## Contents

**Winning Case Presentation**

| Carotid cavernous fistula mimicking Graves’ ophthalmopathy |

4

**Winning Pioneering Research**

| Blunt ocular traumas through larger impact surface areas lead to more severe damages |

4

**Joint Winning Pioneering Research**

| Inherited Retinopathies: A review of recent advances in understanding and the development of potential future therapies |

5

**Winning Audit**

| The use of multidisciplinary team & patient education as strategy to implement visual assessment in patients admitted with a fall |

5

**Case Presentations**

| Advanced Glaucoma: The side effects of topical anti glaucoma medication |

6

| Purtscher’s Retinopathy due to fat emboli following long bone fracture. Case report and review of the literature |

6

| Case report: A simple technique of closing a large, full thickness lower eyelid defect |

6

| Abnormal optic discs in Geleophysic dystrophy |

6

| The importance of advocating eye-protection: a case of perforating ocular injury while gardening |

6

| Sebaceous carcinoma of the eyelid with local recurrence and intracranial extension |

6

**Research**

| Using 3D television to screen for defects in stereo-acuity |

8

| The feasibility of using an iris recognition camera in measuring corneal opacification in mucopolysaccaridoses |

8

| PCR of corneal scraping in cases of microbial keratitis |

8

| The qualifications, attributes, and experience required to be an Ophthalmic Specialist Trainee: a UK national survey 2010/2011 |

8

| Diabetic Retinopathy: A cross-sectional survey of the prevalence in the United Arab Emirates |

8

| Validation of 3 letter and 5 letter per line computerised visual acuity measurements using COMPlog against ETDRS measurements in subjects with AMD |

8

| Sight for the blind: the development of corneal transplantation |

8

| Completing a simulated surgical task in different viewing conditions: Does stereopsis matter? |

8

| Ocular Syphilis: Making a resurgence? |

8

| Questionnaire survey of dry eye disease in Dubai |

8

| A&E- Ophthalmology referral and junior doctor survey 2012 |

8

| Anti-VEGF Pharmacotherapy: A revolution in ophthalmology? |

8

| Assessment of physician competency in visual acuity examination |

8

| The positive effect of visual arts on both patients and staff in ophthalmology |

8

| The association of precipitating factors with clinical outcome in corneal ulcers |

8

| Innovative eye-camps: Rural interventions to actual-eyes NCD rhetoric into reality |

8

| Are blood cholesterol levels associated with Age-Related Macular Degeneration? A systematic review |

8

| Palpebral aperture and levator function between eyes with and without upper eyelid skin creases in Chinese |

8

| Optic Neuritis: review of the NICE guidelines. |

8

| Lucentis (Ranibizumab) vs Avastin (Bevacizumab) report |

8

| Global health and ophthalmic surgery in the United Kingdom |

8

| Long-term visual outcomes of glaucoma patients following a single episode of transscleral cycloide laser treatment |

8

| Treatment of refractory or advanced macular oedema with intravitreal slow-release dexamethasone and bevacizumab |

8

| The pericyte cell in the pathogenesis of diabetic retinopathy |

8

| Investigating gender-related barriers to eye-care amongst cataract patients in Tamil Nadu |
Contents continued

Audits .................................................................................................................................................. 16
An audit into ptosis surgery outcomes
Clinical audit of the long-term results and rates of complications after strabismus surgery
Delay in the diagnosis of Retinoblastoma: A clinical audit
Clinical audit of R1M1 referrals from the English National Screening Programme for Diabetic Retinopathy (ENSPDR)
Tertiary centre’s for uveitis care: Are they undervalued?
Implementation of glaucoma NICE guidelines in Salisbury District Hospital
An audit of current screening practice for retinopathy in type 1 and type 2 diabetes mellitus patients
Nd:YAG capsulotomy following postoperative opacification of hydrophilic and hydrophobic acrylic IOLs
Audit of the patients newly registered with Certificates of Visual Impairment predominantly due to diabetic retinopathy
An audit on ophthalmic assessment in zygomatic fractures
First episode vs recurrent unilateral acute anterior uveitis audit
Agreement between photographic and biomicroscopy grading of diabetic retinopathy
An audit examining the accuracy of biometry comparing the predicted refractive outcome and the actual post-operative refraction in cataract surgery
An audit of management of acute conjunctivitis at one GP practice
Referrals to the Paediatric Ophthalmology service: How accurate are the referrals from General Practitioners and other sources in the community?

About the British Undergraduate Ophthalmology Society ......................................................................................................................... 22

Disclaimer:
This abstract book has been produced using author-supplied data. We accept no responsibility for any claims; it is recommended that these are verified independently.
Winning Case Presentation
Carotid cavernous fistula mimicking Graves’ ophthalmopathy
A Ferdi¹, F Clough¹
1. Fifth Year Medical Student, University College London

Background: A carotid cavernous fistula is a rare condition and the similarity of its presentation to Graves ophthalmopathy can make its diagnosis challenging.

Case Report: A 41-year-old man with a three year diagnosis of Graves’ disease was referred to manage his treatment resistant proptosis in his right eye. On examination, his conjunctiva was hyperaemic and he had mild proptosis in the right eye, all other findings were normal. His visual acuity was 0.9/0.7 uncorrected. Computed tomography (CT) showed mild enlargement of ocular muscles and dilatation of inferior ophthalmic vein. Inferior ophthalmic vein dilatation was attributed to venous stasis caused by muscle enlargement. Serology did not reveal any auto-antibodies. In conjunction with advice from endocrinology, a working diagnosis of Graves’ ophthalmopathy was adopted and treatment started with nonsteroidal anti-inflammatory drugs (NSAIDs). Within eight months the patient’s proptosis had markedly increased, acuity was reduced to counting fingers at 1m, and he had diffuse restriction of extraocular motility in all directions. He also developed a severe relative afferent pupillary defect. The patient was started on high dose steroids but after no improvement a working diagnosis of carotid cavernous fistula was adopted and the patient was scheduled for angiography, which confirmed the diagnosis.

Conclusion: This case illustrates the potential for multiple pathologies to make diagnoses more challenging. It also demonstrates that pathologies can present without features that are typical, as here with dilated inferior instead of superior ophthalmic veins. Being aware of these factors is important in making dynamic diagnoses and beginning swift appropriate treatment.

Winning Pioneering Research
Blunt ocular traumas through larger impact surface areas lead to more severe damages
Y Philippou¹ M Dogramacci²
1. School of Clinical Medicine, University of Cambridge
2. Lister Surgicentre Hospital, Hertfordshire

Introduction: Larger objects are suspected to cause more severe ocular damages, but this has never been investigated. Posteriorly located wounds are correlated with poorer visual prognosis.

Aim: In this study we investigated the relation between the diameter of the impact surface area and the location of the maximum stress point in the ocular tissue during blunt trauma.

Methods: We used Solidworks 2009 SP0.0 software, to construct a virtual eye model. Blunt trauma then was simulated, using an antero-posterior force, applied to the anterior surface of the eye. The scale and the distribution of stress across the model were then determined for different impact surface areas ranging from 1-20mm in diameter.

Results: The maximum stress point generated during a blunt trauma is confined to the cornea and the limbus (zone1) for impacts surface areas ranging between 1-5 mm. The maximum stress point then sharply moves posteriorly to involve the anterior 5 mm of the sclera (zone2) and beyond (zone 3) for larger impact surface areas ranging between 6-10mm and 11-20mm respectively.

Conclusion: Objects causing blunt ocular trauma, through larger impact surface areas, impose more posteriorly located damages and therefore lead to poorer visual prognosis. Careful history taking in assessing blunt eye traumas, taking into consideration the size of the contributing object, can help to predict the visual outcome.
Joint Winning Pioneering Research

Inherited Retinopathies: A review of recent advances in understanding and the development of potential future therapies

M O’Brien¹, N Okhrawi², KS Balaggan²
1. Barts and London University
2. Moorfields Eye Hospital, London

Inherited retinal diseases are important causes of blindness worldwide, that are heterogeneous in their presentation and in their causative mutations, and which remain, at present, predominantly untreatable. Recent advances in molecular genetics have led to substantial improvements in our understanding of the underlying pathogenic mechanisms and in diagnostic accuracy, and have paved the way for the development of novel therapies designed to halt the progression of, or restore, visual loss which is typically profound in advanced stages. Significant advances in genome sequencing technologies and bioinformatics have not only allowed enhancements in the mapping of responsible genes in these disorders, but have also allowed identification of causative mutations. These in turn have permitted clinicians to have greater diagnostic certainty, to provide tailored genetic counselling for these patients, and to better identify and recruit patients suitable for current and future therapeutic trials. Advances in molecular cloning and viral vectorology have permitted the development of restorative gene therapy strategies designed to target recessive retinopathies, and several clinical trials have demonstrated the safety and efficacy of these approaches. The recent demonstration of effective integration of photoreceptor precursors into diseased retinas in vivo, will hopefully allow the clinical development of cell replacement strategies to restore vision in patients with advanced disease. Clinical trials in this arena have very recently been initiated. Retinal prostheses have also seen significant improvements in design and several are currently under clinical evaluation. Further refinement of these strategies should permit treatment of a greater proportion of patients over the coming decades.

Winning Audit

The use of multidisciplinary team & patient education as strategy to implement visual assessment in patients admitted with a fall

Z Zielicka, J-PO Li, S Wells, P Lee, P Kroker
F1 Doctor, Chelsea and Westminster

Background: The leading cause of accidental death in the elderly within the UK is falls. Both National Institute for Clinical Excellence (NICE) and the British Geriatric Society recommend a visual assessment to be completed within a holistic, multidisciplinary team falls assessment.

Aim: To determine whether visual assessment is performed in patients who are admitted with neck of femur fractures.

Methods: We retrospectively assessed medical notes of 50 patients from the Chelsea and Westminster Hospital Neck of Femur Fracture database, admitted between January and August 2011, looking for documentation of visual function and vision assessment.

Results: Only four patients had their vision assessed in terms of acuity, ocular movements and confrontational visual fields. Ten patients had poorly documented assessments such as “cranial nerves NAD”.

