usefulness of Visual Field Index in detecting the progression of glaucoma using Humphrey Field Analyzer.</td>
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<tr>
<td><strong>Results</strong></td>
<td>[186 eyes] were included in the study One eye was anophthalmos and 2 eyes of 2 different had absolute glaucoma, hence were excluded. Based on the HODAPP's classification taking their mean deviation values into consideration, they were grouped into Group I [Glaucoma suspects-ocular hypertension, MD between +2 to -1 dB], Group II [Mild glaucoma, MD between -1 to -6 dB], Group III [Moderate glaucoma, MD between -6 and -12 dB], Group IV [Advanced glaucoma, MD between -12 and -20 dB] and Group V [End stage glaucoma, MD &lt;-20 dB]. The results were Glaucoma suspected [n=21], Mild [n=98], Moderate [n=34], Advanced [n=13] and End stage [n=15]. Mean VFI values among Glaucoma suspected [99.38%], Mild glaucoma [95.87%], Moderate glaucoma [82.12%], Advanced glaucoma [61%] and in End stage glaucoma [21%].</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>Visual Field Index [VFI] is a useful global index in judging the severity of the disease, representing the damage with a single number, except in the initial stages and extremely severe cases.</td>
</tr>
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</table>
Title of Paper | comparative study on steroid therapy vs non steroid therapy in lateral rectus palsy
---|---
Purpose | purpose of my study is to compare the prognosis of lateral rectus palsy patients treated with steroid therapy versus non steroid therapy
Method | 20 lateral rectus palsy patients due to microvascular causes appeared in opd of little flower hospital in the year 2016 - 2017 is taken for the study. one group of 10 patients are treated with systemic steroids and tapering dose of oral steroids. other group of 10 patients are not given steroids. esotropia present is assessed by prism measurements. patients are followed up at 2 week, 1 month and 3 months. Patients are classified into no recovery, partial recovery and full recovery. both groups are compared based on the recovery and the time taken for it.
Results | in our study its been seen that most of the patients treated with systemic steroids had full recovery as is with the group of patients with no steroid therapy. there is no significant difference between the final recovery of ocular movements and also the speed of recovery.
Conclusion | our study concludes that there is no additional benefit in giving systemic steroids to patients with lateral rectus palsy due to microvascular causes
**Title of Paper**  
Infrared reflectance in central serous retinopathy - acute versus chronic

**Purpose**  
To study the infrared reflectance (IR) images in acute and chronic central serous retinopathy (CSR), to describe the common findings and the changes over time.

**Method**  
Patients were divided based on duration of symptoms into group 1 (duration less than or equal to 90 days) and group 2 (duration more than 90 days). Group 1 had 55 eyes and group 2 had 20 eyes. Infrared reflectance images of affected eye were studied. Serial images were analyzed to determine changes over time.

**Results**  
In group 1 the most common finding was a circle of hyporeflectance (80%) corresponding to area of subretinal fluid (p< 0.001).

In group 1, there was significant correlation between duration of symptoms and reflectivity of circle ie as duration increased, circle became more hyporeflective (p<0.007). A negative correlation was seen between the height of subretinal fluid (SRF) and reflectivity of the circle (p<0.001).

Group 2 had only only one eye with the circle of hyporeflectance while rest of the eyes showed an ill defined area of hyporeflectance with areas of mottled hyperreflectance.

