ROYAL ACADEMY OF MEDICINE IN IRELAND

IRISH JOURNAL OF MEDICAL SCIENCE

Proceedings of the RAMI Section of Ophthalmology
Meetings 2005–2015

Irish Journal of Medical Science
Volume 184 Supplement 10
DOI 10.1007/s11845-015-1331-4

Disclosure Statement

This supplement has received no external funding or sponsorship

Ir J Med Sci (2015) 184 (Suppl 10):S423–S473
DOI 10.1007/s11845-015-1331-4

Proceedings of the RAMI Section of Ophthalmology Meeting 27th March 2015 (Limerick)

Profile of Infectious Keratitis: Risk Factors and Clinical Outcomes in an Irish Population

Connolly S, Brennan R, Treacy M, Fulcher T

Department of Ophthalmology, Mater Misercordiae University Hospital, Dublin

Background: Despite treatment advances, microbial keratitis remains a cause of permanent and severe vision loss.
Aim: To retrospectively assess patients with microbial keratitis attending a tertiary referral hospital in Ireland with a view to identifying predisposing factors, clinical presentation and treatment response.
Methods: Patients with a positive corneal scraping culture and received inpatient treatment over a 5-year period were identified via the microbiology database, and a retrospective audit of their medical records was carried out. Clinical information on aetiology, culture results and sensitivities, clinical signs, treatment administered and treatment response was gathered and analysed.
Results: Fifty-eight eyes of 47 patients who received inpatient treatment were identified. Mean duration of admission was 13.7 days, with the longest length of stay 55 days. Eight patients (17 %) of patients were readmitted for further treatment including corneal transplantation. The length of stay was longer in older patients, those with fungal infections, and infections affecting existing corneal transplants. Thirty-two eyes (55 %) had a presenting visual acuity of finger counting or less. Twelve eyes (20.6 %) achieved a final VA of 6/12 or better. Important risk factors included contact lens wear (18.9 % of eyes), ocular surface disease (13.7 % of eyes), corneal anaesthesia (12.1 % of eyes). Seven eyes of 5 patients (12.1 %) required corneal grafting, with 2 patients requiring more than 1 graft to eradicate infection.
Conclusion: Microbial keratitis is an important cause of ocular morbidity. Age and poor presenting visual acuity are prognostic indicators.

References:

1. Otri AM, Fares U, Al-Aqaba MA et al (2013) Profile of sight-threatening infectious keratitis: a prospective study. Acta Ophthalmol 91:643–651
2. Green M, Apel A, Stapleton F (2008) Risk factors and causative organisms in microbial keratitis. Cornea 27:22–27

Iris Micohaemagiomata: a Rare Case of Spontaneous Hyphema in a Young Healthy Lady

Cosgrave E, Ntomchukwu H

Ophthalmology Department, Waterford Regional Hospital

Case description: Sixty-year-old female presented with a days history of left blurred vision.
Ocular exam in right eye was normal. In the left, vision was 6/10, intraocular pressure was 25. Anterior chamber was mid-shallow, with spontaneous micro hyphema and iris vascular turfs on the pupillary margin, fundoscopy and gonioscopy was normal. She had a fundal fluorescein angiography which was normal.

She was not treated but observed and seen again in 3 weeks, at this stage vision had improved to 6/7.5, microhyphema had settled, intraocular pressure was down to 14, but she had persistent iris tuft on the left pupillary margin. Again no abnormalities in the right eye.
Discussion: Management of iris microhaemagiomata depends on the severity of hyphema, in this particular case, it wasn't severe and the intraocular pressure was marginally increased so no treatment was necessary. The essence of this presentation though rare, is to illustrate the importance of thorough ocular examination and the need for high index of suspicion in patients presenting with spontaneous hyphema to prevent unnecessary long time treatment when misdiagnosed.

Case of Bilateral Optic Disc Drusen with No Signs of Progression

Surzhenko I, Logan P

Beaumont Hospital, Dublin

Objectives: Present a case of bilateral optic discs drusen with no signs of the disease progression for more than 20 years.
Discussion: Visual acuity in adults with ODD is often not affected but the visual fields of these patients can be abnormal and may deteriorate over time[1].
Methods: Fifty-five-year-old lady presented to ophthalmology department with an urgent referral from an optician. The patient did not have any complains. She went with her husband to the optician to have his eyes checked and out of curiosity asked to check her eyes as well.
On examination: VA 6/5 6/4. Left eye: numerous round, yellowish elevations visible in the optic nerve head with severely constricted visual fields in left eye. Right eye a few small yellow crystals in the central part of the optic disc with normal visual fields.
Results: The patient was diagnosed with bilateral optic disc drusen. No treatment needed. Examination of eyes every year to detect progression. Our patient VA, IOP and visual fields remain stable for more than 20 years.
Conclusion: Discs drusen should be considered as a diagnosis in overall healthy patients without any complaints, with good visual acuity but peripheral visual fields restriction.
This case shows that the course of the disease is not always progressive, but can remain stable for a long period of time.

Rates of Calibration Error and Knowledge of Technique Using Goldmann's Applantation Tonometers

Murphy M, O'Neill E, O'Brien C

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Background: Intraocular pressure (IOP) measured using Goldmann applantation tonometers (GAT) is the only modifiable risk factor in glaucoma with treatment decisions based largely around IOP level.

Aims: The primary aim was to assess rates of GAT calibration error in three north Dublin hospitals. The secondary aim was to assess knowledge of calibration assessment technique as part of an online survey.
Methods: Rates of calibration error were calculated using a calibration bar at 0, 20 and 60 mmHg on a total of seventeen slit-lamp-mounted Haag-Streit Goldmann tonometers in the Mater Hospital, Temple Street Children's Hospital and Beaumont Hospital. Error rates were calculated using both the manufacturer's recommendation of ±0.5 mmHg at the three testing levels and the South East Asia Glaucoma Interest Group's (SEAGIG) definition of calibration error tolerance (acceptable error within ±2, ±3 and ±4 mmHg at the 0, 20 and 60 mmHg testing levels, respectively). An online survey was distributed amongst non-consultant hospital doctors (NCHDs) to assess knowledge of calibration techniques and responsibilities.
Results: 17.7 % of tonometers were accurate according to manufacturer's recommendation of ±0.5 mmHg at three test levels with total calibration error ranging from −0.5 to 6 mmHg. According to SEAGIG recommendations accuracy was determined to be 76.5, 82.3 and 88.2 % at the 0, 20 and 60 mmHg testing levels, respectively. Provisional questionnaire results suggest 35.7 % of NCHDs do not know how to calibrate a tonometer with 7.1 % routinely checking calibration prior to slit lamp use. 28.6 % of NCHDs do not know what the acceptable rate of calibration error was with a further 64.3 % unsure what to do if error level was deemed unsuitable.
Conclusions: Tonometer calibration error rate is high with a poor understanding of technique, responsibility and action required if calibration falls out of acceptable range.

Intravitreal Triamcinolone Injection Versus Focal Laser Treatment for Resistant Diabetic Macular Oedema

Horgan N, Hamoud A

St. James's Ward, St. Vincent University Hospital, Elm Park, Dublin

Purpose: To compare the effect of an intravitreal injection of triamcinolone, a corticosteroid, with that of focal argon laser treatment for reduction of persistent diabetic macular oedema.
Methods: Twenty eyes of 14 patients with unilateral or bilateral diabetic macular oedema participated in this audit. All of the patients had previous treatment with many intavitreal Avastin injections. Twelve eyes received 4 mg triamcinolone injection and the other eight got laser treatment with or without the steroid injection. The clinical course of best-corrected visual acuity (VA) with a logarithm of the minimum angle of resolution chart and averaged foveal thickness using optical coherence tomography was monitored for up to 6 months after the injection.
Results: Before the injection, foveal thickness and VA were checked. In the triamcinolone-injected eye, and in laser treated eyes; there was no significant difference between the groups. One week after treatment, both groups showed significant regression of macular oedema. The triamcinolone-injected eye showed significantly better results than the laser treated eye. However, triamcinolone treated eyes showed the recurrence of macular oedema with time, even at 24 weeks. Laser, on the long run, kept better results than triamcinolone.
Conclusions: With the generally used concentration, intravitreal injection of triamcinolone acetonide showed better results in reducing DME and in the improvement of VA than that of focal laser. However, its effect is temporary. Better, longer lasting effect usually achieved with focal laser treatment.

Analysis of Paediatric Attendances to a Tertiary Referral Ophthalmic Emergency Department over a One-Month Period

Duff E, Duignan E, Cassidy L

Royal Victoria Eye and Ear Hospital, Adelaide Road, Dublin

Aims: To analyse the pattern of paediatric presentations to the ophthalmic casualty Department of the Royal Victoria Eye and Ear Hospital (RVEEH) in order to inform recommendations for policy changes.
Methods: Paediatric presentations to casualty over a one-month period were identified using a register and case notes examined where available. Information was recorded and categorised according to: patient demographics; source of referral; triage time; triage category; and diagnosis.
Results: One-hundred and six paediatric patients attended casualty during the study period. Some 66 (62 %) self-referred. 50 % of referred patients came via a General Practitioner (GP). Thirteen percent presented from outside the hospital's catchment area. None of the out-of-hours patients (n = 20), attended before 8 a.m. or after 9 p.m. On average, 10.1 paediatric patients presented per day (SD = 0.9). Of cases analysed (n = 67), 36 (54 %) did not require urgent consultation. Most visits related to trauma and infection.
Conclusions: Resource distribution should be informed by the finding that weekends and weekdays had equal attendance, while none of the sample analysed attended between the 9 p.m. and 8 a.m. period. Half of referred paediatric cases were GP referrals, while for the wider population including adults other professionals and self-referral play a greater role, with only 17 % of non-paediatric referrals to casualty being from GPs[1]. Recommendations of an audit[2] of GP referrals to the RVEEH casualty are thus particularly relevant to the paediatric population. Further GP ophthalmic education could address the predominance of non-urgent referrals. This audit has the potential to increase efficiency and patient satisfaction at the RVEEH.

References:

1. Fenton S, Jackson E, Fenton M (2001) An audit of the ophthalmic division of the accident and emergency Department of the Royal Victoria Eye and Ear Hospital, Dublin. Ir Med J 94(9):265–266
2. Al-Arrayedh H, O'Doherty M, Murphy C, O'Reilly F (2010) An audit of primary care referrals to the Ophthalmic Accident and Emergency Department of the Royal Victoria Eye and Ear Hospital, Dublin. RCSI SMJ 3(1):25–28

Rare Case of Choroidal Melanoma Associated with Gastrointestinal Cancer

Minasyan D, Cullinane A

Ophthalmology

Malignant melanoma is a neoplasm of melanocytes, arising de novo or from a pre-existing benign nevus. Melanoma is defined as familial if it is described either in a family with three melanoma patients (irrespective of their relationship) or in a family in which two first-degree relatives are diagnosed with melanoma. The incidence of familial melanoma is about 1.5/100,000 and the prevalence is

unknown. Other cancers, besides melanoma, may also be associated: pancreatic carcinoma, other gastrointestinal cancers and breast cancer.

The purpose of this paper is to present a rare case of FMM associated with gastrointestinal cancer in context of a review of a recent published literature on new available genetic tests and genes responsible for FMM in association of other types of cancer.

30-year-old lady was diagnosed with right choroidal melanoma in 1997, was treated with ruthenium 106. Six years later she was diagnosed with multiple adenomatous polyps on left colon necessitating left hemicolectomy. Her younger sister was diagnosed with left choroidal melanoma in 2006, which was treated with ruthenium plaque therapy. She also undergone left hemicolectomy for left colonic multiple adenomatous polyps. Similar pattern of pathology were strongly suggestive of genetic component. Several genetic tests were performed, recently described ocular melanoma BAP1 gene, also MSI, MYH polyposis, MLH1 and MSH2 were normal.

This case was forwarded to Medical Genetics team in UK, who carrying out research into rare unusual inherited forms of cancer.

The APC of Choroidal Melanomas: a Novel Systemic Association of Metachronous Choroidal Tumours

Mongan AM, O'Neill V, Horgan N

Department of Oncology, Royal Victoria Eye and Ear Hospital

Background: Metachronous melanomas in the same eye are rare, with only a single published case of consecutive unilateral melanomas[1].
Aims: To describe an unusual case of a patient with ipsilateral metachronous choroidal melanomas.
Methods: A photo-essay together with the diagnostic pathway of one patient illustrates this uncommon and complex case.
Results: A temporal macular choroidal melanoma was diagnosed in the left eye of a 36-year-old Caucasian woman in 2006. This was successfully treated with ruthenium plaque radiotherapy with retained visual acuity of 6/12. In 2014, routine six-monthly review revealed a rapidly growing, pigmented, juxtapapillary choroidal tumour nasally in the same eye. Fundal photographs, OCT, autofluorescence and ultrasound was performed; a diagnosis of a unilateral metachronous choroidal melanoma was made and she was referred for proton beam radiotherapy. Of note, her past medical history included partial colectomy for polyposis secondary to familial adenomatous polyposis (FAP). Family history included a sister who underwent plaque radiotherapy for choroidal melanoma, and also had a history of FAP. Adenomatous polyposis coli (APC) protein is mutated in FAP patients and in sporadic colorectal tumours. Korabiowska et al. demonstrated that alterations in the APC gene occur in cutaneous melanomas, suggesting a possible genetic predisposition accounting for the rare occurrence of two consecutive choroidal melanomas in one eye [2].
Conclusions: To our knowledge this is the first case reported in the literature to highlight a possible association between choroidal melanoma and familial polyposis coli.