Conclusion: These results show that vision is not adequately assessed in patients admitted with falls. We have decided to broaden our target audience in our educational strategy to reduce falls. Specifically, we are: Educating the multidisciplinary team and future doctors (medical students), through lectures and a Trust e-learning module on falls assessment; Introducing a “Falls Assessment Checklist” which includes assessment of visual status as a part of the orthogeriatrician ward round; Educating patients and carers on falls prevention, particularly encouraging regular eye check-ups, through a Trust falls leaflet we produced entitled “Preventing Slips, Trips and Falls”; Extending education to primary care by creating a neck of femur fracture discharge letter proforma that will inform the GP of the patient’s visual status, and any suggested further action in the community.
**Case Presentations**

**Advanced Glaucoma: The side effects of topical anti glaucoma medication**

M Awad  
*University of Birmingham*

**Case Presentation:** A 75-year-old male, with known hypertension and advanced primary open angle glaucoma, diagnosed six years ago, presented with red, watery eyes, ocular pain and a deterioration in his vision. He was on a range of anti glaucoma medications: lumigan, dorzolamide hydrochloride, timolol maleate, alphagan P and cosopt. On examination, a diffuse conjunctival injection was evident bilaterally. The visual acuity was 20/30-2 and 20/30-1 in the right and left eyes respectively. The intraocular pressure (IOP) was 22 mmHg in both eyes.

**Conclusion:** This case highlights the importance of exploring alternative management strategies in patients with poor tolerability to topical anti glaucoma medication, or in those whom maximum tolerable regimes fail to adequately lower the IOP.

---

**Purtscher’s Retinopathy due to fat emboli following long bone fracture. Case report and review of the literature**

P Yiannis, R-H Dawn, N Douglas  
*Ophthalmology Department, Addenbrooke's Hospital, Hills Road, Cambridge*

**Background:** Purtscher’s retinopathy is a traumatic angiopathy, most commonly caused by head and chest trauma. The most-prevalent bilateral retinal signs include white ischemic infarcts (cotton-wool spots) and haemorrhages (dot and blot, pre-retinal, or flame). The prognosis for patients with Purtscher’s retinopathy is unpredictable.

**Case Report:** A 20-year-old male was admitted to the emergency department of a tertiary hospital complaining of bilateral blurred vision. He had been discharged 7- days prior after being treated for a long bone fracture in the right leg sustained during a rugby game. Visual acuity on ophthalmic examination was 6/24 in both eyes. Colour fundus photos revealed diffuse retinal whitening of the posterior pole with confluent cotton-wool spots. Fluorescein angiogram showed retinal arteriolar occlusion. The findings were compatible with Purtscher-like retinopathy.

**Conclusion:** Purtscher’s retinopathy presents to the clinician as loss of vision in a patient with a history of a possible precipitating event such as recent major trauma, pancreatitis, childbirth or renal failure. The most probable pathological cause is embolisation of the peripapillary terminal arterioles supplying the superficial peripapillary capillary net. The nature of the embolic particles remains uncertain. Complement-mediated aggregates, fat, air, fibrin clots and platelet clumps may all be involved in what is most likely to be a multifactorial process. We report of a case of Purtscher’s retinopathy secondary to fat embolization following a long bone fracture together with a review of the literature. There is at present no recognised treatment for the condition.

---

**Case report: A simple technique of closing a large, full thickness lower eyelid defect**

W-C D Ngu¹ C N Chua²  
¹. 5th Year Medical Student, University of Dundee  
². Professor of Ophthalmology, University Malaysia Sarawak

**Introduction:** Traditionally, the replacement of anterior and posterior lamella is crucial in eyelid reconstructive surgery. Such procedure is laborious and may require revision and is therefore unsuitable for frail patients. Surgical approach on nasojugal myocutaneous flap is used to close the defect with fast recovery. We would like to describe a 70 year-old man who upon admission due to pneumonia was noted to have a left lower eyelid lesion occupying most of the eyelid margin with ulceration and loss of eyelashes. Excisional biopsy confirmed the diagnosis of basal cell carcinoma.

**Methods:** Interventional case study

**Results:** The lower eyelid lesion was successful excised with a 3mm margin under local anaesthesia. The defect was closed with a nasojugal myocutaneous flap. Although there was no substitute tarsal support for the closure, the eyelid functions well at two
months follow-up except for mild epiphora. There were no corneal abnormalities.

Discussion: Several options were considered to close the defect including Hughes flap. However, in view of the frailty of the patient, we decided not to perform laborious surgery or one which requires revision. A nasojugal myocutaneous flap was used to close the defect. The length of the flap was measured 3mm less of the width of the lower eyelid defect to prevent lower eyelid loosenning.

Conclusion: Lower eyelid defects involving the eyelid margin and extending more than one third of the horizontal length of eyelid margin requires adjacent tissues advancement. Direct closure of full thickness defects larger than one third of eyelid is not recommended.

Abnormal optic discs in Geleophysic dystrophy
K Lang Ping Nam
Newcastle University

Introduction: Geleophysic dystrophy is a rare, progressive, autosomal recessive metabolic condition. Affected individuals exhibit distinctive facies, short stature, reduced joint mobility, severe progressive cardiac valvular disease and lung involvement. 33% die by age 53. Out of the 26 cases described in literature, 17 patients had limited ocular ability. Only one previous case of glaucoma was reported.

Case Report: An 8 year old girl with Geleophysic dystrophy presented to clinic with right eye strabismus. Past medical history included recurrent endo-broncheal infections and mitral valve replacements for stenosis. On examination, she demonstrated hypermetropia, astigmatism and fully accommodative esotropia. Glasses were prescribed. At follow-up, visual acuity was bilaterally decreased. Fundoscopy showed elevated disc margins, and Goldmann tonometry readings were 20.6mmHg in the right, 25.4mmHg in the left eye. There was no arcuate scotoma on Humphrey visual field testing. Slightly abnormal blood vessels were seen on an otherwise normal colour optical coherence tomography scan. Computed tomography showed no signs of raised intracranial pressure. Differential diagnoses included glaucoma, optic disc drusen and raised intracranial pressure. Further management requires optic disc surveillance and, if neurological or visual deterioration, magnetic resonance imaging under general anaesthetic. The latter would necessitate careful evaluation in light of the patients' comorbidities.

Conclusion: This case provides incidental evidence of decreased ocular function in Geleophysic dystrophic patients. Follow-up may establish an association between glaucoma and Geleophysic dystrophy.

The importance of advocating eye-protection: a case of perforating ocular injury while gardening
S R Rufai, J P Doris, S C Lash
University of Southampton

Background: The advocation and use of safety-glasses to prevent eye injuries at work are greater than in the case of gardening or performing DIY at home. The home is the single most common place for blinding injuries to occur. We present a case of perforating ocular injury while gardening, resulting in loss of eye, which could have been prevented by use of safety-glasses.

Case Report: A 23-year-old male presented with a nail perforating his left eyeball. While gardening, he nailed a length of rope into the soil. Upon pulling the rope with force, a nail shot into his left sclera and perforated the globe. He underwent primary repair combined with vitrectomy and lensectomy. The patient did not regain vision and the eye was removed to prevent risk of sympathetic ophthalmitis.

Sebaceous carcinoma of the eyelid with local recurrence and intracranial extension
W-C D Ng, K W Lim, C N Chua
1. 5th year Medical Student, University of Dundee
2. Faculty of Medicine and Health Sciences, University of Malaysia Sarawak, Malaysia.
3. Professor of Ophthalmology, University Malaysia Sarawak.

Background: Sebaceous carcinomas are aggressive tumours with a tendency for local recurrence. We report a case of sebaceous carcinoma of the eyelid with bilateral local recurrence and intracranial extension.

Case Report: A 41 year-old female patient presented with a left upper eyelid lesion. Excisional biopsy was performed and histopathology confirmed a moderately differentiated sebaceous carcinoma. However, the margins were not clear and the patient had another surgery. Nine months later, she presented with a mass over the left eyelid and temporal fossa. Magnetic Resonance Imaging (MRI) showed left intraorbital extraconal mass with intracranial extension. The patient underwent combined radiotherapy and surgery to debulk the brain tumour.

Conclusion: Sebaceous carcinoma of the eyelid is an uncommon eyelid tumour but with an aggressive course. Delayed diagnosis and treatment can result in increased rate of recurrence, metastasis and death. Therefore, a high index of suspicion is crucial if these tumours are to be diagnosed early and adequately treated.
Research

Using 3D television to screen for defects in stereo-acuity

P S Sandhu
Final Year Medical Student, St. George’s, University of London

Aim: To determine whether the stereo-acuity required to subjectively appreciate depth from a 3D television image, viewed from any distance, falls within a clinically relevant range.

Background: A defect of stereopsis in childhood, usually due to strabismus, can cause amblyopia and permanent defects in stereo-acuity if not detected early. Faulty binocular depth perception is not always apparent in daily life as monocular cues such as lighting and perspective can mask binocular defects in 3D vision. 3D television relies on the display of an individual image for each eye and therefore adequate binocular vision is required to fuse these two images in the visual cortex. If fusion is inadequate, a 3D display will seem blurred and viewing may cause discomfort.

Results and conclusions: The stereo-acuity required (~500 arc-seconds) to appreciate 3D image depth in a standard living room space (distance ~6m) is clinically relevant. Furthermore, we can investigate different levels of stereo-acuity by varying the viewing distance.

Further Work: We will discuss how the results of this study could be applied in educational institutions, allowing for the approximate quantification of stereo-acuity defects in children, and selecting those who may need intervention. We will also discuss how this information could be applied to 3D cinema.

The feasibility of using an iris recognition camera in measuring corneal opacification in mucopolysaccharidoses

S Shakir1, J Wong1, F Jawad2, J Ashworth2, T Aslam2
1. University of Manchester
2. Manchester Royal Eye Hospital

Objective: Standard methods of assessing corneal opacification in children with Mucopolysaccharidoses (MPS) are currently limited to standard photography or by subjective observation and are flawed in objectivity and practical validity. Our aim was to demonstrate the feasibility of using an iris recognition camera in measuring corneal opacification rapidly and objectively in MPS patients.