**Conclusion**  
In acute central serous retinopathy, a circle of hyporeflectance is seen which reduces in intensity with increased duration and decrease in SRF height. Chronic CSR shows ill defined hyporeflectance only, with mottled hyperreflectivity. IR reflectance gives an additional information regarding duration of CSR and chronicity of the disease.
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<tr>
<th>Title of Paper</th>
<th>An Unusual Ocular Complication of Chickenpox</th>
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<tr>
<td>Purpose</td>
<td>To report a case of necrotising fasciitis of the eyelids in an uncontrolled diabetic</td>
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<tr>
<td>Method</td>
<td>A 76 yr old uncontrolled diabetic patient admitted to the Medical ward with abundant chickenpox vesicles over the face was referred for painful swelling of both eyelids and discharge in the right eye. He had high fever with chills at the time of admission. Apart from gross cellulitis of the lids with multiple infected vesicles, there was no evidence of involvement of the eyeball or orbit. His blood sugar levels were high and there was polymorphonuclear leucocytosis and elevated ESR and CRP. Blood and pus were cultured before he was started on topical and systemic Acyclovir and antibiotics and Insulin.</td>
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<tr>
<td>Results</td>
<td>The blood culture grew Staph aureus sensitive to Moxiclav, the antibiotic started emperically. Two days later the eyelid skin became necrotic with underlying extensive tissue necrosis that started separately on the lower and upper lid. As pus culture from the face yielded Staph aureus resistant to Moxiclav but sensitive to Linezolid the antibiotic was changed. With this change, daily debridement of the necrotic tissues and control of diabetes the pain and fever subsided, the blood counts and inflammatory markers decreased and healing started. Culture taken from the necrotic lid did not yield Staph but grew candida</td>
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<tr>
<td>Conclusion</td>
<td>Both Varicella zoster infection and diabetes mellitus decrease immunity and predispose to the uncommon but potentially devastating condition of necrotising fasciitis. Candidiatis is a rare cause reported for the same in uncontrolled diabetics. A high index of suspicion and prompt intervention are needed for the successful management of this condition</td>
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THE MACULAR PHOTOSTRESS TEST RECOVERY TIME IN DIABETICS.

**Purpose**

The photostress recovery time test has been widely used as a screening tool to detect any macular pathology. This test has been used to assess the macular function in diabetic patients even without retinopathy in the office settings.

**Method**

We studied 14 eyes of type 2 diabetes of age group of 30 - 70 years. Visual acuity of all cases were noted using Snellens chart. Ophthalmoscope with maximum light intensity was placed in front of their eyes for 30 seconds as proximate as possible. As soon as the light is removed and patient is asked to again read the Snellens chart. The time span is noted from the removal of illumination to the time taken for reading the last readable letter using a stopwatch. The procedure was repeated for 3 times at 5 minutes interval.

**Results**

Results demonstrate that eyes with retinopathy changes and maculopathy have increased PSRT. All eyes without diabetic retinopathy had normal PSRT whereas 75% of NPDR eyes had increased PSRT and 100% of PDR eyes showed increased recovery time with p value .04. The PSRT time also increases as the duration of diabetes. There is a positive correlation between the presence of maculopathy and PSRT prolongation.

**Conclusion**

From this study it can be concluded that there will be an increase in the PSRT with the increase in duration, severity of diabetes and presence of maculopathy.
<table>
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<th><strong>Title of Paper</strong></th>
<th>Ophthalmic Manifestations in Paediatric Patients Referred from a Neurology Institute</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>To study the clinical profile of paediatric patients referred from a neurology institute.</td>
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<tr>
<td><strong>Method</strong></td>
<td>Retrospective chart review of children between the ages 0-12 years referred from a neurology institute during the period of January 2016- April 2017. Data was collected with regards to age, sex, the neurological condition, ophthalmological findings. Visual field analysis, Visual evoked potential (VEP), and Electroretinogram (ERG) findings were noted whenever available.</td>
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<td><strong>Results</strong></td>
<td>There were 45 children with mean age of 3.8 years (range, 8m-12y). The majority were males (n=26,57%). The neurological diagnoses were seizure disorders (n=18,40%), global developmental delay (n=10,22 %), metabolic disorders (n=7,16%), infectious diseases (n=6,13%), and miscellaneous (n=4,10%). The mean visual acuity was 6/12, (range, 6/6-light perception) and the most common refractive error was hypermetropia (n=5,11%). Anterior segment findings included strabismus (n=13,29%), nystagmus (n=6,13%) and pupillary abnormalities (n=3,6.6%), and the posterior segment findings were disc pallor (n=18,40%) and retinal pigmentary changes , including altered retinal sheen (n=5,11 %). Abnormal ERG &amp; VEP were recorded in 9 patients.</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>Disc pallor and strabismus were the most frequent ophthalmological signs in children with neurological disorders.</td>
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<tr>
<td>Title of Paper</td>
<td>To assess the efficacy of Mycophenolate mofetil (MMF) in the therapy of ocular cicatricial pemphigoid (OCP)</td>
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<tr>
<td>Purpose</td>
<td>To evaluate the efficacy of Mycophenolate Mofetil (MMF) in Ocular cicatricial pemphigoid (OCP)</td>
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<tr>
<td>Method</td>
<td>In a retrospective chart review analysis of 23 patients (45 eyes) with clinical OCP was evaluated for 9 months. Main outcome measures were assessing visual acuity, stage of OCP, immunosuppressive therapy and relapse</td>
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<tr>
<td>Results</td>
<td>Median age of presentation with OCP was 72 years with female preponderance. 26.08% (11 eyes) presented in stage 3. VA was maintained. IST was used in combination or alone. 21.73% was treated with MMF, Azathioprine was given to 8.69% patients and methylprednisolone was advised to 26.08%. Relapsed with MMF was 33.3% and 46% with methylprednisolone.</td>
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<tr>
<td>Conclusion</td>
<td>MMF is an effective agent for treatment of OCP. However, the drug cannot always prevent disease progression</td>
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**Title of Paper**  Residual power after LASIK - Analysis of preoperative and post operative factors  