References:

1. Hadden PW, Damato BE (2003) Consecutive choroidal melanoma in the same eye of a patient. Am J Ophthalmol 135(5):728–729
2. Korabiowska M et al (2004) Analysis of adenomatous polyposis coli gene expression, APC locus microsatellite instability and APC promoter methylation in the progression of melanocytic tumours. Mod Pathol 17:1539–1544

Proceedings of the RAMI Section of Ophthalmology, Friday 5th December 2014, Dublin

Orbital Lymphangioma

Guevara G[1], Henry E[1], Stokes J[1], O'Driscoll D[2], Das A[3], Higgins G[1]

Departments of Ophthalmology[1], Radiology[2], Paediatrics[3], University Hospital Waterford, Dunmore Road, Waterford

A 5-year-old girl presented with a 1 week history of worsening left eye pain with associated vomiting and diplopia. The patient was apyrexial and laboratory investigations were normal.

On examination there was axial proptosis of her left eye and restricted eye movements in all directions. In addition the patient had binocular diplopia. Examination revealed good visual acuity, colour vision and normal intraocular pressure. Progressive restriction of extra-ocular movements was noted over the next 3 days, however, optic nerve function remained stable.

The patient was commenced on intravenous antibiotics and a CT Orbit was performed. CT demonstrated an orbital mass measuring 1.4 × 1 cm at the orbital apex, inseparable from the optic nerve and a second, connected lesion at the distal optic nerve measuring 1.4 × 0.7 cm. There was no orbital cellulitis or abscess.

The patient was transferred to an outside institution where MRI orbits demonstrated a bleeding lymphangioma. The patient was managed conservatively with oral dexamethasone. Her eye movements and proptosis have markedly improved with no further evidence of rebleeding.

Lymphangiomas are benign hamartomatous vascular lesions and are an uncommon cause of proptosis in children. Lymphangiomas account for less than 4 % of orbital space-occupying lesions[1]. MRI is the imaging modality of choice. Corticosteroids can expedite resolution of symptoms[2]. Preserving visual function can present a challenge for clinicians with a wide variety of therapeutic options used including sclerosing therapy, corticosteroids, surgery and more recently sildenafil[3]. This case demonstrates a rare cause of proptosis, successfully managed conservatively.

References:

1. Simas N, Farias JP (2014) Orbital lymphangiomas: surgical treatment and clinical outcomes. World Neurosurg 81(5–6): 842.e5–842.e10
2. Sires BS, Goins CR, Anderson RL et al (2001) Systemic corticosteroid use in orbital lymphangioma. Ophthal Plast Reconstr Surg 17:85–90
3. Gandhi NG, Lin LK, O'Hara M (2013) Sildenafil for pediatric orbital lymphangioma. JAMA Ophthalmol 131(9):1228–30

Gradual Reduction in Right Vision

Curtin D[1], Janovics A[1], Moran T[2], Brien O[3], Kwan S[3]

Eye Department[1], ENT Department[2], RVEEH, Adelaide Road, Dublin; Department of NeuroSurgery[3], Beaumont Hospital

Case report: A 41-year-old female presented with a 4 month history of gradual reduction in right vision and desaturation for red. She had no relevant past ocular history. She was on lithium for manic depression and attended a Psychiatrist regularly. She had a 4-year history of treatment for infertility including IVF and ISCE and had been on Clomid for 1 and a half years.

Examination confirmed reduction in right vision OD = 6/24 OS = 6/6.

Right RAPD was recorded and right optic atropy was found on fundoscopy. Ocular examination was otherwise normal.

Goldmann field testing confirmed an enlarged right blind spot and a central scotoma. Her left visual field was normal. VER confirmed a delay in latency R 142 ms L 105 ms.

An urgent MRI scan of the brain and brainstem was requested which identified a 7 cm mass lesion arising from the clivus.

She was transferred urgently to the neurosurgical unit in Beaumont Hospital where surgical resection of the tumour was undertaken.

The histology of the lesion, the patients' long term prognosis, and post op follow up will be presented.

Using the Flexible Silicone Elastomer 'ArtificialIris' (Human Optics) to Manage Traumatic Mydriasis: a Case Report

Goodchild C, Kennelly K, Kinsella F

Department of Ophthalmology, University Hospital Galway

Background: Over last 20 years artificial irises have been used to manage symptoms of photophobia, glare and reduced visual acuity caused by aniridia.
Aims: To report a case using a flexible silicone elastomer, 'ArtificialIris' (Human Optics) to relieve symptoms of traumatic mydriasis.
Case report: A 28-year-old man suffered blunt trauma to his right eye from a high velocity impact by a plastic lid following an air compressor explosion. He was initially managed elsewhere with vitreoretinal surgery for a giant retinal tear with subsequent phacoemulsification and posterior chamber intra-ocular lens insertion.
He presented to us 18 months post trauma with severe symptomatic glare and photophobia due to persistent traumatic mydriasis. Right visual acuity was 6/18 (emmetropic) and mydriasis measured 7 mm, unreactive to light. An 'ArtificialIris' (Human Optics) which was colour matched to the other iris was inserted into the ciliary sulcus. Two weeks post operatively his glare and photophobia was completely resolved and he was delighted with the cosmetic result.
Discussion: The first artificial iris implant was introduced in Europe in 1994[1]. There are 3 categories of artificial iris—modified capsule tension rings, iris reconstruction lenses, and rollable silicone wafers. 'ArtificialIris' is a flexible silicone elastomer which may be inserted through a 2.5–3.2 mm corneal section. This is considerably smaller than other models which require incision sizes of 4–11 mm. As well as managing glare the 'ArtificialIris' is colour matched to the other iris providing excellent cosmesis and not affecting refraction.

References:

1. Sundmacher R, Reinhard T, Althaus C (1994) Black-diaphragm intraocular lens for correction of aniridia. Ophthalmic Surg 25:180–185

Aflibercept use in Anti-VEGF Resistant Macular Oedema: Case Series in Galway University Hospital

Quigley C, Hendrick L, Moynihan P, Kinsella F

Department of Ophthalmology, Galway University Hospital

Background: Macular oedema, as occurs in diabetic retinopathy and in the wet form of age related macular degeneration (AMD), the leading cause of blindness in Ireland, is treated first-line with anti-Vascular Endothelial Growth Factor (VEGF). Persistent oedema is common[1], and use of aflibercept, a recently approved VEGF-inhibiting fusion protein, is increasing as a second line agent.
Aims: The aim of this study is to assess the outcomes of aflibercept treatment in resistant macular oedema, previously unanalysed in an Irish cohort.
Methods: A retrospective chart review was carried out of all patients who were treated with aflibercept for anti-VEGF resistant macular oedema.
Results: There were 13 eyes of 10 patients included. Prior to aflibercept, eyes were treated with anti-VEGF intravitreal injections, median duration of symptoms and number of injections were 25 months [interquartile range (IQR) 8–60 months] and 8 injections (IQR 6–10 injections). The median number of aflibercept injections and time to follow-up were 3 injections (IQR 3–4 injections) and 1.5 months (IQR 1.5–3.5 months, n = 9). The median pre-aflibercept visual acuity and central macular thickness (CMT) were 6/30 (n = 13) and 388 μm (n = 12, IQR 355–491 μm); there was significant reduction of CMT and increase in visual acuity, with median reduction of 103 μm thickness [n = 9, IQR (−183)–(−51) μm, p = 0.02], and a median gain of 4 letters [n = 9, IQR (−1)–7 letters, p = 0.05).
Conclusions: Aflibercept use was associated with significant reduction in oedema and gain in visual acuity, replicating findings in recent studies[2,3], supporting its use as a second line agent in resistant macular oedema.

References:

1. Gharbiya M, Iannetti L, Parisi F et al (2014) Visual and anatomical outcomes of intravitreal aflibercept for treatment-resistant neovascular age-related macular degeneration. Biomed Res Int 2014:273754 (epub 2014/06/05)
2. Kumar N, Marsiglia M, Mrejen S, et al (2013) Visual and anatomical outcomes of intravitreal aflibercept in eyes with persistent subfoveal fluid despite previous treatments with ranibizumab in patients with neovascular age-related macular degeneration. Retina 33(8):1605–1612 (epub 2013/04/04)
3. Chang AA, Li H, Broadhead GK et al (2014) Intravitreal aflibercept for treatment-resistant neovascular age-related macular degeneration. Ophthalmology121(1):188–192 (epub 2013/10/23)

Orbital Lymphoma, a Case Presentation

Hamoud A, Khan R

Department of Ophthalmology, St. James's University Hospital, Dublin

Lymphoma has been described as the most common malignant orbital tumor, representing 55 % of cases in adults, and 10 % of cases in older patients. Lymphoproliferative disease of the orbit usually presents later in life and causes symptoms due to gradually increasing mass effect. Proptosis and visible conjunctival mass are the common modes of presentation. It tends to be localized to the orbit at the time of diagnosis and responds well to local or systemic therapy.

Orbital and adnexal lymphoma is associated with systemic lymphoma in 30–35 % of cases. Hence, all patients with ocular lymphoma should have a complete workup to rule out systemic lymphoma.

The prognosis for ocular lymphoma depends on the tumour's histologic type and stage, as well as on the treatment employed. In general, with modern treatment of patients with NHL, the overall survival rate at 5 years is approximately 60 %.

We reported four cases of orbital lymphomas, all of them are females between the ages of 36–84, presented with unilateral or

bilateral lower lid swelling, one with ptosis, and the last one was with a conjunctival mass.

The 84-year-old lady has recently discovered to have lung lymphoma as well.

Diagnosis was confirmed with MRI and orbital biopsy as well.

All the cases were treated with radiotherapy.

We have a case of an orbital Rosai Dorfan, a histeocystic proliferation, he's a 33-year-old gentleman, responded well to systemic steroid treatment.

Incidence and Causative Organisms of Infective Keratitis in an Irish Population from 2009 to 2014

Brennan R, Connolly S, Treacy M, Fulcher T

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Background: Microbial keratitis is an important cause of ocular morbidity, and knowledge of likely aetiological organisms can guide appropriate therapy.
Aims: To establish demographics, risk factors, and causative organisms of microbial keratitis in a tertiary referral hospital in Ireland.
Methods: Patients who had a corneal scraping for culture over a 5 year period were identified via the microbiology database, and a retrospective audit of their medical records was carried out. Clinical information was gathered from the medical records, and information on gram stain, culture and sensitivities identified from microbiology database.
Results: Two-hundred and seventy-six corneal scrapings from 230 eyes of 229 patients were registered. Of these, a positive result was obtained in 121 (43.8 %). With regard to pathogens and sex distribution, 51/96 (53.1 %) of bacterial keratitis patients were male, while 10/13 (76.9 %) fungal keratitis patients were male. *Pseudomonas aeruginosa* 18/121 (14.8 %), fungi 16/121 (13.2 %), Staph Aureus 12/121 (9.9 %), Acanthamoeba 9/121 (7.4 %), Staph Epidermidis 8/121 (6.6 %), and Strep Pneumoniae 7/121 (5.8 %) were most commonly recovered. Resistance to at least one commonly used antibiotic was seen in 35/121 (28.9 %), with *Staphlococcus* species being the most commonly resistant organism 24/35 (68.6 %).
Conclusion: In this series, the most common organism identified was *P. aeruginosa*, which is consistent with the findings of similar studies in temperate climates.

References:

1. McAllum PJ, McGhee CN (2003) Prescribing trends in infectious keratitis: a survey of New Zealand ophthalmologists. Clin Exp Ophthalmol 31:496–504
2. Otri AM, Fares U, Al-Aqaba MA et al. (2013) Profile of sight-threatening infectious keratitis: a prospective study. Acta Ophthalmol 91:643–651

Pigment Dispersion Syndrome and Pseudoexfoliation Syndrome in the Same Patient—a Case Presentation

Pokrovskaya O, O'Brien C

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Pseudoexfoliation syndrome (PXS) and pigment dispersion syndrome (PDS) are two of the commonest disorders that can produce secondary glaucoma through trabecular blockage. PXS tends to affect an older population, where as PDS is more likely to be seen in a younger, myopic patient cohort. PXS is a generalized disorder of the extracellular matrix characterized by the production and accumulation of a fibrillar extracellular material in many ocular tissues, but is also associated with several systemic disorders including hearing loss, Alzheimer's disease, and vascular disease. Recent genomic research has identified single nucleotide polymorphisms (SNPs) in the LOXL1 gene to be implicated in exfoliation syndrome and exfoliation glaucoma[1]. PDS is recognized as an autosomal dominant disorder, mapped to the 7q35-q36 locus by linkage analysis, although the candidate gene is yet to be identified. Recent studies reveal that the exfoliation syndrome-associated LOXL1 gene variations are not involved in PDS, and there is also no evidence of linkage to the POAG-associated 1q21-q31 locus, suggesting the presence of other yet uncharacterized loci in PDS[2].