Methods: We acquired the most advanced iris recognition camera for our needs, allowing multiple images of the eyes to be taken reliably, rapidly and simultaneously. We used this camera to image all attending MPS patients. We assessed practicality, feasibility and potential of imaging and subsequent analysis to derive a measure for corneal opacification.

Results: Compared to standard imaging, the use of an iris camera appears far more useful, demonstrating adaptability to a variety of patients including children with severe physical disability and/or mental impairments. The iris camera was very effective demonstrating good penetration of all densities of corneas. The iris camera was mobile allowing manipulation into positions for easier focusing of images giving an overall faster capture time.

Conclusion: Iris recognition cameras can provide a reliable, objective and practical means of developing a measure for corneal opacification and assessing disease severity caused by MPS. We are currently adapting the camera and image analysis algorithms to develop this further.

PCR of corneal scraping in cases of microbial keratitis

H Mohamedbhai, C J Heath, M Christodoulides, R Krishnan, P Hossain
University of Southampton

Background: Microbial keratitis is the leading cause of visual impairment and loss in the working age population. Rapid diagnosis and initiation of treatment can resolve the infection. Culturing of corneal scrapes is the primary investigation but has a low sensitivity and can take several weeks. Previous studies have argued for the diagnostic role of PCR in corneal infections.

Aim: To identify the sensitivity of PCR following corneal scraping to determine the causative organism of microbial keratitis.

Methods: Scrapes were collected from patients at the time of presentation. Additionally, sterile, human corneal grafts were inoculated in vitro with bacterial pathogens to simulate live infection and scraped after incubation. Following DNA extraction, PCR and gel electrophoresis were performed on the patient and graft samples.

Results: 11 corneal scrapes were completed: 8 patient samples from infected corneas and 3 scrapes of in vitro live infections of corneal tissue. All 11 scrapes were negative for bacteria, fungi or acanthamoeba. Of the 8 patient samples, 4 patients were culture positive. All 8 cases, following follow-up and treatment, maintained their initial clinical diagnosis of infective keratitis. In the 3 in vitro samples, infection was demonstrated by SEM.

Conclusion: Previous studies, stating the high sensitivity and speed of PCR, argue it to be a potential solution to the limitations of current investigations.3 4 5 The results demonstrate the inability of PCR to identify organisms based upon corneal scraping in infective keratitis. A supposition is that the bacterial populations on scrapes are so small that insufficient DNA can be extracted.
ABSTRACTS

The qualifications, attributes, and experience required to be an Ophthalmic Specialist Trainee: a UK national survey 2010/2011
D Yeo, J Hewsbury, L Nicholson, S Gill, P Murray
Birmingham

Objective: Recent data shows that ophthalmology recruitment in England for 2011 had the highest competition ratio when compared to all other specialties. We conducted a study evaluating the influences and motivations behind entering the specialty, the individual achievements required to secure a training post, and the previous level of clinical experience in ophthalmology.

Methods: An online survey, approved by the Royal College of Ophthalmologists, was sent to the 2010/2011 cohorts of ST1s and FTSTA1s after being trialled on the West Midlands’ trainees.

Results: A total of 4778 trainees undertook the survey (response rate 60%). Of these 89% were ST1s and the rest FTSTA1s. The main motivation behind choosing ophthalmology was “an enthusiastic teacher/tutor with an affiliation to ophthalmology”, with 79% wanting to undertake a higher degree and Part 1 FRCOphth was not uncommon. The majority had experience in audit, teaching and academic research. Being in possession of a higher postgraduate degree, 12% an MD(UK), 12% a PhD, and 39% had passed Part 1 FRCOphth. A total of 69% had published at least one peer-reviewed Medline paper (43% related to ophthalmology) with 50% as first author. There was evidence of at least one international poster or oral presentation in 48% and 29%, respectively. Only 17% of trainees had no prior clinical ophthalmology experience.

Conclusion: Our study shows that ophthalmology trainees made early decisions to enter the specialty and appear highly motivated. The majority had experience in audit, teaching and academic research. Being in possession of a higher postgraduate degree and Part 1 FRCOphth was not uncommon.

Diabetic Retinopathy: A cross-sectional survey of the prevalence in the United Arab Emirates
F Tariq1, C Canning2, J V Forrester3
1. Fifth Year Medical Student, University of Aberdeen
2. Consultant Ophthalmologist, Moorfields Eye Hospital Dubai
3. Professor of Ophthalmology, University of Aberdeen

Introduction: Diabetic Retinopathy, a micro-angiopathy affects the retinal vasculature and is the commonest cause for acquired blindness in the working population. Early diagnosis and treatment of diabetic retinopathy can reduce the risk of sight loss in more than 90% of cases. Screening programs are in place across the United Kingdom to detect the disease. However, in the United Arab Emirates no such program exists, therefore, the diagnosis of diabetic retinopathy is largely opportunistic.

Methods: A cross-sectional study was conducted using data from diabetic patients attending the Imperial College London Diabetes Centre, Abu Dhabi, to look at the spectrum of diabetic eye disease in the UAE. Retinal images stored on the electronic database Computer Assisted Retinal Analysis (CARA) were graded according to the Scottish Diabetic Grading Scheme. Patient demographics and clinical characteristics were abstracted from the patient database Diamond. All data was statistically analysed using SPSS version 19.0.

Results: 214 diabetic patients were enrolled in the study; the majority were type 2 diabetic (96%). Retinopathy and maculopathy affecting at least one eye was detected in 60.7% and 40.2%, respectively. Background retinopathy was present in 45.3%, pre-proliferative retinopathy in 10.7% and proliferative retinopathy in 4.7%. The duration of diabetes amongst the subjects ranged from 0 to 31 years (95% CI: 7.00-8.99).

Conclusion: Diabetic Retinopathy is more prevalent in UAE compared with the UK, reflecting the exponential rise in type 2 diabetes rates due to rapid urbanisation within the region and lack of structured screening for diabetic eye disease.

Validation of 3 letter and 5 letter per line computerised visual acuity measurements using COMPllog against ETDRS measurements in subjects with AMD
Y Bokinni1, N Shah2, D Alistair2, H Laidlaw3
1. King’s College London, School of Medicine, London
2. Department of Ophthalmology, St Thomas’ Hospital, London

Introduction: Age-related Macular degeneration (AMD) is the leading cause of visual loss in the industrialized world, and its prevalence has been projected to double by the year 2020. AMD affects the macula, often creating a central scotoma. Accurate and repeatable visual acuity (VA) measurements are important in monitoring disease progression and treatment efficacy. EDTRS charts are considered the ‘gold standard’ tests for VA and employ 5 letters per line. The COMPllog computerised VA measuring system, relies on a 3 letter per line assessment. Its advantages include the ease of use, shorter test distances, and an automated scoring system.

Aim: We aimed to determine whether electronic COMPllog measurements agree with those of the 5 letters per line ETDRS charts in patients with AMD.

Method: Timed test and retest VA measurements were taken using 3 and 5 letters per line on COMPllog and the ETDRS charts in random order in 50 patients with wet AMD. Bland and Altman methods were employed.

Results: No significant bias and similar test-retest variability was observed in the computerised 3 and 5 letter per line VA measurements compared to the ETDRS chart. Median test times were 92, 71.5 and 131.5 seconds for ETDRS and COMPllog 3 and 5 letters per line respectively.

Conclusion: The preliminary data is suggestive that COMPllog measurements agree well with and are similarly reliable to the ETDRS chart. In patients with AMD, the use of 3 or 5 letters per line did not appear to affect VA scores although test times are shorter with 3 letters per line.
Sight for the blind: the development of corneal transplantation
P Gunveer
Imperial College London

Corneal transplantation has restored the sight of millions of people worldwide. However, it is often forgotten in the transplant literature, despite being the first tissue to be successfully transplanted from one individual to another. Publications on the topic thus far have taken a retrospective approach and not delved into the reasons why corneal transplantation progressed as it did. This project aims to analyse the various factors that both encouraged its development, as well as those that hindered it and how these were overcome. The development of this innovation can be divided into three key periods: the translation of an idea into practice; the journey to become a successful operation; and the struggle to gain sufficient donor material. The major influencing factors in each of these phases will be demonstrated, particularly focusing on the situation in Britain. Medical publications dating as far back as the 18th century, archival material and newspaper articles, as well as the appropriate secondary literature, will be used to broaden historical insight into this operation. The story of corneal transplantation is an interesting account of a procedure that has gradually developed over time. Importantly, it set a precedent for organ donation both legally and socially in Britain, paving the way for future transplants.

Completing a simulated surgical task in different viewing conditions: Does stereopsis matter?
E Bloch¹, N Uddin², L Gannon², S Jain²
1. University College London
2. Royal Free Hospital

Aim: To show the difference in hand-eye coordination in adults with normal stereopsis under binocular and monocular viewing conditions. The manual task was carried out in 3 dimensional and 2 dimensional conditions.

Methods: The experiment was conducted with 30. Information was collected regarding previous relevant ophthalmic history and the lateral dominance. Participants were asked to pick up and place small plastic balls on columns of various heights within 50 seconds using laparoscopic graspers. The task was carried out in free-space and on a LCD monitor with both eyes open and with one eye covered for each condition. Differences in performance were compared between both eyes and one eye in both test conditions.

Results: In the free space condition, participants showed a significantly faster rate of performance with both eyes open (mean 11 balls) compared to one eye occluded (9.38 balls) in the allocated time of 50 seconds (p=0.00056). However, there was no significant difference in performance using the surgical simulator with either one or both eyes (5.97 and 6.15 balls in each condition respectively, p=0.62).

Conclusion: The presence of stereopsis affects performance on the surgical simulator in free space viewing (a task in 3 dimensions) but has no similar effect when viewing a monitor which is a 2 dimensional state.