**Purpose**  To evaluate the preoperative and postoperative characteristics of eyes that developed residual power after LASIK  

**Method**  54 eyes of 31 patients who developed residual power after myopic LASIK correction were analysed retrospectively. The preoperative characteristics of these patients like age, refractive error, pachymetry, variation of subjective cylindrical power with topographic cylinder, steep K and its axis and the post operative characteristics like residual power(spherical and cylindrical), time of appearance of residual power, pachymetry, were studied and the results were statistically analysed.  

**Results**  Regression was observed in 27.77% in early, 22.22% in intermediate and 50% in late postoperative period and 9.2% developed ectasia. Magnitude of myopia was mild in 44.4%, moderate in 22.2% and severe in 33.3%. Mean preoperative pachymetry was 529.6+/−34.4. The mean steep K was 44.4+/−1.3 and 77.8% had the rule astigmatism. There was no correlation between variation in preoperative subjective cylinder and preoperative topographic cylinder with residual spherical power (r =0.011 p>0.05) and no correlation between variation in preoperative acceptance cylinder and preoperative topographic cylinder with residual cylinder (r =0.088 p>0.05).  

**Conclusion**  Most patients who developed regression showed normal profile in preoperative and postoperative characteristics. This may be due to meticulous preoperative workup that rejects extreme characteristics. Corneal Biomechanics seem to have significant role in developing residual power and its detailed analysis will reduce incidence of residual power in post LASIK eyes
## Title of Paper
RARE CASE OF TRAUMATIC OPTIC NEUROPATHY WITH COMBINED CENTRAL RETINAL ARTERY AND VEIN OCCLUSION POST BLUNT TRAUMA

## Purpose
To report a rare occurrence of traumatic optic neuropathy with combined central retinal artery and vein occlusion in a patient who sustained blunt facial trauma and its proposed pathophysiology.

## Method
Observational case report

## Results
18 year old presented with left cheek injury by a bulls horn 2 hours prior. Right eye vision and examination was WNL. Left eye had no PL and gross RAPD. The intraocular pressures were 10 mm Hg in both eyes. Fundus showed disc edema with 2-3 RNFL haemorrhages, mild retinal paleness within the arcades suggestive of possible arterial occlusion. Imaging (working diagnosis of TON) showed bulky optic nerve and medial wall orbital fracture. IOP reduction as in classical CRAO was not done. He was started on intravenous steroids. He developed further retinal pallor, flame shaped haemorrhages and cherry red spot over the next 18 hours. No improvement in vision noted.