We describe the intriguing case of MM, a 77-year-old-lady with classic features of PDS in one eye, who now presents with PXS in her other eye. To our knowledge, this is the first case described in the literature of a patient with a simultaneous diagnosis PXS and PDS. This unusual case acts as a platform for an interesting discussion of the genomics of PXS and PDS.

References:

1. Thorleifson, G., et al. (2007) Common sequence variants in the LOXL1 gene confer susceptibility to exfoliation glaucoma. Science 317(5843):1397–1400
2. Rao KN et al (2008) Exfoliation syndrome and exfoliation glaucoma-associated LOXL1 variations are not involved in pigment dispersion syndrome and pigmentary glaucoma. Mol Vis. 14:1254–1262

Clinical Heterogeneity in Usher Syndrome: a Case Report

Mongan AM, Brosnahan D

Royal Victoria Eye and Ear Hospital, Dublin

Background: Usher syndrome (USH) is a group of autosomal recessively inherited disorders characterized by the association of sensorineural hearing loss and visual impairment due to retinitis pigmentosa, with or without vestibular dysfunction. USH accounts for the majority of deaf-blindness in humans with a prevalence of at least 3.2 per 100,000. Only two published abstracts describe exudative retinopathy in a patient with USH[1,2].
Aim: To describe an unusual case of USH type II associated with exudative retinopathy typical of Coats' disease. A photo-essay together with the diagnostic pathway of the patient illustrates the clinical heterogenity of USH.
Methods: We report a case of a 21-year-old boy with sensorineural deafness and normal vestibular function who presented with a recent history of night blindness.
Results: Fundoscopy showed bilateral retinitis pigmentosa and a single focus of subretinal exudation with overlying telangiectatic retinal vessels inferonasal to the vascular arcade in the left eye. FFA demonstrated a zone of telangiectasis adjacent to a large area of capillary nonperfusion. Electroretinography showed no rod-isolated responses from either eye, indicating compromised macular and inner retinal function bilaterally, consistent with RP. A history of bilateral high frequency hearing loss was noted. A diagnosis of UH type II was made. Gene analysis studies are pending.
Conclusion: Retinitis pigmentosa is associated with many systemic conditions. Clinical heterogeneity is accompanied by high genetic heterogeneity in USH, and targeted gene analysis may provide better

understanding of genotype–phenotype relationship of the disease. This case highlights an unusual association between Coats-type exudative lesions and USH.

References:

1. Murthy R, Honavar SG (2009) Secondary vasoproliferative retinal tumor associated with Usher syndrome type 1. J AAPOS 13(1):97–98
2. Kiratli H, Oztürkmen C (2004) Coats-like lesions in Usher syndrome type II. Graefes Arch Clin Exp Ophthalmol 242(3):265–267

Ocriplasmin in the Treatment of Vitreomacular Traction and Macular Holes

Hendrick LM, Kinsella F

Department of Ophthalmology, University Hospital College Galway

Objectives: Ocriplasmin is a recombinant, proteolytic enzyme which induces vitreolysis. It is approved for use in the non-surgical treatment of symptomatic vitreomacular traction (VMT) and small full-thickness macular holes. We present the findings of a study of fourteen patients (sixteen eyes) undergoing treatment with ocriplasmin.
Methods: Fourteen patients were enrolled between November 2013 and September 2014. Twelve patients underwent unilateral 125 μg ocriplasmin injection intravitreally, with two patients receiving bilateral injections. Examination consisted of pre- and post-treatment slit-lamp examination and OCT. Patients were followed up at 1 week, 1 and 3 months following treatment. The primary outcomes were resolution of vitreomacular adhesion in patients with VMT and nonsurgical closure of a macular hole at 28 days. Secondary measures were change in Snellen best-corrected visual acuity and avoidance of vitrectomy.
Results: Three patients (three eyes) with symptomatic VMT and eleven patients (thirteen eyes) with small full-thickness macular holes received treatment. One patient, treated for VMT, failed to present for follow up. Of the two other VMT patients, posterior vitreous face detachment (PVD) was induced in both and BCVA improved from 6/18 to 6/12. Of the eyes with macular holes ($n = 13$), PVD was induced in ten eyes and non-surgical closure of the hole occurred in two patients. Average BCVA improved by one line, and two patients subsequently underwent vitrectomy and internal limiting membrane peel.
Conclusions: Previous clinical trials have demonstrated the usefulness of intravitreal ocriplasmin in the treatment of vitreomacular traction and macular holes. With the exception of two patients, this study has failed to reproduce these benefits. However, the objective of PVD induction was achieved thirteen of the sixteen patients.

Proceedings of the RAMI Section of Ophthalmology, Friday 28th March 2014, Mullingar

A Case of Optic Neuritis Secondary to Antiandrogen Therapy

Ní Mhéalóid Á, Cunniffe G

Department of Ophthalmology, Mater Misericordiae University Hospital, Eccles Street, Dublin

Background: Optic neuropathy is a disorder characterised by dysfunction or destruction of the optic nerve tissues. Drug-induced optic neuropathy is of the toxic type and can be defined as a clinical syndrome characterised by papillomacular bundle damage, central or cecocentral scotoma and reduced colour vision.
Aim: To report a case of unilateral optic neuritis secondary to the use of the antiandrogen, cyproterone acetate.
Case report: A 21-year-old female presented to the eye casualty department with a 4 day history of right brow pain exacerbated by eye movement and a 3 day history of blurring of the right temporal field of vision. She had been taking desogestrel 75 mg and cyproterone acetate 50 mg for the previous 2 months for hormone imbalance. Right visual acuity measured 6/9 and left visual acuity measured 6/6. Right red desaturation and pain on eye movement were present. Fundoscopy was normal. Goldmann perimetry showed a right enlarged blind spot with predominantly temporal visual field loss. A magnetic resonance imaging scan of the orbits, brain and pituitary was reported as normal. Upon consultation with the patient's endocrinologist, the anti-androgen therapy was discontinued. Three weeks later, the eye pain had completely resolved. Repeat Goldmann visual fields showed expansion compared with the first measurement.
Discussion: Known side effects of cyproterone acetate include retinal vascular disorder and retinal vein thrombosis[1]. In this case and in other cases described in the literature, there was a temporal relationship between cessation of the medication and improvement in visual symptoms. This implies that discontinuation of the offending drug constitutes the basis of treatment in drug-induced optic neuropathy[2].

References:

1. http://www.bayer.ca/files/ANDROCUR-PM-ENG-25Feb2011-142634.pdf
2. Ambizas EM, Patel PN (2011) Drug-induced optic neuropathy. US Pharm 36(4):HS2–HS6

Use of Triple Procedure Surgery for the Management of Recurrent Crystalline Keratopathy

El-Farouki GW, Hamoud A, O'Connor G

Department of Ophthalmology, Cork University Hospital

Background: Crystalline keratopathy is a condition in which crystals are deposited in the corneal epithelium and/or anterior stroma, and arises from a multitude of causes such as infection and corneal dystrophy (Gupta et al.). Many persons who are pre-disposed to it are also prone to developing lenticular opacities. Surgical intervention for the different opacities may be carried out sequentially, but it has been reported that there is no significant increase in endothelial cell loss when corneal transplantation is combined with cataract surgery (Davis and Stark).
Summary: We report on a case of recurrent intractable crystalline keratopathy, focusing on the use of triple simultaneous procedure surgery for treatment. Surgical management involved penetrating keratoplasty, cataract extraction and intra-ocular lens implantation in one surgical procedure. Patient history, presentation, treatment options, surgical procedure and clinical course are described.

References:

1. Gupta P, Kharod B, Afshari N et al (2008) Crystalline keratopathy: spectrum of disease, diagnosis and treatment. J Am Acad Ophthalmol (1)
2. Davis E, Stark W (2000) The triple procedure may be superior to sequential surgery. Arch Ophthalmol 118(3):414–415

Atypical Presentation of Lyme Disease

Al Tahs K[1], Baily C[2], Fenton S[3]

Department of Ophthalmology[1], Microbiology[2], Rheumatology[3], Cork University Hospital, Cork

Aims: To highlight an atypical presentation of Lyme disease.
Background: A 52-year-old male presented with a long history of recurrent scleritis. He subsequently developed panuveitis with bilateral inferior exudative retinal detachments. He subsequently underwent extensive medical investigations resulting in a serologic diagnosis of Lyme disease (*B. burgdorferi*).
Method: Retrospective analysis of case notes.
Conclusion: We present a rare atypical case of Lyme disease. Lyme disease is a tick-borne infection with the spirochete *Borrelia burgdorferi*, can lead to various different organ manifestations. Severe ocular effects, however, are very rare.

"Explosive" Central Retinal Vein Occlusion—a Case Report

Vartsakis G

Ophthalmology Department, University Hospital Galway

Introduction: Central retinal vein occlusion typically presents with sudden and painless decrease in vision. It is usually an evolving condition; thus, close follow-up is needed. Multiple retinal haemorrhages in all four quadrants with engorgement and tortuosity of retinal veins, optic nerve head swelling and macular oedema are some of the most typical findings.
Case description: A 66-year-old male presented in the Ophthalmology Department complaining of new onset, painless blurring of vision. On examination, preretinal haemorrhages, subhyaloid haemorrhage in the absence of neovascularization and excessive subretinal fluid were seen.
Discussion: "Explosive" central retinal vein occlusion is an uncommon type of retinal drainage obstruction occurring at the level of optic nerve head. Atypical findings might confuse a central retinal vein occlusion with other ocular conditions as proliferative diabetic retinopathy, blood dyscrasias, Valsava retinopathy and Terson syndrome.

Scleral Glued Intraocular Lenses—a Case Report with Video

Treacy M, O'Brien P

Royal Victoria Eye and Ear Hospital

A 30-year-old gentleman presented to the Royal Victoria Eye and Ear Hospital following trauma to the left eye with a 180 degree, perilimbal, full thickness scleral laceration and his lens was found to be located on his left cheek. Vision at that time was perception of light. On the same day, he underwent a primary repair. Following the primary repair he had a total vitreous haemorrhage and clotted blood in the anterior chamber; the blood did not clear for the following 2 months and vision remained perception of light. He then underwent an anterior chamber washout and exploratory vitrectomy. Post operatively his vision was 6/24 with a +11.00/+1.00 × 120 correction but he developed a 60 prism-dioptre esotropia. It was decided to insert an intraocular lens prior to strabismus surgery.

A scleral-glued intraocular lens was offered to this patient; Agarwal et al. first described this technique in 2007. It consists of inserting a standard three-piece IOL in the posterior chamber. The haptics are buried in sclera under scleral flaps that are glued in place with fibrin glue. Scleral glued lenses are indicated in aphakic eyes where there is insufficient capsular support for in-the-bag or sulcus-supported IOLs and it offers significant benefits over anterior chamber or scleral suture fixated lenses. Since 2007 there have been 735 reported cases of scleral glued IOLs with few complications.

Post-operatively our patient achieved 6/15 unaided vision and had a BCVA of 6/9 with a +1.00/+1.00 × 180 correction. However, he complained bitterly of diplopia on account of his esotropia, which was rectified with subsequent strabismus surgery.

References:

1. Kumar DA, Agarwal A (2013) Glued intraocular lens: a major review on surgical technique and results. Curr Opin Ophthalmol 24(1):21–29. doi:10.1097/ICU.0b013e32835a939f
2. Agarwal A, Kumar DA, Jacob S et al (2008) Fibrin glue-assisted sutureless posterior chamber intraocular lens implantation in eyes with deficient posterior capsules. J Cataract Refract Surg 34: 1433–1438
3. Kumar DA, Agarwal A, Prakash G et al (2010) Glued posterior chamber IOL in eyes with deficient capsular support: a retrospective analysis of 1-year postoperative outcomes. Eye (Lond) 24:1143–1148

Sterile Intraocular Inflammation and Orbital Apex Syndrome: a Unique Presentation of Metastatic Skin Cancer

Minos E, Mongan AM, Chuen TM

Department of Ophthalmology, Sligo General Hospital, Sligo

Background: Cutaneous malignancies rarely metastasize to the eye[1]. Intraocular metastasis from cutaneous squamous cell carcinoma (cSCC) has not previously been described in the literature.
Aims: To describe an unusual case of intracranial perineural invasion metastasis associated with uveal metastasis which was causing an intraocular inflammation in a patient with primary cSCC of the nose.
Methods: Clinical, laboratory and radiological findings, as well as the management of this case are presented.
Results: A 76-year-old lady with primary nasal cSCC, presented with ophthalmoplegia, proptosis and severe visual loss suggesting orbital apex syndrome[2] associated with complete lid ptosis and associated severe anterior uveitis with hypopyon and keratitis. Corneal cultures were negative, suggesting a sterile keratitis. CT orbits revealed infiltration of the medial orbital wall with no signs of orbital cellulitis. Brain MRI revealed a necrotic mass of the left temporal lobe in proximity with the left optic nerve and cavernous sinus. Ultrasound demonstrated a flat chorioretinal lesion with high acoustic signal. Topical and systemic dexamethasone therapy were the mainstream to treat the intraocular inflammation completely.
Conclusion: A high index of suspicion is required when dealing with patients presenting with severe anterior uveitis with a history of malignancy[3]. This is the first case reported in the literature of intraocular involvement and orbital apex syndrome associated with metastatic cSCC.