Ocular Syphilis: Making a resurgence?
Z K Durani², G Hitch², E Draeger², B T Goh³,
1. St Georges University of London
2. Moorfields Eye Hospital, London
3. The Royal London Hospital

Objective: The last decade has seen a rise in the incidence of syphilis in the UK. The purpose of this study is to investigate cases presenting with ocular signs of the disease and a positive treponemal serology presenting to Moorfields Eye Hospital (MEH) in the past 46 years.

Methods: A retrospective study of 222 cases with positive treponemal serology with ocular signs seen between May 1965 - December 2010 was carried out. Exclusion criteria included patients with a past history of Yaws (85 cases).

Results: Of 222 cases, 84 (37.8%) had congenital syphilis (CS) and 138 (62.1 %) had acquired syphilis (AS). Of 84 cases with CS, 64 (76.2%) interstitial keratitis, 22 (26.2%) had anterior uveitis and 10 (11.9%) had posterior uveitis. Of AS cases, 34 were females and 104 were males, (13.4% homosexual men), 18 (13%) had early syphilis, (87%) were late syphilis. Of 128 cases with late AS, 64 (50%) had anterior uveitis, 21 (16.4%) had posterior uveitis, and other ocular signs were also documented. The number of AS cases presenting increased from 3 cases in 2001-2005 to 25 cases in 2006-2011.

Conclusion: Since 2005 there has been a large increase in the number of cases of acquired syphilis presenting with ocular signs while cases of congenital syphilis remain low. The majority of cases had no non-ocular signs of syphilis. Ophthalmologists need to be increasingly vigilant to syphilis as a cause of ocular problems. Partner notification and screening for other sexually transmitted infections are essential.

Questionnaire survey of dry eye disease in Dubai
M. Kim, A. Sciscio
Moorfields Eye Hospital Dubai

Aim: The aim of the study was to investigate the prevalence of dry eye disease amongst residents in Dubai and environmental factors that may contribute to the pathogenesis of dry eye disease.

Results: The total of 62 subjects who lived in Dubai for more than one year were recruited to the study. The subjects were asked to fill in a questionnaire which contained questions regarding the frequency of dry eye symptoms and exacerbating environmental factors. 61.3% complained of at least occasional dry eye symptoms with 24.2% suffering the symptoms half of a day or more. Amongst those who complained of at least occasional dry eye symptoms, 52.6% reported symptoms being worse in summer, 36.8% reported symptoms worse indoor, and 68.4% reported symptoms worse in a conditioned environment. Moreover, 60.5% reported their symptoms being either new or worse in Dubai compared to European or other Asian countries. About 50% of those with at least occasional symptoms reported using artificial tear drops at least once a month. Dubai provides a unique environmental
condition where high humidity and temperature, windy air with proximity to desert and year-round use of indoor air-conditioning may contribute to pathogenesis of dry eye disease.

Conclusion: By performing a subject-filled questionnaire survey, the study shows that dry eye disease is more prevalent in Dubai with new onset or worsening of pre-existing symptoms and environmental factors such as high humidity, temperature and indoor air-conditioning may well contribute to its pathogenesis.

A&E– Ophthalmology referral and junior doctor survey 2012
A Rosli1, S Subramani2, K F Loo2, Z A Ahmad1
1. University of Liverpool
2. Blackpool Victoria Hospital

Introduction: The primary aim of this survey was to examine the quality of referrals from A&E to ophthalmology at a district general hospital. The secondary aim was to determine junior doctors’ views on undergraduate ophthalmic training, and their thoughts on formal ophthalmic training in A&E.

Methods: Ophthalmologists running the eye casualty clinics were asked to analyse A&E referrals during a 2 week interval in Feb 2012. Junior doctors in A&E were surveyed alongside.

Results: 7 referrals were analysed by three ophthalmic doctors. 3/7 (42%) had inadequate histories, 2/7 (29%) had average quality histories and 2/7 (29%) had good histories. Only 3/7 (42%) referrals had the visual acuity recorded. All but one had sufficient relevant ophthalmic examination performed and recorded. 4/7 (57%) referrals had the correct diagnoses. 13 A&E junior doctors responded to the survey of which the majority had 1-2 weeks of ophthalmic undergraduate training. 2/13 (15%) found their undergraduate ophthalmic teaching adequate, 6/13 (46%) somewhat adequate, and 5/13 (39%) inadequate. 2/13 (15%) were very uncertain in using a slit lamp, 8/13 (62%) just about manage, 2/13 (15%) felt they were good at it and 1/13 (8%) felt they were very good. 11/13 (85%) felt ophthalmic teaching on practical skills would be helpful.

Conclusion: There is room for improvement on the quality of ophthalmic history, examination and treatment in the A&E setting. Formal ophthalmic teaching is welcomed and may help. As opticians play an increasing role in primary ophthalmic care, their role in undergraduate ophthalmic placements should be explored.

Anti-VEGF Pharmacotherapy: A revolution in ophthalmology?
N Patel1, KS Balaggan2, N Okhravi1
1. Barts and London University
2. Moorfields Eye Hospital, London

Age-related macular degeneration is the leading cause of severe, irreversible visual impairment in developed societies. Alarmingly, prevalence is expected to increase by 50% by 2020. Exudative AMD (eAMD), accounts for 75% of cases of severe visual loss. Vascular endothelial growth factor (VEGF) is the key proangiogenic cytokine in these patients. The prognosis of most patients appears to have been dramatically improved with the advent of the novel anti-VEGF pharmacotherapies ranibizumab and bevacizumab, which remarkably prevent the otherwise predictable decline in visual function. Both agents appear equally effective, although currently only the significantly more expensive ranibizumab is licensed for intravitreal use in the UK. Cumulative clinical experience, however, suggests that short-term intermittent downstream targeting by these agents is neither sufficient to significantly improve vision in most patients, nor to induce neovascular regression. Importantly, it is highly likely that most patients who respond to therapy will require life-long repeated intravitreal injections to maintain these benefits in the long-term. The financial and logistical burdens of frequent visits for dosing and/or monitoring for an ever-expanding elderly population should not be underestimated, particularly in the setting of publicly funded health-care systems with finite resources, and especially as life-long therapy is likely to be required for most patients. Repeated intravitreal injections are also associated with cumulative risks of local complications including endophthalmitis. This review will evaluate the evidence for the efficacies of these anti-VEGF pharmacotherapies and also discuss their limitations and potential areas for further refinement of anti-angiogenic therapy for eAMD.

Assessment of physician competency in visual acuity examination
C Yap1, A Borowska1, S Sturman1
1. Department of Neurology, City Hospital, Birmingham

Aim: The aim of this study is to assess the number of junior physicians in Sandwell and West Birmingham Trust who can carry out visual acuity assessment using a Snellen chart correctly. Availability of Snellen chart in medical wards and ED was also assessed.

Purpose: The unavailability of Snellen chart and incompetency of physicians in assessing visual acuity could impose great implications on patient health and potential for litigation.

Methods: 80 junior doctors ranging in grade from house officer to specialist registrar doing medical or ED rotations were randomly selected and their visual acuity assessment skills were tested in controlled environment. The data was collected prospectively using an observational technique.

Results: Overall, 42% doctors were competent in all the assessed elements; 65% of doctors confirmed if patients required corrective lenses; 91% made sure patients was at the correct distance from chart; 76% ensured only one eye was tested at a time; 70% used pinhole to correct for refractive error; and 59% knew how to interpret the Snellen chart. In terms of availability, The Snellen chart was only available in 16% of the assessed clinical areas.

Conclusion: This study highlights the lack of availability and practice in using Snellen chart as part of routine clinical examination in medical patients. To increase awareness in this subject, teachings were arranged and posters were put up within the Trust.
The positive effect of visual arts on both patients and staff in ophthalmology

V Kadaba, J Kefas, N Minakaran, J Bladen, M Moosajee
1. Imperial College London
2. Moorfields Eye Hospital, London

Introduction: Art in hospitals reduces sickness, anxiety and stress. The effect of art on visually impaired patients has not been previously investigated.

Aim: To investigate how the visual arts influence the patient, visitor and staff experience in ophthalmology, and to determine if having an eye condition alters a person’s appreciation and creation of art.

Methods: An art and photography exhibition was held at Moorfields Eye Hospital featuring artwork created by patients with various eye conditions and members of staff. On the day, 48 patients, 25 visitors and 28 staff members completed questionnaires (103 in total) to determine the effect of visual arts in ophthalmology.

Results: The majority of respondents agreed or strongly agreed that display of visual art in hospitals improved the patient experience (92%), relaxed patients (91%), made clinic waiting times more bearable (85%) and improved staff morale (70%); visually impaired people can appreciate art (84%), create art (83%), and tactile art in the ophthalmology setting improves the patient experience (83%). Those with an eye condition agreed or strongly agreed that they could express themselves through art creation just as before they developed visual problems (75%).

Conclusions: There is a strong consensus between patients and staff that art positively enhances the ophthalmology clinical environment by relaxing patients and optimizing staff morale. Importantly, this study highlights the fact that visually impaired patients do appreciate and can create art. Displaying tactile art in hospitals would be a significant improvement to the patient experience.

The association of precipitating factors with clinical outcome in corneal ulcers

S J Heng, A Al-Ani, S J Dancer, A Fern
1. University of Glasgow School of Medicine,
2. Ophthalmology Department, Hairmyres Hospital
3. Microbiology Department, Hairmyres Hospital

Background: Corneal ulceration is a common sight-threatening condition and represents a significant healthcare and economic burden. Corneal ulcers can be classified in a number of ways, but they are rare in the absence of precipitating factors. The aim of this study is to investigate the association of presumed precipitating factors with clinical outcome in corneal ulcers presenting to a secondary care setting.

Methods: Cases of corneal ulcers presenting to a district general hospital between June 2009 and May 2011 were retrospectively reviewed. Patients were grouped by the apparent precipitating factors at presentation for their corneal ulcers into (1) a trauma/contact lens group and (2) a lid/ocular surface disease group. Baseline characteristics of patients at presentation were compared. The primary study endpoint was time to corneal re-epithelialisation.