## Conclusion
The paucity of clinical findings at initial presentation could lead to non-diagnosis of an evolving CRAO. There may be multiple mechanisms of vision loss in blunt trauma. The possibility of TON with combined CRAO, CRVO and the importance of managing CRAO must not be overlooked. Such rare cases need to be reported.
<table>
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<th><strong>Title of Paper</strong></th>
<th>High intraocular pressure in a young myope- are you missing something?</th>
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<tr>
<td><strong>Purpose</strong></td>
<td>We report a case of spherophakia that caused raised intra ocular pressures in a young myopic male child and describe the characteristics and the ultrasound biomicroscopy findings as well as the mechanism and management of glaucoma in spherophakia in this case</td>
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<tr>
<td><strong>Method</strong></td>
<td>A 11 year old male child with high myopia was found to have intraocular pressures of 32 in right eye and 34 in left eye. Anterior chamber was deep and gonio showed open angles. Post dilatation iop was 7 mm lower than initial values. Ubm done showed spherophakic lens and axial length of 21mm both eye with b scan. Patient was started on Dorzolamide timolol drops and iop reduced to 18 mm in next visit</td>
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<tr>
<td><strong>Results</strong></td>
<td>The presentation and pathogenesis of glaucoma in spherophakia raises several issues about the management of glaucoma in spherophakia. Lensectomy in spherophakia can be surgically and postoperatively challenging. If there is no papillary block medical management can be tried</td>
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# Optical coherence tomography characteristics in eyes with optic disc pit with or without maculopathy

**Title of Paper**
Optical coherence tomography characteristics in eyes with optic disc pit with or without maculopathy

**Purpose**
To study the optical coherence tomography characteristics of optic disc pit with or without maculopathy and validate the proposed mechanisms of fluid passage from the optic disc pit to the macula

**Method**
The medical records of 28 patients (28 eyes) with the diagnosis of optic disc pit were reviewed. Clinical features that were studied included duration of visual impairment, initial visual acuity, and associated fundus features. Optical coherence tomography (OCT) characteristics including presence or absence of macular changes, communication with pit, layer(s) of retina involved in schisis, and presence of serous macular detachment were noted.

**Results**
The mean age was 35.32 years. Ten of the 28 eyes (35.7%) had combined outer and inner layer schisis with no serous macular detachment (SMD), whereas 6 eyes (21.4%) had combined outer and inner layer schisis with SMD. 4 eyes had outer layer schisis only and 2 eyes presented with outer layer schisis and SMD. One eye had inner layer schisis alone and one eye had atrophic macula. 4 eyes had normal macula. Communication between the schitic cavity and the the gap in the lamina cribrosa could be demonstrated on Enhanced depth Imaging in 14 eyes.

**Conclusion**
This study validates the hypothesis that cerebrospinal fluid could be the source of fluid in optic disc pit maculopathy as a communication could be demonstrated between the schitic cavity to gap in the lamina cribrosa could be demonstrated on Enhanced depth Imaging
**Title of Paper**  
A rare case report of glaucoma in Klippel Trenaunay syndrome

**Purpose**  
We present this case due to rarity of association. It is characterized by triad of port-wine stains, enlarged limbs and venous and / or lymphatic malformation. Surgery has its own complications. This patient had angle closure glaucoma in re and yag peripheral iridectomy was done and iop was reduced.

**Method**  
Patient presented with vision re- 6/36 , le- pl negative iop 28 in right and 8 in le, , port wine stain present on both sides of face and body and both upper and lower limb of right side were hypertrophied. F examination showed 0.9 cup with glaucomatous optic atrophy in right and fixed dilated pupil with cataractous lens in le. B scan le showed closed funnel retinal detachment a shallow cup. No choroidal hemangioma or vessel tortuosity. Yag pi was done in re and iop reduced.

**Results**

**Conclusion**  
We present this case due to rarity of association. It is characterized by triad of port-wine stains, enlarged limbs and venous and / or lymphatic malformation. Surgery has its own complications. This patient had angle closure glaucoma in re and yag peripheral iridectomy was done and iop was reduced.