References:

1. Shiles CL, Shields JA, Gross NE, Schwartz GP, Lally SE (1997) Survey of 520 eyes with uveal metastases. Ophthalmology 104(8):1265–1276
2. Yeh S, Foroozan R (2004) Orbital apex syndrome. Curr Opin Ophthalmol 15(6):490–498
3. Woog JJ, Chess J, Albert DM, Dueker DK, Berson FG, Craft J (1984) Metastatic carcinoma of the iris simulating iridocyclitis. Br J Ophthalmology 68:167–173

Proceedings of the RAMI Section of Ophthalmology, Friday 6th December 2013, Dublin

Case Report: Unusual Visual Field Caused by Planum Sphenoidalum Meningioma

Treacy M, Curtin D

RVEEH

Case report: A 66-year-old lady presented to clinic in November 2012 complaining of blurring of vision in the left eye. Her vision was 6/6 in the right and 6/9 in the left. Her intraocular pressures were normal at 16 and 14 mmHg but the optic discs looked glaucomatous, her cup:disc ratio was 0.5 in the right and 0.6 in the left.
She was booked for Humphrey visual field (HVF) testing 2 weeks later but failed to attend due to unrelated illness. Her HVF was conducted in March 2013 and it showed an arcuate scotoma, typical for glaucoma, in the right and diffuse, patchy field loss in the left. Clinically, her vision held at 6/6 in the right but had dropped to 6/12 in the left. The pressures remained normal at 13 and 12 mmHg but disc cupping had progressed to 0.6 and 0.7. A provisional diagnosis of low tension glaucoma was made and the patient was started on gutte travoprost nocte. On account of the unusual left HVF a CT brain and subsequent MRI were preformed. The brain imaging showed a 3 cm suprasellar mass arising from the tuberculum sellae which was compressing the optic chiasm. The patient was referred to the neurosurgeons who preformed an endoscopic transnasal decompression.

The patient's vision subsequently normalised and her visual field returned to normal; gutte travoprost was discontinued. This case demonstrates the importance of imaging in cases of possible glaucoma which have atypical features.

Anterior Opacification of Intraocular Lenses after Descemet Stripping Endothelial Keratoplasty

Ní Mhéalóid Á, Fulcher T, O'Keefe M

Department of Ophthalmology, Mater Misericordiae University Hospital, Eccles Street, Dublin 7

Background: Anterior intraocular lens (IOL) opacification is a new phenomenon that is becoming apparent in patients who have undergone descemet stripping endothelial keratoplasty (DSEK) performed either concurrently, or after earlier phacoemulsification and IOL insertion. Very few cases have been reported to date in the literature.

Aims: To report four cases of unexplained anterior intraocular lens (IOL) opacification after descemet stripping endothelial keratoplasty (DSEK) for Fuch's endothelial dystrophy.
Methods: Observational case series involving the analysis of three cases of hydrophilic IOL opacification and one case of opacification of an IOL with a hydrophobic surface, in patients who underwent DSEK.
Results: In all cases, the opacification interfered with visual acuity. Postoperative graft displacement occurred in three cases requiring intracameral injections of air. A redo DSEK was later required in two of these cases. A redo DSEK alone was required in another case. Attempted removal of the opacification in one case with Neodymium YAG (Nd: YAG) and by surgical means was unsuccessful and IOL explantation was required.
Conclusion: To date no definitive aetiology has been discovered. The process of opacification may be mediated by repeated intracameral injections of air1, a breakdown in the blood aqueous barrier (BAB)2, or a prolonged inflammatory reaction3 due to multiple procedures.

References:

1. Fellman MA (2013) Calcification of a hydrophilic acrylic intraocular lens after descemet-stripping endothelial keratoplasty: case report and laboratory analyses. J Cataract Refract Surg 39
2. Neuhann IM et al (2013) Intraocular lens calcification after keratoplasty. Cornea 32(4)
3. Seitzman GD (2005) Cataract surgery in Fuch's dystrophy. Curr Opin Ophthalmol 16:241–245

Evaluating Glaucoma Surgery Performed Under Local Anesthesia. Can Good Surgical Outcome be Combined with Patients' Tolerance?

Vartsakis G, O'Donoghue E

Ophthal Department, University Hospital, Galway

Background: Glaucoma is the leading cause of irreversible blindness worldwide[1].
Glaucoma surgery remains the gold standard when despite maximal medical treatment the intraocular pressure doesn't reach satisfying levels, when poor medication compliance is suspected or in aggressive types of glaucoma.
Aims-methods: We designed a prospective study to record and analyze the cases of ten glaucoma patients who underwent glaucoma surgery under local anesthesia.
A numeric rating scale for subjective pain assessment was used to interview patients in the recovery room[2].
Results: Five patients underwent Trabeculectomy augmented with Mitomycin C and one with 5-FU. Three patients had combined Phacoemulsification-Trabeculectomy augmented with Mitomycin C and one underwent trabeculectomy bleb revision with application of Mitomycin C. Four patients had previous ophthalmic surgery. The mean number of topical glaucoma agents used preoperatively was 3 and the most common type of glaucoma was pseudoexfoliative (50 %). No intraoperative complications were encountered. The average pain scoring was 1.3/10. Microscope light sensitivity was not an issue for the patients and in only 2 cases the surgeon had to top-up local anaesthesia intraoperatively. A mean of 64.6 % reduction in intraocular pressure was recorded. In the postoperative period only 4 patients needed further intervention (laser suture lysis, bleb resuturing).

Conclusions: Glaucoma surgery can successfully be carried out under local anaesthesia, being a safe option for anaesthesia administration and a well-tolerated procedure for all patients.

References:

1. Pascolini D, Mariotti SP (2012) Global estimates of visual impairment: 2010. Br J Ophthalmol 96(5):614–618
2. Royal College of Physicians, British Geriatrics Society, The British Pain Society (2007) The assessment of pain in older people—national guidelines

Corneal Hysteresis Measured with the Ocular Response Analyser in Primary Open Angle Glaucoma Compared to Ocular Hypertension

Murphy ML, Pokrovskaya O, O'Brien C

Department Ophthalmology, Mater Hospital, Dublin

Background: Intraocular pressure (IOP) measurements are influenced by the biomechanical properties of the cornea such as central corneal thickness (CCT) and corneal hysteresis (CH). CH is a novel parameter that may account for the relationship between corneal biomechanics and disease progression in glaucoma. Evidence suggests that eyes with lower CH have faster rates of visual field loss compared to those with higher CH[1]. Higher CH has also been demonstrated in patients with ocular hypertension (OHT) compared to primary open angle glaucoma (POAG)[2]. CCT is considered a protective factor in patients with raised IOP[3].
Aims: To evaluate the relationship between CH in patients with POAG compared to OHT and to determine the association between CH and CCT.
Methods: In this cross-sectional study a total of 56 patients were examined. CH was measured by the Reichert ocular response analyser. CCT was measured using a handheld ultrasonic pachymeter. An independent sample *t* test was performed to evaluate the relationship between both POAG ($n = 20$) and OHT ($n = 16$) and CH. The Pearson correlation coefficient was calculated to assess the associations between CH and CCT ($n = 56$).
Results: There was a statistically significant difference between the mean CH measured in subjects with POAG (8.3 ± 2.4 mmHg) compared to OHT (10.3 ± 1.5 mmHg), $p = 0.008$. A significant positive correlation between CH and CCT was also demonstrated (Pearson correlation coefficient $r = 0.365$; $P = 0.006$).
Conclusions: This study demonstrated that CH was lower in the POAG group compared to the OHT group suggesting reduced corneal compliance in POAG. There was also a strong positive correlation between CH and CCT. This may be of particular importance when trying to account for the large variation in disease progression in patients with a similar IOP.

References:

1. Medeiros FA, Meira-Freitas D, Lisboa R et al (2013) Corneal hysteresis as a risk factor for glaucoma progression: a prospective longitudinal study. Ophthalmol 120(8):1533–1540
2. Shah S, Laiquzzaman M, Mantry S, et al (2008) Ocular response analyser to assess hysteresis and corneal resistance factor in low tension, open angle glaucoma and ocular hypertension. Clin Exp Ophthalmol 36(6):508–513
3. Wolfs RC, Klaver CC, Vingerling JR et al (1997) Distribution of central corneal thickness and its association with intraocular pressure: The Rotterdam Study. Am J Ophthalmol 123(6):767–772

Spontaneous Suprachoroidal Haemorrhage Following Thrombolysis

Bafiq R, Loane E, Fenton S

Department of Ophthalogy, CUH, Cork

Suprachoroidal haemorrhage is an uncommon complication of intraocular surgery. Spontaneous suprachoroidal haemorrhage is extremely rare and potentially sight threatening. We report a case secondary to thrombolysis following myocardial infarction (MI).

A 63-year-old male presented with chest pain to Waterford Regional Hospital. His electrocardiogram showed an anterior MI. He was thrombolysed with tissue Plasminogen activator. He was transferred to Cork University Hospital for Primary Percutaneous Coronary Intervention (PCI). Enroute 3 h post thrombolysis, he noticed acute left eye pain and reduced vision.

On arrival visual acuity Snellen was perception to light in the left and 6/6 in the right eye. Examination of his left eye showed a positive afferent pupillary defect with a fixed mid dilated pupil. Cornea was hazy, anterior chamber (AC) was shallow and angle was closed with a raised intra ocular pressure (IOP) of 36 mmHg and no fundal view. Right ocular examination was unremarkable. Ultrasound B scan showed a left dense suprachoroidal haemorrhage. He underwent an urgent left NdYAG peripheral iridotomy. Four days later his vision was unchanged, AC deepened and IOP was 4 mmHg. One month later his left vision was no perception to light and ultrasound Bscan showed resolving suprachoroidal haemorrhage with no fundal view.

To our knowledge there are only five previous reports of spontaneous suprachoroidal haemorrhage secondary to thrombolysis in the literature. Prompt diagnosis and management may improve the final visual outcome.

Pain, Diplopia and Proptosis: a Case Report

Kobayter LK[1], McGuire MM[2], Horgan NH[1]

Departments of Ophthalmology, REEVH[1]; St. Vincent's University Hospital[2], Dublin

Background: Lymphoid tumours account for 6–8 % of all orbital tumours[1]. Peripheral T cell lymphoma presenting as an orbital mass is relatively rare but can be rapidly progressive[2]. It should not be overlooked as a potential differential diagnosis in patients presenting with idiopathic orbital inflammation.
Aim: To present a case of peripheral T cell lymphoma presenting as a unilateral painful ophthalmoplegia.
Methods: We describe a case of a peripheral T cell lymphoma in a 63-year-old South African gentleman who presented to the Ophthalmology Emergency Department complaining of a painful right eye, dizzy spells and diplopia. He had no history of dysthyroid disease. Examination revealed significant limitation of extraocular eye movements, mild proptosis and early features of optic disc oedema. Pending imaging results he was commenced on IV corticosteroids, orbital pseudotumour being considered a likely cause.
Results: MRI orbits revealed abnormal enhancement extending through the right orbital apex towards the right intracavernous internal carotid artery. Whilst awaiting further imaging the patients clinical signs were progressive. In light of this, lymphoma was considered a more likely cause.
CT thorax, abdomen and pelvis confirmed bilateral adrenal masses as well as a soft tissue mass encasing the superior vena cava.

Adrenal biospy confirmed a polymorphous dyshesive tumour cell population consistent with peripheral T cell lymphoma, not otherwise specified. The patient was admitted to the intensive care unit with adrenal insufficiency and had one cycle of chemotherapy. Unfortunately the patient succumbed to his systemic disease within 1 week of commencing chemotherapy, due to multiorgan failure.

Conclusion: Peripheral T cell lymphoma can present as a painful ophthalmoplegia with no other systemic features. It can take a rapid course and should therefore be considered as a differential for idiopathic orbital inflammation. Prompt systemic investigation should be initiated.

References:

1. Shields JAShields, CLScartozzi, R (2004) Survey of 1264 patients with orbital tumours and simulating lesions: the 2002 Montgomery Lecture, part 1. Ophthalmology 111 (5) 997–1008
2. Chen YJ, Chen JT, DW Lu et al (2009) Primary peripheral T-cell lymphoma of the orbit. Arch Ophthalmol 127(8):1070–1072

Comparison of Adjustable and Non-Adjustable Adult Strabismus

Kelly R[1], Dooley I[2], Doyle F[3]

Department of Ophthalmology, Mater Hospital, Dublin

Background: Adjustable suture strabismus surgery has been in common clinical practice since the 1970s[1]. Opinion is divided on when adjustable sutures should be used over conventional strabismus surgery, though adjustable suture techniques are usually employed where the outcome is considered to be less predictable.

Recently the use of adjustable sutures has been proposed as the gold standard approach in the surgical management of strabismus[2]. Nonetheless there remains a lack of clear evidence favouring the adjustable approach over conventional surgery, with many studies demonstrating mixed results and marked clinical heterogeneity[3].