Results: 57 consecutive patients presenting with corneal ulcers were included in the study. 33 patients presented with corneal trauma/contact lens use while 24 patients presented with lid/ocular surface disease. The trauma/contact lens group had a significantly shorter time to re-epithelialisation compared to the lid/ocular surface disease group (log-rank p<0.001). The trauma/contact lens group was significantly younger (p<0.001), had smaller ulcers (p=0.02) and was more frequently male (p=0.042).

Conclusions: Presumed precipitating factors for corneal ulceration are strongly associated with corneal re-epithelialisation. Identification of these factors at presentation may help in risk stratification and management of corneal ulcers.

Innovative eye-camps: Rural interventions to actual-eyes NCD rhetoric into reality

H Khaki
Imperial College London

Concerted global efforts such as the SAFE strategy, the OCP and the OEPA and have contributed towards a substantial reduction in Trachoma and Onchocerciasis - the two leading causes of infectious, communicable blindness worldwide. Concurrent attempts to tackle non-communicable age-related eye conditions (glaucoma, cataract and diabetic retinopathy) have been slower by comparison. However, the recent United Nations Meeting on Non-Communicable Diseases (NCDs) has rejuvenated stakeholders to address a growing epidemic, with a specific focus on strengthening health systems. As policy makers contemplate how best to build capacity, powerful lessons can be learnt from NGOs and private funders on improving ophthalmic provision in the developing world.

The present work is an exposition and review of three successful eye-camp models (BCT, Aeinullah and VisionPlus) that focus on treating NCD-related eye conditions in East Africa, and specifically how: Through school-based interventions and the distribution of EyeCare textbooks, NCD prevention is at the heart of treatment.

Cataract surgery has been optimised for expediency and rationed resources whilst maintaining a high success rate in developing countries; Collaborations with Ministries of Health and overseas Corporations (through Corporate Social Responsibility) are helping to provide sustainable interventions in ophthalmology; Surgical interventions are complemented by opportunities to seek gainful employment to provide an integrated ophthalmology experience; Individuals in rural Bagamoyo, Dodoma, Jimba, Kibaha, Lamu, Lindi, Lukana Village, Marumbo, Mtwaru and Moroni are able to access ophthalmology services through innovative outreach projects.
Are blood cholesterol levels associated with Age-Related Macular Degeneration? A systematic review

Z Jarrar
St George’s, University of London

Background: AMD is the leading cause of visual impairment in the developed world. Some studies have investigated blood cholesterol, a defining risk factor of coronary heart disease, as a potential risk factor for AMD. There is conflicting evidence about the association between blood cholesterol levels and AMD.

Aim: To quantify the collective association between blood cholesterol levels and AMD and to explore any impact of cholesterol-lowering therapy on AMD.

Methods: Literature searches of ‘Medline,’ ‘Embase’ and ‘Web of Knowledge’ included ‘blood cholesterol’ and ‘AMD’ terms. A total of 487 published materials were identified, 18 of which were included in this review. Statistical and meta-analyses were performed using a ‘fixed-effect’ approach.

Results: Eighteen studies (1,196 AMD cases out of a population of 37,373) were included in the systematic review. Eleven studies (10 case-control, 1 population-based) presented mean differences in blood cholesterol between AMD patients and control subjects. AMD patients on average had blood cholesterol levels 0.27mmol/L (95% CI, 0.20 to 0.33) higher than control subjects. Seven population-based studies expressed odds ratios of AMD per 10mmol/L increase in total blood cholesterol. No association between a 10mmol/L rise in blood cholesterol and AMD status was found (pooled odds ratio 1.00 [95% CI, 0.99 to 1.01]).

Conclusion: While case-control studies suggest an association between total blood cholesterol and AMD, population-based studies do not. Therefore, cholesterol-lowering therapy is unlikely to impact on AMD. Associations with AMD subgroups require further research.

Palpebral aperture and levator function between eyes with and without upper eyelid skin creases in Chinese

K W Lima, C N Chuab, S L Tingb

Aim: Upper eyelid skin crease (popularly known as double eyelid) is absent in about 50% of the East Asian population. However, there have not been studies looking at the effects of the upper eyelid skin creases on palpebral aperture and levator function.

Methods: Measurements of the skin creases, palpebral apertures and levator functions were taken of 97 Chinese males and 101 Chinese females aged between 18 and 26.

Results: Upper eyelid creases were absent in both eyes in 30.8% and absent in one eye in 6.6% of the study subjects. In the male subjects, the mean values of the palpebral aperture were 9.6 ± 1.0 mm in eyes with skin creases and 8.6 ± 1.2 mm in eyes without. The mean values of the levator function were 14.9 ± 1.5 mm and 12.2 ± 1.9 mm respectively. These results were statistically significant (p<0.001).

Conclusion: Eyes with upper eyelid skin creases have larger palpebral apertures and levator excursions than eyes without upper eyelid skin creases.

Optic Neuritis: review of the NICE guidelines

S Khan

1. Bristol Medical School, University Walk, University of Bristol, Bristol.

Background: Optic neuritis has a well-established association with multiple sclerosis (MS). Ophthalmic changes such as a transient reduced retinal nerve fibre layer thickness are commonly encountered after an episode of acute optic neuritis. Faster recovery of visual outcomes has been associated with a significant increase in quality of life. Therefore prompt identification of patients with optic neuritis and a high-risk of developing MS may lead to early diagnosis, delay MS development and improve quality of life.

Aim: This review aims to evaluate the evidence basis of guidelines for treatment of optic neuritis as set out by National Institute of Clinical Excellence (NICE) and address the future management of acute optic neuritis.

Results: The Optic Neuritis Treatment Trial 1992-2004 (ONTT) have reported a significant increased rate of recovery of visual outcomes including contrast sensitivity and visual fields, with intravenous methylprednisolone compared to placebo or oral route after 15 days. No significant long-term benefits to visual outcomes have been measured with IV/oral corticosteroids compared to placebo. Brain imaging using Gadolinium-enhanced MRI scans may be used to predict MS-risk at 15 years post-onset of optic neuritis. Early screening with fMRI for visual cortex reorganisation may have a role in early diagnosis and as a predictor of better visual outcomes.

Conclusions: Main recommendations from this literature review are: greater emphasis on high-dose corticosteroids for faster recovery of visual outcomes, routine MRI-screening in patients with confirmed acute optic neuritis following positive Aulhorn Flicker Test and further clinical audit on patient quality of life outcomes.

Lucentis (Ranibizumab) vs Avastin (Bevacizumab) report

F Lewis

Royal United Hospital, Bath

Age related macular degeneration (AMD) is the most common cause of poor sight in the UK. 90% of AMD cases are Dry which currently has no treatments and 10% are Wet the main NICE approved treatment it Ranibizumab. This monthly injection costs £10,700 and £18,300 (although courses don’t always stop after two years). Ranibizumab was developed from Bevacizumab (used to
treat cancer) but before the introduction of Ranibizumab some private practices used Bevacizumab to treat patients with wet AMD. In contrast Bevacizumab costs roughly £27 per dose. Both drugs are made by Genentech. The National Eye Institute published the results of a CATT study on the two drugs administered monthly. At 1 year Bevacizumab and Ranibizumab had equivalent effects on visual acuity, with 8.0 and 8.5 letters gained respectively. However the rates of serious adverse events differed, these require further study, and more common with Bevacizumab than with Ranibizumab (24.1% vs. 19.0%). Both drugs are anti-angiogenics and work by binding to VEGF-A (it causes new vessels to grow) and inhibiting it. The NICE currently only approves Ranibizumab for use in patients with wet AMD. Now with this study (May ‘11), I think NICE should revisit the guidelines on Bevacizumab. It is illogical to fund one that is 28 times more expensive but with similar outcomes and risks. By using Bevacizumab for AMD NICE could afford to lower the requirements to qualify for treatment and hence halting further deterioration in vision in more people. From speaking to patients on Ranibizumab treatment, the earlier it is caught and treated the better the vision (since both treatments only stabilise vision).

Global health and ophthalmic surgery in the United Kingdom
Y-J Chong, A Logeswaran, K Chen
1. Fifth Year Medical Student, Imperial College London

Background: 39 million people worldwide are blind with cataracts being the leading cause of blindness in low-middle income countries. It is estimated that the volume of cataract surgeries in developing countries has to increase by 3-4 folds to eliminate cataracts as a major cause of blindness.

Aims: The UK is one of the key players in global health as the second largest donor to global public health. Our aim is to identify the role of the UK in the provision of ophthalmic surgical care to developing countries.

Methods: Literature review

Results: Ophthalmic surgical care provision to developing countries by the UK is mainly through charities and volunteerism. The UK is also part of the International Council of Ophthalmology, which has been running a fellowship-training scheme for doctors from developing countries to train in the UK. However, there have been no formal twinning programs that would allow UK doctors to train and perform ophthalmic surgery in developing countries. Several American universities offer international ophthalmology training in developing countries as part of their residency programs. These programs are more effective than short-term missions, as there is long-term commitment to the provision of human resources, investment in local health infrastructure and health training, and promotion of surgical research agendas relevant to developing countries.

Conclusion: Formal ophthalmic twinning programs should be considered by the UK, given the positive experiences from America, as well as evidence from the WHO demonstrating that such partnerships could address the issue of human resources shortages in developing counties.

Long-term visual outcomes of glaucoma patients following a single episode of transscleral cycloidee laser treatment
I Zhekov, R Janjua, H Shahid, N Sarkies, K R Martin, A J R White
1: Cambridge University Teaching Hospitals NHS Foundation Trust, Cambridge
2: NIHR Biomedical Research Centre, University of Cambridge

Aim: The aim of this study was to document the efficacy and visual outcome of a single cycloidee laser photoaogulation treatment in refractory glaucoma.

Methods: A retrospective chart review of all patients who underwent trans-scleral diode laser cyclophotocoagulation over a 7-year period was carried out in a tertiary referral centre. Of the 87 records examined, 73 patients (84%) had required only a single treatment of cycloidee and were analysed further.