Aims: To establish whether a trend exists to suggest more favourable surgical outcomes using the adjustable suture approach.

Methods: A retrospective audit of the medical records of all patients who underwent strabismus surgery at the Mater Hospital, Dublin, under a specific consultant between 2010 and 2012 was undertaken. Outcomes were compared between adjustable and non-adjustable surgeries including: type of procedure; horizontal and vertical deviation per muscle and per millimeter; pre- and post-operative horizontal and vertical deviation.

Results: Data from 27 procedures on 24 patients was analysed with a mean follow up of 8.7 months postoperatively. Sixteen surgeries were non-adjustable while 11 were adjustable. There was a trend towards greater surgical outcomes in the adjustable group for the parameters of horizontal deviation per muscle (in prism dioptres) pre and post-operatively ($p = 0.05$) and horizontal deviation per millimetre recessed or resected ($p = 0.065$). Mean difference in horizontal and vertical deviations were 16.33 and 3.17 PD, respectively (non-adjustable) versus 22.8 and 11.0 PD, respectively (adjustable).

Conclusions: There is a trend towards greater effect using adjustable surgery versus non-adjustable.

References:

1. Jampolsky A (1979) Current techniques of adjustable strabismus surgery. Am J Ophthalmol 88:406–418
2. Tripathi A, Haslett R, Marsh IB (2003) Strabismus surgery: adjustable sutures-good for all? Eye 17:739–742
3. Haridas A, Sundaram V (2005) Adjustable versus non-adjustable sutures for strabismus. Cochrane Database Syst Rev (1): CD004240. doi:10.1002/14651858.CD004240.pub2

Traumatic Macular Hole: Two Case Reports

Rahman N, Lee P, Doris J

Department of Ophthalmology, Royal Victoria Eye and Ear Hospital, Dublin

Traumatic macular hole most commonly occurs following ocular contusion injury. Spontaneous closure can happen, however, but this is not common. Surgical management of traumatic macular hole is similar to that of idiopathic macular holes which includes vitrectomy, ILM peeling and fluid-gas exchange. We report two cases of traumatic macular hole, both of which underwent surgical intervention.

Two cases of traumatic macular hole were referred to our outpatient clinic with reduced visual acuity following a blunt trauma. Diagnosis was based on fundoscopic and optical coherence tomography (OCT) findings. There were no evidence of spontaneous hole closure in both cases after 6 weeks of initial assessment and surgical intervention was arranged following this. Visual outcome and anatomical closure of macular hole were assessed at 2 and 6 weeks after surgery.

Selection of cases and timing of surgery play an important role in determining the anatomical and functional outcomes of traumatic macular hole repair. It is also important to remember that spontaneous closure of the hole can occur in approximately 50 % of cases. However, surgical management should not be deferred for too long, as long standing holes are often associated with poor prognosis.

NK/T Cell Lymphoma Presenting with Visual Loss

Fogarty H, Kevane B, Fortune A

Department of Haematology, Mater Hospital, Dublin

A 51-year-old gentleman presented with a short history of visual loss in his left eye. He was initially referred to Ophthalmology and was diagnosed with retinal detachment and uveitis of unknown aetiology. Multiple investigations were performed including: baseline bloods, virology, autoantibody and vasculitic screens, all of which were normal. He underwent surgical repair of the detached retina with concurrent vitreal biopsy. Histology from the biopsy was normal and the underlying cause of the uveitis was not identified although polymerase chain reaction analysis of the vitreal tissue showed evidence of active Epstein–Barr virus infection.

The visual symptoms recurred on two further occasions and shortly after the third episode he began to report marked constitutional symptoms as well as left eye pain. In addition he developed progressive nasal congestion and a variety of neurological symptoms including left ptosis, bilateral lower limb weakness, paraesthesia and foot drop. He was diagnosed with a recurring uveitis associated with a mononeuritis multiplex. Possible causes considered at this time included vasculitis, sarcoidosis, or a paraneoplastic syndrome.

In view of the nasal congestion, an ENT opinion was sought and biopsy of an inflamed nasal turbinate identified a lymphoid neoplasm consistent with NK/T cell lymphoma. A PET-CT scan was subsequently performed and in view of his clinical, histopathological and radiological findings he was diagnosed with Stage IIB NK/T Cell Lymphoma, nasal

type. Following a multidisciplinary discussion of the case, he proceeded to receive cytotoxic chemotherapy (SMILE protocol) with a complete radiological response achieved following cycle 2.

Salzmann's Nodular Degeneration of the Cornea: a Report of 3 Cases

AlArrayedh H[1], Murphy CC[1,2]

Departments of Ophthalmology, RVEEH[1], RCSI[2], Dublin

Background/aims: To report on the clinical characteristic of treatment outcomes of 3 cases with Salzmann's Nodular Degeneration of the Cornea.
Methods: Records of three patients with Salzmann's Nodular Degeneration of the cornea in a specialized corneal clinic have been retrospectively. Patient demographics, clinical characteristics, visual acuity, and treatment methods were analyzed.
Results: A total of 3 patients with Salzmann's nodular degeneration of the cornea have been reported in a specialized corneal clinic.
Conclusions: Salzmann's nodular dystrophy may be associated with chronic ocular surface inflammation and irritation, which is predominantly present in middle-aged women. It is important to diagnose, as there is a good prognosis with medical and surgical therapy.

Ocriplasmin for Macular Hole Associated with Vitreomacular Traction: a Case Report

Yasir I, Kennelly K, Hickey-Dwyer M

Department of Ophthalmology, University Hospital Limerick

Introduction: Vitreomacular traction (VMT) with or without macular holes may cause visual disturbance and decreased visual acuity. Previously, vitrectomy was the only intervention available for these patients. Intravitreal injection of ocriplasmin is a new treatment option. Ocriplasmin may release VMT by degrading laminin and fibronectin at the vitreoretinal interface resulting in closure of 50 % of macular holes with VMT at day 28[1,2].
Case report: A 67-year-old female presented complaining of blurred vision and distortion in her right eye for 3 weeks. Visual acuity was 6/18. Fundoscopy and optical coherence tomography (OCT) confirmed VMT. Following observation for 3 months, visual acuity decreased to 6/24 and OCT demonstrated progression of VMT now with a grade 2 macular hole. She received an intravitreal injection of Ocriplasmin. One month later her visual acuity improved to 6/10 and OCT confirmed resolution of VMT and macular hole closure.
Conclusion: Ocriplasmin is an effective therapeutic and cost effective option in patients with macular holes and VMT, reducing the need for vitrectomy.

References:

1. Stalmans P et al. (2012) Enzymatic vitreolysis with ocriplasmin for vitreomacular traction and macular holes. N Engl J Med 367:606–615
2. Ocriplasmin for Vitreoretinal Diseases, Tsui I, Pan CK, Steven D, Schwartz J (2012) Biomed Biotechnol 2012:354979. Published online 14 Oct 2012. doi:10.1155/2012/354979

Bilateral Iris Transillumination Associated with Fluoroquinolone Therapy: a Case Report

Connolly S, Dervan E

Deparment of Ophthalmology, MMUH

Background: Recent publications have highlighted systemic fluoroquinolones as a potential cause of acute bilateral depigmenting iris transillumination[1].
Aims: To describe a case of bilateral iris transillumination following moxifloxacin therapy, and to review the literature.
Methods: Review of the patient records, and a review of the literature using the PubMed database.
Results: A 48-year-old lady presented with distorted pupils. This had been noted incidentally following an exacerbation of bronchiectasis, which was treated with oral moxifloxacin, bilateral iris transillumination, left sided peripheral synechiae, posteriorly bowed irides, bilateral pigmented trabecular meshwork, bilateral corneal endothelial pigment deposition, and a history of intermittent, self-resolving red eyes. A literature review provided case-reports describing this phenomenon, however, a recent case–control series 2 did not prove causation.
Conclusion: Fluoroquinolone use has recently been identified as a possible cause of uveitis and bilateral iris depigmentation. It is unclear at present if this represents an adverse effect of fluoroquinolone use, or is due to the underlying condition being treated.

References:

1. Hinkle DM, Dacey MS, Mandelcorn E et al Bilateral uveitis associated

Proceedings of the RAMI Section of Ophthalmology Meeting 22nd Feb 2013 Kilkenny

A Rare Case of Leber's Hereditary Optic Neuropathy

Minasyan D, O'Connor G, O'Sullivan S

Departments of Ophthalmology[1], Neurology[2], Cork University Hospital

Leber's hereditary optic neuropathy is a mitochondrial inherited degeneration of retinal ganglion cells and their axons, resulting to an acute or subacute bilateral loss of central vision, this affects predominantly young adult males. The purpose of this paper is to present a case of Leber's hereditary optic neuropathy, in context of a review of a recent published literature on neuro-ophthalmological evaluation and management of this condition.

A 14-year-old male was presented with bilateral painless visual loss. He was found to have pale bilateral optic discs, worse on right, loss of colour vision. He also reported pins and needles in his right arm for several weeks. His mother was recently diagnosed with MS, but no significant family history of blindness reported.

Extensive investigations including cerebrospinal fluid examination, Magnetic Resonance Imaging did not reveal any cause. After performing genetic analysis for mitochondrial DNA disease Leber's hereditary optic neuropathy was suspected. Treatment with Ibedenone 300 mg 3 times per day was commenced. Despite treatment after 6 months condition remains unchanged,

with visual acuity HM's snellen right eye and 3/60 snellen left eye.

Leber's hereditary optic neuropathy is a rare condition, which can cause blindness in young adults.

Modern understanding of disease inheritance and mutation will be discussed along with duration of treatment and outcome.

Sheer, Speed and Safety—a Rare Cause of Embolic Disease

Naughton A, O'Neill E, Morris B, Connell PP

Ophthalmology Department, Mater Misericordiae University Hospital, Dublin 7

A 39-year-old male presented with a four day history of sudden-onset, painless, central visual filed defect in his right eye. Past medical and ophthalmic history was unremarkable.

Snellen visual acuity (VA) was 6/9 in his right and 6/6 in his left eye. Confrontational visual field identified a right para-central superior field defect confirmed on Goldmann perimetry. Fundal examination revealed an area suggestive of an inferior macular branch retinal arterial occlusion (BRAO) in his right eye, confirmed on subsequent fundus fluorescein angiography and optical coherence tomography demonstrating a thickened ganglion cell layer.

Serological work-up was negative. CT angiography demonstrated a right internal carotid intimal flap secondary to a small arterial dissection which was pathogenic. Vascular consultation suggested conservative management with anti-platelet therapy.

On closer questioning he revealed a history of part time rally driving. Subsequent follow up demonstrated arterial occlusion resolution with a persistent subtle defect in the quality of VA.

Craniocervical artery dissection is a major cause of ischaemic stroke in young to middle aged individuals[1]. Mild mechanical cervical stress plays a role as possible trigger factor in the pathogenesis[2]. We present a case of internal carotid artery dissection caused by acceleration-deceleration injury secondary to rally driving resulting in a macular branch retinal artery occlusion.

References:

1. Rubinstein S, Haldeman S, van Tulder M (2006) An etiologic model to help explain the pathogenesis of cervical artery dissection: Implications for cervical manipulation. J Manipulative Physiol Ther 29:336–338. doi: 10.1016/j.jmpt.2006.03.003

A Pain in the Neck

Duignan E, Manning S, O'Connor M

Carotid artery dissection is a medical emergency that can lead to cerebral ischaemia. It often presents after blunt cranio-cervical trauma. Suggestive symptoms in the absence of a history of trauma must be treated with a high degree of suspicion.

We present the case of a 50-year-old man with a 6-day history of left frontal headache, left ptosis and a mild decrease in visual acuity in the left eye. There was no history of trauma. Three days previously, he attended another hospital where he was investigated with a CT of the sinuses. No abnormalities were detected and the patient was referred to the ophthalmology casualty.

A history was elicited of one brief episode of transient left upper neck pain. On examination, he was found to have a left Horner's syndrome with left ptosis and meiosis. There were no other neurological findings.

He was immediately referred for CT angiogram. This showed a left internal carotid artery dissection involving most of the length of the vessel and an urgent vascular opinion was sought. The patient's spontaneous carotid dissection was managed conservatively with commencement of anticoagulant medication and he has had an uneventful course to date with partial resolution of his oculosympathetic palsy.

Conclusion: Carotid dissection can occur spontaneously, after trauma and has also been described in a series of patients with unusual associations such as bungee jumping, dental work and headbanging. Any patient with a painful Horner's syndrome must be investigated for carotid dissection, with or without a history of trauma.

Atypical Optic Neuritis: a Case Report

Hanim Rahim F

Ophthalmology Department, Waterford Regional Hospital, Dunmore Road, Waterford, Ireland

Tuberculous optic neuritis is a rare disease, difficult to diagnose and treat, with various clinical manifestations.