Results: The mean intraocular pressure (IOP) after a single treatment decreased from 39.5 +/- 1.3 mmHg to 17.8 +/- 1.5 mmHg after a 6-week follow-up period, (P<0.0001). This reduction in IOP was maintained over a 3 year period. 63.5% patients were able to reduce the number of medications used, with a mean reduction from 2.6 to 1.6 medications (P<0.05). Mean initial visual field loss was 8.74dB. At 6months post treatment, field loss was measured at 9.06dB (p>0.05). Prior to treatment, average visual acuity was 0.57 LogMAR units. The vision remained unchanged or improved for 83.6% patients (P>0.05) for the duration of the study. Hypotony occurred in 5.3% of patients, predominantly in patients receiving high laser energy treatment (in excess of 90J). No patient required enucleation following cycloidee laser therapy. In our cohort, a single session of cycloidee laser therapy was sufficient to reduce the IOP and maintain vision in 84% patients with refractory glaucoma over a 3 year period.

Conclusion: These results support the view that cycloidee laser treatment can be useful even in eyes with relatively good visual potential.

Treatment of refractory or advanced macular oedema with intravitreal slow-release dexamethasone and bevacizumab
G Manasseh, D McHugh
King’s College Hospital, London

Aim: To analyse the anatomical and visual outcomes of intravitreal injection of slow-release dexamethasone (Ozurdex) either alone or in combination with bevacizumab (Avastin).

Methods: A retrospective review was performed of 7 eyes of 7 patients (6 males and 1 female) with macular oedema who were treated with Ozurdex implantation and avastin injection (2 eyes with Ozurdex alone and 5 eyes underwent combination therapy. The mean age was 72 years (range 54 to 83). The conditions treated included retinal vein occlusion, diabetic maculopathy, and Irvine-Gass syndrome. 6 patients had received previous forms of therapy, but with an incomplete or relapsing response. The review period was 1-3 months. Pre- and post-implantation visual acuities and foveal thicknesses were recorded.

Results: The mean pre-implantation visual acuity was 39.29
ETDRS letters (range 5 to 70 letters), and the mean pre-implantation foveal thickness was 608μm (range 358 to 944μm). By 2 months, the mean post-injection visual acuity was 61.71 ETDRS letters (range 25 to 76 letters), and the mean foveal thickness was 269μm (range -204 to -431μm). The mean change in visual acuity was +22.43 letters (range 0 to 50 letters), and the mean change in foveal thickness was -338μm (range -101 to -703μm). One eye developed recurrent macular oedema following implantation and has undergone further combination therapy. There were no complications of therapy.

**Conclusion:** Ozurdex, either alone, or combined with Avastin produces early reduction of macular oedema with visual improvement. An on-going study is evaluating longer term outcomes.

**The pericyte cell in the pathogenesis of diabetic retinopathy**

N Raithatha

Fifth Year Medical Student, Imperial College London

Diabetic retinopathy is a very common diabetes-related morbidity, present in both type-I and II diabetics, and is a leading cause of blindness. Pericyte cell loss from retinal capillaries is one of the earliest events that occurs in the pathogenesis of retinopathy. The reasons for pericyte loss are still unclear. Many mechanisms have been proposed, but all rather different, and little has been published studying the interrelations between mechanisms.

This article groups the mechanisms of pericyte loss into three categories- factors causing pericyte migration, the role of the immune-system in pericyte loss and the role of molecules from glucose-metabolism. This article evaluates research-studies performed in each category and tries to identify relationships between mechanisms, all with an aim of answering: 'which of the pathogenic mechanisms is the most significant?' This hopes to identify a key therapeutic target to correct pericyte loss and therefore target early-retinopathy. The current treatment in-use - laser-phacoablation- only targets advanced-stage-retinopathy.

AGEs (advanced-glycation-end-products) from glucose-metabolism have been found to possibly interlink many mechanisms of pericyte loss. AGEs affect levels of angiopoietin-2 and PDGF (platelet-derived-growth-factor) involved in pericyte migration and also induce many inflammatory molecules which cause pericyte death (e.g. TNF-a). The downregulation of PEDF (pigment-epithelium-derived-factor) renders pericytes susceptible to AGE-mediated damage and could also be important in retinopathy.

Further work is required to evaluate the extent to which AGEs/PEDF affect the molecules involved in pericyte loss, and newly introduced human-pericyte lines could make this species-specific. Therapeutically targeting AGEs could one day benefit the millions of diabetics suffering from retinopathy.

**Investigating gender-related barriers to eye-care amongst cataract patients in Tamil Nadu**

R Cunningham¹, A Cassells-Brown², S Joseph³

1. University of Leeds
3. Faculty member, LAICO, Aravind Eye Care System, Tamil Nadu

**Aim:** To investigate the understanding and contextualisation of sight-loss and experiences of gender-related barriers to treatment for low-income individuals with cataract. Motivations and barriers to uptake of free treatment at Aravind (Madurai) were examined, and contrasted with the views and beliefs of others. The goal was to elicit the reasons patients with V.A. of 6/24 or worse who consult AECS fail to accept free surgery, and inform future research.

**Methods:** Participants were identified through convenience sampling, after entering the Aravind system. Patients were referred by counsellors if not accepting the recommended treatment. Semi-structured interviews of ten ‘non-willing’ participants were conducted. Two focus groups of ‘willing’ inpatients were conducted to enable triangulation. Interviews were translated and fully transcribed, before coding via thematic content analysis.

**Results:** Poor health-seeking behaviours are compounded by inflexible gender-norms. Sufferers noted progressive visual loss, but were unable to link this to irreversible deterioration. While both men and women were unwilling to travel unaccompanied for treatment, women were also unwilling to undertake treatment due to the lack of support they believed they would receive during recovery.

**Discussion:** Pre- and post-operative family support is essential to reduce the barriers experienced. Perceptions of a free-service as an inferior service may be widespread and this requires further investigations. Four SMART recommendations for stakeholders are suggested. Original research requires effective project planning and data collection; health-related fieldwork requires patience, flexibility, and a realistic set of aims and objectives.
Audits

An audit into ptosis surgery outcomes

D Muhundhakumar1, S Vardy2
1. Stage 3 Medical Student, Cambridge Clinical School
2. Consultant Oculoplastic Surgeon, Peterborough NHS Trust

Aims: To assess the results of Mr Vardy’s aponeurotic ptosis surgery from January 2010 to December 2011. To help improve clinical practice by comparing outcomes with those found in the British Oculoplastic Surgery Society (BOPSS) National Ptosis survey.

Methods: A retrospective audit based on case notes for patients undergoing ptosis surgery by Mr Vardy between January 2010 and December 2011. A BOPSS style data entry sheet including pre-operative, operative and post-operative data was filled in using information from patient case notes. Surgical results were assessed objectively by pre and post-operative measurements of vertical palpebral aperture, upper margin to reflex distance (UMRD), lid show and skin crease. Post-operative prevalence of lagophthalmos and exposure keratopathy were included in the assessment. Where re-operation was required the reasons were documented. The patient’s subjective opinion of whether they were happy with the end result was included.

Results: 27 patients underwent anterior resections between January 2012 and December 2011. At one week post-operatively, 64% of ptosis operations were deemed successful based on UMRD measurements (3mm +/- 1mm). 100% of these patients were subjectively happy with the outcomes. At three months the sample size went down from 14 to 8, but 75% were deemed successful based on UMRD and 88% of patients were happy. At one week post-op, 67% were deemed successful based on interlid UMRD difference (<2mm) with 100 per cent of these patients happy. Sample size fell from 6 to 5 at three months and 40% were deemed successful based on interlid UMRD measurements. 80% of patients were happy. At 1 week post-op, 57% were deemed successful based on interlid show difference (<2mm) with 100% of these patients happy. Sample size fell from 14 to 8 at three months, and 50% were deemed successful based on interlid show with 75% of patients happy.

Conclusion: These results for Mr Vardy can be compared to those of his peers from the BOPSS survey in order to inform clinical practice and highlight areas for improvement.

Clinical audit of the long-term results and rates of complications after strabismus surgery

N J Attreed1, N Watson2
1. Final Year Medical Student, Norwich Medical School, University of East Anglia.
2. Consultant Ophthalmologist, James Paget University Hospital

Aim: To assess whether accurate information is given to patients and parents regarding the success rates and the risks of complications associated with strabismus surgery.

Methods: A consecutive case series of patients who underwent strabismus surgery between 2004 and 2007 were identified from the operative register at a district general hospital. The inclusion criteria were primary strabismus surgeries for any comitant strabismus with visual potential in both eyes. Medical records were reviewed and retrospectively analyzed. Follow-up was at least 5 years. Outcomes were post-operative alignment (success being defined as within 10Δ of orthophoria) and the occurrence of surgical complications. These results were then compared to our current standard: the rates of post-operative alignment and complications currently given by the consultant ophthalmologist when gaining consent for strabismus surgery (obtained from the published literature).

Results: Rates of under- or overcorrection at follow-up were found to be consistent with our standard. Post-operative haemorrhage resulted in all cases. One slipped muscle occurred. No other complications were recorded.

Conclusion: The results of this audit are consistent with those reported in the literature confirming that accurate information is being given to patients and parents.

Recommendations: The use of pharmaco-therapy (lopidine and Phenylephrine) has recently commenced in this hospital and it would be useful to re-audit these patients to determine whether less post-operative bleeding occurs with this technique. Post-operative sub-conjunctival haemorrhage could also be reduced by micro-incisional strabismus surgery. A re-audit will be performed to establish the effects of pharmaco-therapy and micro-incisional strabismus surgery.

Delay in the diagnosis of Retinoblastoma: A clinical audit

A Jaulim1
1. Barts and The London School of Medicine and Dentistry, Queen Mary University of London

Objectives: To determine how long it took for a child with retinoblastoma to be referred from primary to secondary healthcare and finally the overall time it took for the child to be seen by a retinoblastoma surgeon at the Barts and the London NHS Trust.

Methods: A retrospective audit using patient medical notes for the period January 2008 to December 2009. Only sporadic cases were included. This study is compared to a similar study undertaken from 1993 to 1996 which has been published.

Setting Notes provided from the retinoblastoma service at The Royal London Hospital. Main outcome measures (1) referral time from primary health service to secondary health service. (2) referral time from primary to secondary healthcare service. (3) time taken for the child to be seen by the retinoblastoma surgeon. (4) referral time from primary to secondary healthcare service. (5) time taken for the child to be seen by the retinoblastoma surgeon.
time from secondary health service to tertiary service (3) overall referral time from primary healthcare service to tertiary retinoblastoma service (4) association between delay in referral and presentation of a more advanced tumour requiring post-enucleation chemotherapy.

**Results:** The median referral time from primary to secondary health care was 12 days whereas the transition from primary service to tertiary service was 16.5 days (24 weeks). GPs referred the majority of cases and on average took 25 days to refer as compared to health visitors who took 37 days. Median time intervals were 5 days for GPs and 25.5 days for health visitors. The average referral time from secondary to tertiary care was 7 days. Finally, 10 of the 28 patients required post-enucleation chemotherapy for local tissue invasion by tumour. The Mann–Whitney Test demonstrated that there was no significant difference in the delay between this cohort and the group who did not require post-enucleation chemotherapy with $p>0.05$ ($p_1=0.2, p_2=0.5$)

**Conclusion:** The study demonstrated that for the cohort 2008-2009 there remains room for improvement in ensuring referral times to the tertiary service can be made within 2 weeks particularly with respect to health visitors. There still remains a huge variation in referral times between healthcare professions with a range from 4 days to 127 days. Many parents and healthcare professionals are not aware that a white pupil could potentially be due to retinoblastoma. Awareness campaigns in 2010 have emphasized to both healthcare professionals and parents the importance of a white pupil. A re-audit of a cohort of sporadic cases in 2011–2012 will determine if the awareness campaigns have been successful in shortening the referral times to the retinoblastoma service allowing for quicker diagnosis and a reduced morbidity from retinoblastoma for children.

---

**Clinical audit of R1M1 referrals from the English National Screening Programme for Diabetic Retinopathy (ENSPDR)**

C Svasti-Salee, S Stewart

**Medical Student, University College London**

**Introduction:** The ENSPDR guidelines dictate that all patients with NSC grade R1M1 diabetic retinopathy should be referred to hospital eye services. However, based on clinical experience, only a minority require treatment or close follow-up. We propose that the remaining ‘unnecessary’ referrals could instead be monitored in a dedicated R1M1 OCT clinic.

**Aim:** To determine the proportion of patients referred from the ENSPDR with NSC grade R1M1 diabetic retinopathy who do not require laser treatment or close follow-up (at least six months) in diabetic eye clinic.

**Methods:** We examined the outcomes for patients referred to hospital eye services with grade R1M1 diabetic retinopathy. Patients seen at the Whittington and Royal Free hospitals between March and July of 2011 were included. The following were recorded: screening findings (NSC grade and visual acuity), findings in clinic (NSC grade and visual acuity) and outcome (follow-up at less than six months, at six months or longer, or discharge to the screening programme).

**Results:** 118 patients met the selection criteria; 12 were excluded. Of the remaining 106 patients, 55 (51.9%) were for follow-up at the diabetic retinopathy clinic at six months or longer and 26 (24.5%) were discharged back to screening. Only 25 patients (23.6%) required follow-up within six months, because the severity of their maculopathy warranted close observation or treatment.

**Conclusion:** 76.4% of R1M1 referrals did not require treatment or close follow-up. The incorporation of a dedicated clinic for R1M1 referrals into the existing patient pathway would reduce case-load and may be more cost-efficient.

---

**Tertiary centre’s for uveitis care: Are they undervalued?**

S Ilyas

**University of Birmingham**

**Background:** Uveitis is a potentially blinding disease and many trainees have little exposure to the condition. Therefore, patients are often referred to tertiary centres of care from very long distances. Currently the main centres are: Newcastle, Birmingham, Cambridge, Bristol and London.

**Aim:** Recently there has been a huge emphasis on reducing new patient waiting times (18 weeks from referral to being seen in this clinic). Furthermore, commissioners are beginning to use contract limiters and financial penalties to reduce new: follow up (N: F) ratios to 2.5 or below. Therefore, we will comment on how well this tertiary uveitis centre is meeting these targets.

**Methods:** Patients seen in Professor Philip Murray’s Uveitis Outpatient Clinic, Birmingham Midland Eye Centre (BMEC), during the period 1st April 09-31st March 2011 (24 Month Period) were selected for analysis.

**Results:** 245 new patients were referred from 31 PCTs with only 15.1% of patients being discharged. 710 follow up patients (3596 follow up patient episodes) were referred from 38 PCTs and 7.04% of patients were discharged. The PCTs which patients were referred from will be outlined on a map of the UK. The referral waiting time was 3.5 weeks and the N: F ratio was 1:14.7.

**Conclusion:** We suggest training more ophthalmologists in order to manage/monitor this condition, which will allow more patients to be discharged from the service. Also, we propose to increase the tariff for new and follow up patient visits to reflect the demand for the service.
Implementation of glaucoma NICE guidelines in Salisbury District Hospital

M Qureshi
University of Southampton

Background: In the United Kingdom, over 1 million sight tests are performed annually, of which 60,000 are referred for further assessment regarding glaucoma. Glaucoma is the second leading cause of blindness worldwide and is characterised by a triad of raised intra-ocular pressure, abnormality in the disc with visual field defects.

Aim: To determine whether NICE guidelines regarding glaucoma are being implemented at Salisbury District Hospital and previous recommendations are being followed.

Methods: Data was collected at random from out patients at Salisbury District Hospital (SDH). Fifteen chronic open angle glaucoma patients were selected from five different consultants and their data was reviewed and recorded.

Results: The results have shown that from the patients selected, 100% of patients had pachymetry and visual acuity recorded. In 86% of patients the intra-ocular pressure was less than 18 or two-thirds of presenting and had visual field’s assessment. The data found no patients (0%) were offered any written documentation regarding glaucoma. The results also showed that target pressures were set in 13% of cases and OCT was performed in 53% of cases.

Conclusion: Currently, patients are not being provided with the correct information to understand their clinical disease with some NICE guideline criteria not being completely met. Setting target pressures and using OCT is not mandatory, however can aid the clinical picture and disease management.

An audit of current screening practice for retinopathy in type 1 and type 2 diabetes mellitus patients

A Vanna, K Patel, J Barraclough
University of Birmingham

Background: Retinopathy screening amongst the diabetic population has been established as an integral part of routine diabetic care since 2003. Intent of this practice is to allow early identification of retinal damage so treatment may be sought promptly preventing sight loss. NICE guidelines recommend that all diabetic patients should be offered retinopathy screening at the time of diagnosis which is then repeated annually, however this has not been met as exemplified by 2009 Department of Health data indicating that of the approximately 2.3 million diabetics in England only 70.2% have received screening.

Objective: The objective of this retrospective audit was to assess how effectively these guidelines are being implemented within a general practice (Cheswick Green Surgery, Solihull).

Methods: This audit used patient data collected from the EMISTM patient record system and central screening records as provided by the Heart of England Diabetic Retinopathy Screening Centre of Excellence (HEDRSC). There are 184 diabetics enlisted at this practice: we aimed to identify what proportion were part of the formal screening programme, and investigate the reasoning behind those who are not.

Results: Of the 184 diabetic patients, only 150 (84%) had been screened within the past 15 months. Of the remaining 34 ‘unscreened’ patients, only 32% were true non-attendees, the remaining had either been screened or deceased. There was seen to be a large amount of discordance between EMISTM and the central HEDRSC registers which may be partly responsible for the overinflated value of screening non-attendance.

Nd:YAG capsulotomy following postoperative opacification of hydrophilic and hydrophobic acrylic IOLs

C L Godfrey, S Hull, V Lee
Central Middlesex Hospital, North West London Hospitals NHS Trust

Aim: To report posterior capsular opacification following implantation of hydrophilic/hydrophobic acrylic IOLs and assessment of outcomes following treatment with Nd:YAG capsulotomy.

Methods: Retrospective review of notes of patients who underwent cataract surgery with development of posterior capsular opacification (PCO). 60 patients who underwent Nd:YAG capsulotomy for PCO from August 2010-February 2011 were included. Data regarding pre and postoperative visual acuity, ocular comorbidity and complications relating to cataract surgery and Nd:YAG capsulotomy were recorded. Time lapse from surgery to development of opacification was evaluated and visual acuity pre and post Nd:YAG capsulotomy was compared.

Results: 60 patients identified with a total of 66 eyes developing posterior capsular opacification following phacoemulsification. 45 eyes underwent implantation of a hydrophilic acrylic intraocular lens (Rayner) with the mean time to development of PCO being 2.62 years. Uveitis was reported in 1 patient (1.5%) following Nd: YAG laser capsulotomy however 51.5% patients were not followed up after treatment. logMAR visual acuity improved substantially in 40.6% patients following treatment for PCO. 59.4% of patients did not achieve the expected improvement in visual acuity, however 78.9% of these patients had pre-existing ocular pathology.

Conclusion: Complication rates following Nd:YAG capsulotomy are low. However it is recommended that patients at risk of developing complications are followed up routinely. Reduction in laser power is recommended with intention of re-auditing.
Audit of the patients newly registered with Certificates of Visual Impairment predominantly due to diabetic retinopathy

A Higham
Kings College London

Background: The UK National Screening Committee for Diabetic Retinopathy (DR) states that within 5 years of starting the screening programme there is an achievable 10-40% reduction in patients newly certified visually impaired (CVI) predominantly due to DR. Consequently, Conquest and Eastbourne District General (EDG) hospitals audited this group, providing a baseline for monitoring in the re-audit.

Method: Prospective data was taken from the CVI databases at each hospital. The initial audit focussed on 01/01/2009 – 30/09/2010, the re-audit between 01/12/2010- 30/11/2011.

Results: The average number of CVI registrations per month in the first and second audits were 9.65 and 8.25 at Conquest and 8.6 and 17.2 (over double) at EDG, respectively. There were 12 (6.2% of total) CVI registrations with DR in Conquest and 10 (5.3% of total) at EDGH initially. In the re-audit, 4 DR registrations (4.0% of total) were completed at Conquest and 13 DR registrations (6.3% of total) at EDG.