A 54-year-old Polish lady presented with 2 weeks history of reduced visual acuity in right eye, painful eye movements and right facial numbness. Examinations showed relative afferent pupillary defect in the right eye, right optic disc swelling, with an ESR of 22. Visual acuity further deteriorated to No Perception of Light within 5 days. MRI orbits and brain revealed post contrast enhancement of the right optic nerve to the level of optic chiasm, as well as in pons and cerebral peduncle. Cerebrospinal fluid showed high white cells count and high protein. Chronic syphilis infection was detected from serology test and patient was treated with intravenous benzylpenicillin for a week with no clinical improvement. Mantoux test and Quanteferon test done showed strongly positive results, indicating Mycobacterium Tuberculous (TB) infection. TB treatment commenced, without any recovery of visual acuity.

Blindness is an uncommon complication of Mycobacterium Tuberculous infection. A tuberculous aetiology should be considered when evaluating optic neuropathy in patients from endemic area.

The Profile of Patients Attending a Triaged Eye Emergency Service

Vartsakis G, Fahy G

Ophthalmology Department, Galway University Hospital, Galway

Galway University Hospital provides an eye emergency service for patients triaged from Accident and Emergency (A&E) department, general practitioners and opticians. A fully resourced service is available from 9 a.m. to 5 p.m. Monday to Friday and a skeleton on-call service thereafter. We evaluated the referral pattern of patients to eye emergency service.

A prospective study recording all patients referred to the eye emergency department over 5 consecutive weeks in 2012 was performed.

Four-hundred and eight cases were seen in total, 312 (76.5 %) were seen Monday to Friday 9 a.m. to 5 p.m. and 96 (23.5 %) afterhours. Thirty-nine (9.6 %) were seen during weekends, 24 of which were seen from 9 a.m. to 5 p.m. and 33.3 % of cases were inflammatory and 31.9 % traumatic. Anterior uveitis (39 cases—9.6 %) and corneal abrasion (37 cases—9.1 %) were the most common diagnosis, while bacterial keratitis (9 cases—2.2 %) and globe rupture/penetration (4 cases—1 %) were the most serious. 85.6 % of patients were seen within 30 h from referral. A&E department referred 35 % of cases seen during normal hours and 70.8 % of those seen afterhours. 42.5 % of patients needed to be followed-up in the clinics. 72 patients (17.6 %) were seen from 5 p.m. to 9 a.m. Monday to Monday. 21 were traumatic, 4 required admission (2 retinal detachments, 1 globe rupture, 1 bacterial keratitis) and only 9 were deemed inappropriate afterwards.

Serious eye pathology presents after normal working hours. Compared to a walk-in casualty[1], a more complex casemix of patients is seen when triaged prior to being seen in eye casualty.

Reference:

1 Vernon SA (1983) Analysis of all new cases seen in a busy regional centre ophthalmic casualty department during 24-week period. J Roy Soc Med 76(4):279–282

Two Years Review of Periocular Basal Cell Carcinoma

Rahman N, Ali Y, El-Morsy M

Ophthalmic Department, Sligo General Hospital

Basal cell carcinoma (BCC) is the most common periocular skin cancer. Surgical excision remains the mainstay treatment as it produces excellent result, with low incidence of recurrence, if the lesion is completely excised. However, there are varying techniques used to excise the periocular BCC; all in an effort to ensure complete excision without requiring complicated reconstruction. We aimed to identify the most appropriate technique and safety margin to ensure complete excision of periocular basal cell carcinoma. Additionally, we would want to recommend a rational follow-up protocol following excision of periocular BCC.

All patients who underwent periocular BCC excision between 2008 and 2010 were included. Medical records of patients under the care of an oculoplastic surgeon in Sligo General Hospital were reviewed.

A total of 30 patients had periocular BCC excision during the 4-year period. BCC involving a limit of the excised tissue were reported in 6 cases. There was no evidence of recurrence among all patients. The patients were reviewed in oculoplastic follow-up clinic with a 6-months interval for up to 2 years before being discharged.

The majority of patients with periocular BCC had a 4 mm punch biopsy to confirm diagnosis, followed by complete excision with reconstruction. 6 cases were reported with BCC involving a limit of the excised tissue (2 medial, 2 superior, 1 inferior and 1 lateral) on histology. There was no evidence of recurrence noted among all patients. The patients are kept under review for up to 2 years following excision of periocular BCC. Results will be discussed.

External Eye Disease?

Pokrovskaya O, O'Reilly P

Mid Western Regional Hospital, Limerick, Ireland

We present a very unusual case of apparent external eye disease. A 55-year-old man presented with an 18 month history of ocular symptoms and eyelid pathology. On examination, he had very impressive bilateral thickened eyelids with associated meibomian gland dysfunction and multiple large chalazia. He also had exceptional upper eyelid laxity, a mechanical ptosis impinging on the visual axis and a fungal nail infection. He was convinced that both his ocular symptoms and the nail infection came on concurrently at a time when he began working with horses and he denies any previous eyelid or ocular problems.

We discuss possible diagnoses and the management dilemmas in this unusual case.

Investigating Paediatric Cataract Patients

McCollum T, McLoone E

Department of Ophthalmology, Royal Victoria Hospital, Belfast

Aims: To evaluate current approach to investigating unilateral and bilateral paediatric cataract patients in UK and Ireland.
Methods: A structured questionnaire was distributed to those listed in the British Cataract Interest Group via post and online surveymonkey.
Results: Forty consultants completed the survey. The results displayed a varied approach and a lack of consistency in practice. The majority of respondents felt that bilateral cataract patients should be referred to a Paediatrician for a medical assessment and further investigations. Only three out of the forty consultants routinely requested parents to bring photographs of the baby in an attempt to date the onset of unilateral cataract. The most common perceived cause of unilateral cataract in practice was idiopathic (38 %), second to this was persistent fetal vasculature (20 %). The most common perceived cause of bilateral cataract was hereditary (48 %).
Conclusion: This survey displays an apparent lack of consistency in the investigation of paediatric cataract patients. It highlights the importance of the paediatric team in medical assessment of the child and effective communication to avoid overlap or unnecessary investigations.

A Rare Case of Optic Neuritis Following Hepatitis A and Typhoid Vaccination

Bafiq R[1], Ryan A[1], Costello D[2], Cullinane A[1]

Departments of Ophthalmology[1], Neurology[2], Cork University Hospital

Acute optic neuritis is most commonly due to demyelination. The differential diagnosis includes infectious, inflammatory, toxic, nutritional, compressive, infiltrative, ischaemic and genetic optic neuropathies. The purpose of this paper is to present a rare case of post- vaccination optic neuritis resulting in severe bilateral loss of vision in which no other cause for optic neuropathy was identified.

A 51-year-old gentleman presented with headache exacerbated by ocular movement and bilateral blurred vision 9 days following vaccination against hepatitis A and typhoid. He was found to have bilateral retrobulbar optic neuritis with progressive reduction in visual acuity, loss of colour vision, absence of optic nerve head swelling and bilateral optic nerve enhancement on magnetic resonance imaging.

Extensive investigation including temporal artery biopsy, cerebrospinal fluid examination, molecular genetic analysis and even optic nerve sheath biopsy revealed no identifiable cause. He had a remote past history of pulmonary sarcoidosis and Vitamin B12 deficiency. At the time of presentation, his vitamin B12 levels were normal and optic nerve biopsy showed no evidence of granulomatous inflammation. Despite treatment with intravenous methylprednisolone and immunoglobulins, visual acuity did not improve and remained at 6/60 snellen in both eyes after 3 months.

Post-vaccination optic neuritis in adults is rarely reported in the literature and the exact aetiopathogenesis is poorly understood. Most cases improve with treatment. A brief review of recent literature will be discussed.

A Case Series of Orbital Lymphomas

Babiker S, Loane E, Fenton S

Department Of Ophthalmology, Cork University Hospital, Cork

Lymphoma comprises 55 % of malignant orbital tumors in adults.It can affect the lids, conjunctiva, lacrimal and orbital tissues. Clinical presentation varies from subtle symptoms that can be misdiagnosed as benign conditions, to alarming symptoms such as proptosis or diplopia.

We will discuss a case series of 6 patients with lymphoma seen in Cork University Hospital, mainly focusing on their symptoms and signs. 2 of the patients were known to have lymphoma in other sites, whereas in 4 of them ocular disease was the first diagnosis. Patients presented with proptosis (2 cases), lid mass (1), lid fullness (1), periorbital mass (1).

As junior doctors are the first line in the service, it is important to have high index of suspicion to perform radiological/histological workup on time; this is the main aim of the our paper.

The Importance of Histological Margin Control in Periocular Skin Malignancies

Droney T, Razaq R, O'Reilly P

Department of Ophthalmology, Mid Western Regional Hospital, Limerick

Periocular skin tumours account for 5–10 % of all skin cancers. Basal cell carcinoma is the most common malignancy followed by squamous cell carcinoma. The ideal treatment for these tumours involves complete excision followed by reconstruction. Incomplete resection is the main risk factor for recurrence. Traditionally excision involved identification of tumour margins using clinical clues such as colour and surface contour followed by the excision of the tumour together with a margin of 3–5 mm of presumed healthy surrounding tissue. However, studies have shown that this general approach is associated with a 16–40 % risk of incomplete excision.

We performed a retrospective analysis of 28 patients who underwent excision of a periocular skin tumour with a 3 mm clear margin that were subsequently sent for frozen section analysis prior to reconstruction, in order to identify the rate of positive margins that are present when this traditional 3 mm margin is used.

Out of 28 patients, 8 (28.6 %) required further resection due to persistent tumour following initial resection. Of these 8, 7 had one positive margin and 1 had two positive margins. Following further excision all 8 were clear of tumour.

This study highlights the fact that clinical identification of tumour margin in eyelid malignancies is inadequate. In order to ensure complete tumour excision and thus lessen the risk of recurrence histological margin control is vital. The use of frozen section analysis at the time of resection is a good way to ensure this.

Idiopathic White Dot Syndromes—a Case Study

Ali YIH, Kilmartin DJ, Quinn S

Department of Ophthalmology, Sligo Regional Hospital, Sligo, Ireland

Purpose: To highlight White Dot Syndromes regarding symptoms, differential diagnosis, investigations, management and prognosis with reference to a case that presented to Sligo Regional Hospital in late 2012. These inflammatory chorioretinopathies of unknown aetiology, are uveitic entities that affect relatively young, otherwise healthy patients. These diseases primarily affect the posterior uveal tract and may present with white inflammatory lesions in retina, pigment epithelium, and/or choroid. Some of these conditions like Acute Posterior Multifocal Placoid Pigment Epitheliopathy (APMPPE) usually have a self-limited course and have an extremely good visual prognosis with preservation of central vision.
Methods: Gathering all data concerning the case including blood tests, Fundal Fluorescein Angiography, Optical Coherence Tomography, clinical findings, differential diagnoses postulated, treatment and follow up.
Summary: A 43-year-old female presented with sudden onset conjunctival injection, pain, photophobia. She had anterior uveitis, no vitritis, flat retina and normal acuity. We demonstrate her progression over 4 days to gross macular oedema and impaired vision. Her vision deteriorated from 6/6 bilaterally, to 6/60 on the fourth day. She responded well to Steroids and Immunosuppressives (Mycophenolate Mofetil), and has now recovered to 6/9 right and 6/6 left eye. The case shows that although APMPEE can have an acute course with dramatic loss of vision, it has good prognosis and responds well to treatment.
Implications: It highlights the importance of close follow up of Uveitis patients, and the potentially dramatic course of APMPEE, requiring aggressive treatment.

Proceedings of the RAMI Section of Ophthalmology, Friday 7th Dec 2012, Dublin

Post-Operative Bilateral Ischeamic Optic Neuropathy

Ntomchukwu H, O'Reilly P

Mid-Western Regional Hospital, Limerick

Background: Nonarteritic Ischemic optic neuropathy refers to optic nerve damage secondary to compromised blood flow to the optic nerve. This typically occurs with age and in predisposed individuals. Postoperative ischaemic optic neuropathy is a less common but well reported cause.

Case report: A 62-year-old man was referred to the eye department in the Midwestern Regional Hospital. He was 4 days post uneventful bilateral knee replacement surgery elsewhere and had complained of visual deterioration in his right eye on waking the day after surgery. On examination he was noted to have optic nerve swelling associated with a relative afferent pupillary defect on the right side and a visual acuity measuring only counting fingers. Blood loss during surgery was not reported to be excessive. His haemoglobin was, however, somewhat reduced measuring only 9.2 and a presumptive diagnosis of postoperative ischaemic optic neuropathy was made. Blood transfusions were recommended and commenced to normalize the haemoglobin and maximize the blood flow to the optic nerve.

He was seen again 8 days later and the left optic nerve was now noted to be swollen inferiorly with an associated visual field deficit although he was asymptomatic on this side. He has remained under regular review and is now 7 months post surgery.

Conclusion: Even where there is not an inordinate amount of blood loss reported intra-operatively, post-operative ischaemic optic neuropathy should be considered if the clinical presentation fits.

The Outcome of Tectonic Lamellar Keratoplasty in the Context of Serious Ocular Surface Disease

Kamel K, Fahy G

Ophthalmology Department, Galway University Hospital, Galway

Corneal perforation and descematocele are rare but serious complications of ocular surface disease (OSD). We evaluated the outcomes of tectonic lamellar keratoplasty (TLK) in this context.

Retrospective study of all TLK performed in Galway University Hospital over 11 years, from August 1999 to August 2010. Diagnosis, pre and post-operative visual acuity (VA) and complications were recorded.

Fifteen patients underwent 19 procedures, 12 had corneal perforation and three had descematocele. Three patients had rheumatoid arthritis (RA), two (herpes simplex keratitis), two (traumatic), two (idiopathic), one (herpes zoster keratitis), one (rosacea), one (ocular cicatricial pemphigoid), one (Sjogren syndrome), one (Terrien's marginal degeneration) and one floppy eyelid syndrome (FUS). Two patients required horseshoe grafts while 13 required circular grafts. One rheumatic patient required further TLK after 9 months, one required penetrating keratoplasty after 3 years. The FUS patient required further TLK after 6 months. All other eyes (13) were secured after first TLK. 3/15(20 %) had post-op VA >6/12, 5/15 (33.3 %) VA 6/15–6/36, 7/15 (46.6 %) VA <6/60. Complications: loose suture 11/19(57.8 %), epithelial defect greater than 2 weeks 4/19(21.1 %), graft melt 2/19(10.5 %), Double AC 1/19(5.3 %).

TLK is a good method to secure the eye in patients with corneal perforation secondary to OSD. It offers significant advantage over penetrating keratoplasty. Most post-operative problems can be managed conservatively. Repeat TLK is occasionally required but had good outcome. Control of underlying OSD is essential to avoid complications.

A Rare Case of Susac's Syndrome: the Complete Clinical Triad

Coakley D[1], Collins N[1], Marnane M[2], Ryan A[2], Talty P[1]

Departments of Ophthalmology[1], Neurology[2], Cork University Hospital, Cork

We report a case involving a 62-year-old female presenting with ataxia, vertigo, memory loss, tinnitus and hearing loss. Magnetic resonance image (MRI) of brain demonstrated multifocal central corpus callosal microinfaracts. Fundal examination revealed bilateral occlusive retinal vasculitis and a diagnosis of Susac's syndrome (SS) was made. The patient was initially treated with high dose intravenous methylprednisolone (1000 mg/day) and subsequently commenced on cyclophosphamide and immunoglobulin therapy following clinical deterioration. Susac's syndrome is a rare, immune-mediated endotheliopathy involving the precapillary arterioles of the brain, retina and inner ear. Less than 200 cases have ever been reported. The syndrome typically affects young women and is characterised by the clinical triad: encephalopathy, hearing loss and branch retinal artery occlusions (BRAO). MRI demonstrates pathognomonic white matter changes that always affect the central corpus callosum. Due to the rarity of this disease, its aetiology remains poorly understood and diagnosis is frequently delayed due to its diverse presentation. The symptom complex can mimic other pathologies and diagnosis often requires a multidisciplinary approach involving radiologists, neurologists and ophthalmologists. This case outlines clinical and paraclinical findings leading to the diagnosis of SS and provides an overview of disease management. Prompt diagnosis and aggressive treatment are required to avoid or lessen permanent neurological deficit. Despite its rarity, the condition is being recognised more frequently as physician awareness increases.

Giant Cell Arteritis: a Case Series

Duignan E, Kennedy S, Curtin D

Royal Victoria Eye and Ear Hospital, Dublin

Giant cell arteritis (GCA) represents an ophthalmic emergency as it can cause irreversible loss of vision if not treated promptly with corticosteroid therapy. Giant cell arteritis is a chronic vasculitis of large and medium vessels, particularly affecting cranial branches which arise from the arch of the aorta. Visual loss occurs in up to one-fifth of patients. Twenty to fifty percent may develop a bilateral decrease in vision if treatment is delayed.

We wish to present five contrasting cases to exemplify the range of presentation of this disease and highlight certain aspects of care.

These cases represent a spectrum of presentation and complications encountered in GCA. Of the five cases, only three met the diagnostic criteria of the American College of Rheumatology described in 1990. All patients were over 50 (mean age 77) and all had an elevated ESR. Four biopsies were positive for granulomatous change diagnostic of GCA. Temporal artery abnormality on palpation was present in two patients and one patient experienced new onset headache.

Complications within this group include central retinal artery occlusion, choroidal infarction, anterior ischaemic optic neuropathy and optic atrophy. Prompt diagnosis and commencement of corticosteroid therapy can salvage visual loss to varying degrees, with one patient recovering 6/60 vision from HM on presentation, and early medical therapy can prevent visual loss in the fellow eye.

Our conclusion in presenting this small series of clinical cases is to highlight the importance of performing ESR and CRP in all patients with sudden loss of vision over 50 years of age, timely commencement of high dose IV steroids and confirmatory diagnosis with temporal artery biopsy.

Audit of Fundus Fluorescein Angiography over a Six Month Period at Cork University Hospital

Hamoud A, Ryan A, Whyte A, O'Connor G

Ophthalmology Department, Cork University Hospital, Cork

Purpose: To audit the use of fundus fluorescein angiography (FFA) as a diagnostic tool in Cork University Hospital in the modern era of Optical Coherence Tomography (OCT) imaging.
Methods: Retrospective analysis of all FFA investigations undertaken in a 6-month period from 1st September 2011 to 28th February 2012. We recorded: the indication for FFA, FFA diagnosis, whether an OCT was undertaken, and if the FFA was of additive diagnostic benefit compared to the OCT.
Results: One-hundred and nineteen angiograms were analysed (awaiting final statistical analysis). Interim analysis suggests that the FFA provided valuable diagnostic information over an OCT alone in most cases and that the FFA investigation was appropriate.
Conclusion: FFA has great potential as a unique non-invasive tool to investigate in vivo the microvascular pathogenesis affecting the back of the eye. The FFA still has a very important diagnostic role in the assessment of a variety of fundal pathologies in addition to OCT.

Avoiding and Managing the Argentinian Flag Sign in Mature White Cataract Surgery

Lee P, McElnea E, O'Brien C

Ophthalmology Department, Mater Misericordiae University Hospital

Mature white cataracts are challenging in phacoemulsification surgery. The Argentinian flag sign (AFS) which can occur during capsulorrhexis is a recognized complication. In those cases in which this happens the subsequent surgical steps are made much more difficult.

Through video presentation we highlight the pre-operative and intra-operative factors that lead to the occurrence of AFS. Further, using animation, we explain the mechanism by which this complication occurs. How to avoid this complication and how to manage it should it happen is elaborated.

Understanding the AFS as a possible complication of cataract surgery will enable surgeons to anticipate its occurrence. Prompt implementation of appropriate surgical manoeuvres will help to diminish the occurrence of AFS.

Optic Disc Pit Maculopathy

Pokrovskaya O[1], Cullinane A[2]

Department of Ophthalmology[1], Mid Western Regional Hospital, Limerick; Department of Ophthalmology[2], Cork University Hospital, Cork

Optic disc pits are a rare congenital anomaly which may be associated with serous detachment of the macula and retinal schisis. The visual prognosis in these cases is often poor, and no universally accepted treatment has been described to date.

This is a retrospective case report. We explore the clinical presentation, imaging, and treatment options. Our case is of a 19-year-old Irish male who presented with profound visual loss following blunt trauma to his left eye. On examination, he was found to have an optic disc pit with an area of fluid tracking from the pit towards the macular region.

The pathophysiology of this rare condition has been much debated, with the state of the posterior hyaloid face appearing to be of key significance[2]. The aetiology of the subretinal fluid also remains a controversial subject. Treatment options vary from conservative, to posterior macular buckling, and vitrectomy with gas tamponade, with or without laser photocoagulation and membrane peeling[1]. Our case highlights the potential for new treatment techniques—including the possible role of plasmin enzyme to induce posterior vitreous detachment.

References:

1. Shukla D, Kalliath J, Tandon M, Vijayakumar B (2012) Vitrectomy for optic disk pit with macular schisis and outer retinal dehiscence. Retina 32 1337–1342
2. Theodossiadis PG , Grigoropoulos VG, Emfietzoglou J, Theodossiadis GP (2007) Vitreous findings in optic disc pit maculopathy based on optical coherence tomography. Graefes Arch Clin Exp Ophthalmol 245:1311–1318

Eales' Disease: Clinical Presentation of a Rare Clinical Entity in Developed Countries with an update of literature review on the management in last ten years

Bafiq R, Collins N, Talty P, Fenton S

Department of Ophthalmology, Cork University Hospital, Cork

Eales' disease is an idiopathic inflammatory vascular occlusive disease that primarily affects peripheral retina of young adults. Although it is commonly seen in India, it is rarely reported in developed countries. We report a case series from a 30 year review of cases of Eales' disease from Cork University Hospital.

A total of two cases of Eales's disease were recorded in Cork University Hospital since 1982. Two males aged 30 and 32 years presented with minor visual disturbance of short duration (floaters in one case and shadow in visual field in the second case). Both had monocular changes with vitreous haemorrhage and retinal neovascularization (NVE). Fluorescein angiography showed retinal phlebitis, peripheral non perfusion and neovascularization and they were treated with panretinal photocoagulation (PRP). One patient who had a strongly positive Mantoux test was put on tuberculosis chemoprophylaxis. Despite having had PRP, he had persistent vitreous haemorrhage and was treated with intravitreal anti-VEGF. Both patients eventually had good visual outcome with a final recorded visual acuity of 6/5 Snellen.

We present two cases of Eales' disease from a 30 year review of cases in Cork University Hospital. We discuss, in the context of a review of recently published literature on Eales' disease, the management of this poorly understood condition. Some controversial issues—including the hypothesis that TB may be involved in the pathogenesis of the disease, are reviewed.

A Rare Case of Bilateral Congenital Corneal Opacification

Moran S, Kirwan C, O'Keefe M, Lanigan B

Childrens University Hospital, Temple Street, Dublin

We present the challenging case of a 2-week-old baby presenting with bilateral corneal opacification. This is a retrospective case report.

A 2-week-old baby was referred with bilateral corneal opacification. Examination revealed dense bilateral corneal opacification, aniridia, and glaucoma. Bilateral trabeculectomies were carried out at 2 weeks of age, followed by bilateral penetrating keratoplasties at age 6 and 7 weeks. Histology of the host cornea confirmed bilateral Peters anomaly. Although Peters anomaly has rarely been described in association with aniridia, there are no previous reports of Peters anomaly occurring with both aniridia, and congenital glaucoma. Follow-up at 6 months revealed bilateral clear corneal grafts and controlled intraocular pressures. The baby fixes and follows, and functions well in aphakic spectacles. Peters anomaly is a rare congenital anterior segment malformation characterised by central corneal opacities and underlying defects of the stroma, Descemets membrane and endothelium. Aniridia is a distinct clinical condition largely caused by mutations in the PAX6 gene. The glaucoma associated with Peters anomaly is difficult to control and surgical intervention is usually required.

In summary, this is a rare case of Peters anomaly in association with aniridia and congenital glaucoma. Management of such cases is challenging and early intervention is required.

Occult Intraorbital Foreign Body

Bashir S, Fulcher T

Ophthalmology Department, Mater Misricordiae University Hospital, Dublin

High index of suspicion is required for diagnosis of intraorbital foreign bodies. This is particularly true for wooden Intraorbital foreign bodies (WIOFB) as they do not readily show up on imaging.

In this case, a 26-year-old male presented 1 day after falling into a ditch off his bike. He complained of right eye swelling and pain. On examination he had tense right periorbital haematoma, severe chemosis, counting fingers vision, and near total ophthalmoplegia. CT scan performed showed medial orbital wall fracture, deformed inferomedial margin of the globe, and air in the orbit. Examination under anaesthesia revealed a laceration in nasal conjunctiva with multiple small foreign bodies in the area, and visible medial bony margin. The globe was intact. The patient was then referred for orbital surgeon opinion. Examination raised the suspicion for WIOFB. CT scan was reviewed and discussed with the radiologist. MRI and exploration were performed subsequently, which showed 4 cm $\times$ 1 cm piece of tree branch lodged into the medial orbital wall and extending into the cribriform plate.

Identification of WIOFB is crucial for avoiding severe orbital infection. This case emphasizes the high index of suspicion required to detect WIOFB. Even if initial scanning is negative, review of scans and discussion with the radiologist with view of further imaging is always worth doing.

Proceedings of the RAMI Section of Ophthalmology, Friday 23rd March 2012, Limerick

Upper Eyelid Reconstruction Using a Novel Combination of Flaps

Razaq R, Droney T, O'Reilly P

Department of Ophthalmology, Mid Western Regional Hospital, Limerick

The aim of eyelid reconstruction is to provide corneal protection along with reasonable functionality. Lower eyelid defects are much more common (post removal of lid tumours), however, where there is a large upper eyelid defect, these issues are more pressing. Extensive upper eyelid defects are conventionally reconstructed by either, a Cutler-Beard bridge flap or a Pedicle switch flap, however, these are not without their own problems.