Conclusion: The two-fold increase of patients registered CVI per month at EDG may be accounted for by increased awareness by professionals and publicity of CVI, leading to increased uptake. This occurred secondary to the initial audit suggesting many eligible patients were not registered. It is therefore difficult to interpret the number of DR registrations at EDG. In Conquest there has been a decrease across the audits in absolute number of DR registrations, associated with a lower percentage of DR of total CVI registrations. This decrease is in line with screening guidance and will be monitored yearly.

An audit on ophthalmic assessment in zygomatic fractures

B D T Xue Chao, J Y Tung Lo
University of Manchester

Background: Zygomatic fractures are a common consequence of blunt trauma to the face, and may result in ophthalmic complications such as retrobulbar haemorrhage and orbital floor fractures. It is therefore essential that proper ophthalmic assessments are done. This audit aims to ascertain whether or not trainees at the Royal Blackburn Hospital are performing these assessments, and if so, how well.

Methods: 34 sets of notes of patients with known zygomatic fractures were reviewed. Ophthalmic assessments, if done, were noted for thoroughness. Assessments for the following were audited: subconjunctival haemorrhage, enophthalmos, hypoglobus, pupils equal and reactive to light and accommodation, ophthalmoplegia, diplopia.

Results: Junior staff at the Oral and Maxillofacial Department performed more thorough assessments (60%) than those at the A&E department (10%).

Conclusion: There is still room for improvement in both groups. In the Oral and Maxillofacial department, most of the ophthalmic assessments were prompted during the use of pre-designed trauma sheets. The A&E Department, however, lacked such a comprehensive resource. It is proposed that these trauma sheets be shared with the A&E department. Alternatively, an ophthalmic assessment “fill-in-the-blanks” ink stamp may be designed for the A&E department to facilitate recording in place of trauma sheets.

First episode vs recurrent unilateral acute anterior uveitis audit

L White
University of Birmingham

Aim: The purpose of this audit was to assess: Quality of recorded data in the patient’s notes. And whether both eyes were dilated and what treatment the patient received. And if the aforementioned points were affected by whether the uveitis was a first episode or recurrent.

Methods: Retrospective audit conducted at The Birmingham and Midland Eye Centre. A computer search identified patients diagnosed with uveitis between 27/10/10 – 30/11/10. A questionnaire was devised which looked at 13 different documentations including laterality of eyes, flare, cells and grade of doctor. Of the 342 patients on the database, only 23 had true, unilateral uveitis hence these were the patients included in the audit.

Results: Documentation of different signs varied including 100% for visual acuity, 50% for keratic precipitates for first episode and 62.5% for second episode. In first episode cases, 50% of affected eyes and 37.5% of unaffected eyes were examined under dilated conditions. In recurrent cases, 50% were of affected and 28.6% of unaffected eyes. 1 patient seen by a ST1-3 was discharged immediately whereas 3 patients seen by the same level were followed up within 7 days. There was no pattern to ST4-7s follow up time. The SAS doctors followed up after 2 weeks.

Conclusion: The documentation in the notes needs to be vastly improved. Not all patients have the fundi of their eyes examined, the findings of which may contribute to their treatment. There’s a correlation between follow up time and the grade of doctor.
Agreement between photographic and biomicroscopy grading of diabetic retinopathy

R Healy, V Jones, A Sallam, P Donachie, P H Scanlon, R L Johnston
Newcastle University

Aim: To audit the agreement level and identify reasons for disagreement between grading of mydriatic digital photographs in a diabetic retinopathy screening service and hospital biomicroscopy grading for diabetic retinopathy and maculopathy.

Methods: National Screening Committee grades for diabetic retinopathy recorded on an electronic medical record following hospital biomicroscopy were retrospectively compared to the grades at screening that prompted referral. In cases of disagreement, images were reviewed.

Results: Data for 1635 patients (3270 eyes) were analysed. The hospital eye service grades for diabetic retinopathy were: R0 (no retinopathy) in 355 eyes; R1 (background retinopathy) in 1877 eyes; R2 (pre-proliferative retinopathy) in 908 eyes; R3 (proliferative retinopathy) in 135 eyes. The screening service grades were in agreement in 2516 eyes (76.9%), they recorded a lower grade in 246 eyes and a higher grade in 508 eyes. Agreement using linear weighted kappa was good (κ = 0.65). The commonest cause for disagreement was over-grading of R1 as R2 by clinicians. The hospital grades for diabetic maculopathy were: M0 (no maculopathy) in 2461 eyes and M1 (maculopathy) in 809 eyes. The screening service were in agreement in 2298 eyes (76.9%), they recorded a lower grade in 112 eyes and a higher grade in 860 eyes. Agreement using Kappa was moderate (κ = 0.39) a similar level to the previous study (κ=0.41). The commonest cause for disagreement was clinicians missing exudates.

Conclusion: This study showed improvement in the levels of agreement for diabetic retinopathy and maculopathy between hospital and screening services between 2008-2011.

An audit examining the accuracy of biometry comparing the predicted refractive outcome and the actual post-operative refraction in cataract surgery

T Berman
Newcastle University

Background: Pre-operative biometry is an important quality standard in cataract surgery, impacting the refractive outcome and quality of vision. The guidelines by the Royal College of Ophthalmologists state that the NHS is expected to be able to achieve a refractive outcome within +/-1.00D of the predicted outcome in 85% of cases.

Aim: Does the ophthalmology department at the RVI meet the guidelines set by the Royal College of Ophthalmologists? Has the department improved since last year’s audit, in which the department failed to meet the standard?

Method: Data from 100 consecutive patients who had undergone cataract surgery within the last 3 months was collected retrospectively. A comparison between pre-operative predicted refraction and actual post-operative refractions was studied.

Results: 90% of the patients sampled fell within the College guideline, meaning that the department is meeting the criteria.

Discussion: Ideally, this audit would have been completed prospectively, tracking the patient notes from their initial pre-operative assessment though to their post-operative check. The data as presented only confirms that the RVI meets the college standards; it does not highlight any possible means for improving outcomes after cataract surgery.

Recommendations: Repetition of this audit on an annual basis, as well as regular reports of outliers throughout the year, in order to identify areas for improvement.

An audit of management of acute conjunctivitis at one GP practice

L Lai
Imperial College London

Background: Acute conjunctivitis (AC) is very common, accounting for 2% of consultations in general practice. Although AC is usually self-limiting, more than 80% of patients presenting with AC are given prescriptions of ocular antibiotics. 3.4 million prescriptions of these antibiotics are issued every year, at a cost of £4.7 million to the NHS. 10% of patients will experience side effects from ocular antibiotics, which can be avoided in the first place. Unnecessary prescriptions may also contribute to antibiotic resistance.

Aim: This audit is to assess whether the doctors at one GP practice in London prescribe ocular antibiotics responsibly in the treatment of AC.

Methods: Data of patients presented to the practice with AC in the one month period between 01.11.2011 and 30.11.2011 was collected and analysed to see whether they were managed without prescriptions of antibiotics. A standard of 70% was set.

Results: 13.3% patients were managed without prescriptions of ocular antibiotics, of which 75% re-attended the practise within 2 weeks with the same complaints. Only 7.7% of those who were prescribed with antibiotics re-attended.

Conclusion: To safely and effectively reduce prescriptions of ocular antibiotics in the management of AC, doctors should educate patients that symptoms of AC usually settle within 1 to 2 weeks, advise them to practise self-care, and re-attend if symptoms become more severe. Education of doctors is equally important, as they may not be aware of the evidence regarding management of AC. A repeat of this audit cycle should be conducted in six months’ time.
Referrals to the Paediatric Ophthalmology service: How accurate are the referrals from General Practitioners and other sources in the community?

D K-H Ho\textsuperscript{1}, G Jutley\textsuperscript{2}, B Gohil\textsuperscript{2}, S Khan\textsuperscript{2}, L Dhir\textsuperscript{2}

\textsuperscript{1} Imperial College London
\textsuperscript{2} Chelsea and Westminster Hospital.

\textbf{Aim:} The purpose of this study was to evaluate referrals to the Paediatric Ophthalmology service at a large London teaching hospital and to detect discrepancy between the diagnosis on referral and the final diagnosis.

\textbf{Method:} Retrospective case note review of 105 consecutive paediatric patients. The diagnosis mentioned in the initial referral letter, and the final diagnosis made after full clinical assessment were compared for accuracy.

\textbf{Results:} Source of referrals: General practitioners (67%); hospital physicians (17%); school nurses (7.4%) and health visitors (8.6%). 68% of children were under 7; 54% under 5 and 34% under 3 years respectively. Out of 57 children (54%) under 5 years, 28 were referred with reduced vision. General practitioners referred 17 of these; having liaised with optometrists in only 2 cases. Four of the 28 patients had vision acuity documented in the referral. There was a large discrepancy between the initial and the final diagnosis. 13% of diagnoses on referral were correct, 19% partially correct and 68% completely incorrect.

\textbf{Conclusion:} There is only 13% corroboration between diagnoses and 68% of cases referred had a completely incorrect provisional diagnosis. We demonstrated a lack of ophthalmic knowledge in the general practitioners in the UK, which indicates a need for improvement in training.
Interested in ophthalmology? Or just confused about eye movements? Want to learn exactly how to use an ophthalmoscope? Have an ophthalmology-related project or elective you want to publish?

Join BUOS - a dedicated learning platform for medical students and junior doctors:

- **Online learning** via our website, facebook and twitter pages
- **Practical Skills for Future Ophthalmologists Workshop** at Moorefields Eye Hospital, London
- Annual **Ophthalmology Conference** at the Royal Society of Medicine, London
- **British Undergraduate Journal of Ophthalmology**, a new peer-reviewed online journal
- **Essay Prize Competition** “Innovations in Ophthalmology”
  Deadline: Friday 5th April 2013
- **iCare** - project to educate school kids about the eye health and fundraise at your medical school for our chosen charity - **Orbis**