In this case report we describe the oculoplastic techniques employed in the reconstruction of a sub-total upper eyelid defect with complete loss of the medial canthal tendon, following wide excision of an extensive squamous cell carcinoma. A novel combination of flaps were used, including a sliding tarso-conjunctival flap from the upper eyelid together with an inverse Hughes flap from the lower eyelid. The residual medial defect was repaired with the aid of a medial periosteal flap. Blood supply to the supraclavicular skin graft was enhanced by an orbicularis muscle flap. This further contributed to improved lid functionality and enhanced orbicularis function.

The patient achieved very good cosmesis, excellent functionality with good eyelid closure and corneal protection. Furthermore, there was no compromise to the donor lower eyelid.

We discuss the issues relating to the reconstruction of large upper eyelid defects and offer a viable alternative to the better known methods of reconstruction.

"Gone with a Wink"

Droney T, Razaq R, O'Reilly P

Mid-Western Regional Hospital, Limerick

This case report describes a 19-year-old fit and healthy male presenting with an acute onset of a triad of symptoms including; left sided ptosis, left abduction deficit and left eye temporal field defect. His symptoms were brought on following a violent bout of sneezing. In the course of time his left eye visual acuity deteriorated from 6/9 on presentation to 6/36, with normal pupillary reactions and optic nerves. The reduction in visual acuity coincided with progression of the left eye temporal visual field defect. He also reported altered corneal sensation on the left side.

He had extensive imaging including 2 consecutive MRIs and a CT angiogram which were inconclusive. Blood tests were negative for inflammatory and infective conditions. Lumbar puncture revealed a few white cells, thought to be of low significance. Two separate trials of high dose steroid treatment failed to improve his symptoms.

The signs and symptoms, though suggestive of orbital apex or superior orbital fissure type syndromes, lacked certain elements to fulfil the criteria fully.

The case opens an interesting forum for discussion for alternative diagnostic possibilities.

Management of a Juxtapapillary Retinal Capillary Hemiangioblastoma

Croghan C, O'Connor G

Cork University Hospital, Wilton, Co., Cork

This case report describes the case of a 25-year-old man with Von Hippel–Lindau syndrome. Von Hippel–Lindau (VHL) syndrome is an autosomal dominant inherited tumour susceptibility syndrome.

Prevalence is estimated at 2–3 per 100,000. Clinical manifestations include haemangioblastomas in the retina and central nervous system, renal cell carcinoma of kidney, islet cell tumours of the pancreas, and phaeochromocytoma.

This man had a positive family history of VHL, and was screened at ophthalmology outpatients since 10 years of age. Ocular examination revealed a juxtapapillary retinal capillary hemiangiomablastoma in the left eye. The diagnosis of VHL can be made in a patient with a family history of VHL based on a single retinal or cerebellar hemangioblastoma, renal cell carcinoma or pheochromocytoma. Photodynamic therapy was not undertaken due to proximity to the optic nerve head. He was reviewed annually.

At the age of 25 vision was reduced from 6/6 to 6/12 in the left eye. He developed cystoid macular oedema and central serous retinopathy, due to progression of angioma at the left optic nerve head. Treatment with photodynamic therapy was undertaken due to risk of reduced visual acuity with or without treatment.

Retinal haemangioblastomas are found in 60 % of VHL patients during their lifetime. They typically occur in the peripheral retina, and are multiple. Life expectancy was less than 50 years before surveillance protocols were developed. Increased quality of life and improved prognosis has been greatly improved with genetic analysis screening, annual assessments, early recognition and appropriate treatment.

Vogt Koyanagi Harada Disease, a Typical Presentation of a Rare Disease

Babiker S, Roy M, Whyte A, Murray A

Department of Ophthalmology, Cork University Hospital, Cork

A 39-year-old Argentinean lady presented with progressive bilateral blurring of vision and metamorphopsia of 7 days duration starting in the left eye. The condition was preceded 10 days earlier with headache, photophobia, neck pain, tinnitus and altered hearing.

Examination showed bilateral panuveitis (mainly posterior), with disk edema and retinal folds. Optical coherence tomography and fundus fluorescein angiography showed multiple neurosensory detachments.

She was treated with oral steroids with a good response followed by tapering. During the next 2 years, she developed 3 episodes of recurrences of uveitis, with formation of posterior synechiae, but a normal intraocular pressure. Currently, her vision is maintained at a level of 6/9 on a maintenance dose of prednisolone 10 mg.

Vogt Koyanagi Harada syndrome is a rare cause of uveitis in people of Hispanic, Mediterranean or Asian oroigin. It is characterized by ocular, cutaneous and neurological manifestations. It has two subgroups, this case falls into the Harada Disease group. As with other causes of severe uveitis, early recognition and treatment is important to prevent significant complications such as glaucoma, cataract, choroidal neovascularization and subretinal fibrosis, all leading to poor visual outcome.

Audit of Intravitreal Bevacizumab Injections Performed by an Anterior Segment Team

Goetz R, Curtin D, O'Brien P

Department of Ophthalmology, RVEEH, Dublin

The primary aim of this study was to analyze the protocol used for administering intravitreal Bevacizumab and the outcomes achieved.

A record of patients receiving intravitreal Bevacizumab from March 2010 to December 2011 was acquired. The charts of these patients were reviewed and data was extracted and inserted into an excel spreadsheet and analysed.

Twenty-two eyes of 19 patients were identified for the audit. Of these, 68 % (n = 15) were for neovascular age related macular degeneration, 18 % (n = 4) were for cystoid macular oedema secondary to branch retinal vein occlusion, and 14 % (n = 3) were for diabetic maculopathy. The average interval between injections was 5.5 weeks for AMD, 5 weeks for BRVO and 4 weeks for diabetic retinopathy. 33.3 % of the AMD group achieved visual gains of >1 line, 46.7 % remained the same and 20 % lost no more than 1 line. In the BRVO group, there were visual gains in 100 % of eyes injected and in the diabetic retinopathy group, 33 % achieved visual gains (>1 line) and 66 % remained the same. Central retinal thickness improved on average by 33.3 μm for AMD, 154.25 μm for BRVO and 34.7 μm for diabetic retinopathy. There was 1 complication; a transient IOP increase treated with paracentesis.

Satisfactory outcomes were achieved by an anterior segment team using an initial loading course of three IVT Bevacizumab injections followed by a clinician-determined retreatment protocol. These results compare to those in the published literature.

Central Retinal Vein Occlusion in a Young Healthy Male Following the Swine Flu Vaccine

Manning S, Hickey-Dwyer M

Ophthalmology Department, Mid-Western Regional Hospital, Limerick

We describe a case of central retinal vein occlusion (CRVO) in a young healthy male following the Pandemic Influenza A (H1N1) vaccine ("swine flu" vaccine) (Pandemrix®; GlaxoSmithKline).

A previously healthy 15-year-old male developed sudden painless loss of vision in the left eye due to a CRVO 2 weeks following the Pandemrix® vaccine, in January 2010. Ischaemic sequelae of the CRVO ensued, leading to no perception of light, despite aggressive treatment.

More than 250,000 people received the Pandemrix® vaccine during the H1N1 2009 flu pandemic. Central retinal vein occlusion is not a known complication of the swine flu vaccine. The implications of such an association are considered and a literature search is presented.

Otitic Hydrocephalus—a Rare Cause of Papilloedema

Pokrovskaya O, Murray A

Cork University Hospital

Otitic hydrocephalus remains an extremely rare and elusive condition, which may complicate a seemingly straight forward case of otitis media or acute mastoiditis with potentially devastating consequences[1].

This is a retrospective case report of a new case of otitic hydrocephalus in Ireland. We reviewed clinical history, radiographic findings, medical and surgical management, and follow-up.

A 12-year-old EH suffering from otitis media developed the alarming symptoms of severe headaches, diplopia, nausea and

vomiting. Ophthalmological examination revealed marked papilloedema. Cerebral imaging confirmed right transverse and sigmoid sinus thrombosis. Treatment of raised ICP necessitated lumbar puncture, with subsequent symptomatic improvement.

With advances in modern antibiotics the incidence of otitic hydrocephalus has significantly decreased since it was first described by Sir CP Symonds in 1932[2]. However, it remains a very real potential source of morbid complications from middle ear disease. This case illustrates an interesting presentation of otitic hydrocephalus in a 12 year old, and explores clinical features, treatment and prognosis in this age group.

References:

1. Durairaj VD, Andrews B, Rao RR, Chan KH (2008) Morbid complications of otitic hydrocephalus. Orbit 27:51–54
2. Symonds CP (1932) Otitic hydrocephalus: a report of three cases Br Med J 1:53–54

The Role of Toll-Like Receptors in Herpes Simplex Keratitis

Malone CPG[1,2], Shahnazaryan D[1,2], Conlon R[2], Chan T[2], Anyiam A[2], Murphy CC[1,2], Jefferies CA[2]

Royal Victoria Eye and Ear Hospital[1], Dublin, and Royal College of Surgeons in Ireland[2], Dublin

Herpes simplex keratitis (HSK), caused by herpes simplex virus type 1 (HSV-1), is characterised by recurrent episodes of corneal inflammation which lead to loss of vision. Toll-like receptors (TLRs) are key components of innate immunity and are highly expressed in human corneal epithelial cells (HCECs). Upon exposure to HSV-1, TLRs trigger induction of the anti-viral cytokine type 1 interferon (type 1 IFN). Several TLRs have been implicated in this initial pro-inflammatory cascade; however, there is a paucity of data regarding the cytokine profile of HCECs. We hypothesise that elucidation of the pathways involved may lead to novel therapeutic targets for HSK.

Immortalised HCECs were stimulated with TLR ligands poly I:C (TLR3), and CpG ODN (TLR9). Constitutive TLR transcription was identified using polymerase chain reaction. Western blotting was performed to measure interferon regulatory factor 3 (IRF3), nuclear factor κB (NFκB) and mitogen-activated protein kinase (MAP kinase) production. Enzyme-linked immunosorbent assay (ELISA) was used to quantify cytokine expression in cell supernatant.

HCECs stimulated with poly I:C demonstrated increased IRF3 and NFκB production. Cells stimulated with CpG ODN showed activation of NFκB and MAP kinase. ELISA identified increased production of various cytokines, including IL-6, potent anti-viral agent IFNγ, and the interferon-dependent chemokine RANTES.

Our results indicate activation of type 1 IFN pathways and induction of pro-inflammatory cytokines in HCECs in the presence of TLR ligands. We aim next to investigate TLR expression in the corneal epithelium of patients with active HSK.

Sudden Loss of Vision in a Systemic Lymphoma Patient

Fauzi FM, Charalampidou S, Horgan N

St. Vincent's University Hospital, Dublin

Introduction: The authors present a case of a sudden loss of vision in a systemic lymphoma patient.
Materials/methods: The clinical and photographic records of this case report are reviewed.
Results: A 57-year-old lady with a 4 weeks history of sudden loss of vision in the left eye was referred to the ophthalmology services in SVUH as a consult from the haematology team. She had a significant past medical history of Non-Hodgkins Lymphoma diagnosed in May 2010 treated with chemotherapy and stem cell transplantation, and breast carcinoma diagnosed in 2008 treated with mastectomy with axillary clearance, chemo therapy, and hormonal therapy. She had two intensive care admissions with neutropaenia sepsis and more recently respiratory failure secondary to pulmonary oedema. She noticed a drop in the vision when she recovered from her first ICU admission and describes it as seeing a red blob. She underwent fundal photographs, fundal fluorescein angiography and MRI of brain and orbits are also presented. A decision to observe was then made.
Conclusion: This case highlights the importance of considering the possibility of unusual diagnoses in patients with visual loss on a background of significant systemic co-morbidities.

A Case of Cyclodialysis in Phacoemulsification Surgery

O'Rourke M, Loane E, Doyle A

Royal Victoria Eye and Ear Hospital, Dublin

We present the case of a 62-year-old male who underwent routine phacoemulsification surgery. Iris capture within the phaco probe was noted at the 6 o'clock position. The procedure was further complicated by a posterior capsular tear. At 1 month post-operatively the eye was hypotonous.

Gonioscopy, ultrasound B scan and ultrasound biomicroscopypy was used to determine the cause of the hypotony. These showed the presence of an iris cleft near the site of iris loss from the phacoemulsification probe.

Topical atropine, argon laser and cyclocryotherapy were unsucessful in closing the cleft and the eye remained hypotonous. Repair of the cyclo-dialysis cleft using a scleral flap and suturing of the ciliary body was required to close the cleft.

We present a rare case of cyclodialysis and resultant hypotony and its management in a case of complicated phacoemulsification surgery.

An Unusual Medical Case

Ryan A, O'Toole L

Mater Misericordiae University Hospital, Dublin

Introduction: Alkaptonuria is a rare clinical entity. It is an autosomal recessive disorder caused by deficiency of homogentisic acid oxidase, excess homogentisic acid is deposited as an 'ochre' pigment in various tissues including the sclera, bone, cartilage and skin causing bluish-black discoloration (ochronosis).We present an interesting case of delayed diagnosis of this rare disorder.
Materials/methods: A 52-year-old gentleman with large joint arthropathy presented to an orthopaedic surgeon for right knee replacement surgery. Many years previously he had required replacement of his right shoulder joint which was found to be 'black'

following trauma. He had an 'innocent' heart murmur in childhood but subsequently developed aortic stenosis in later years.
The knee joint was found to be black at the time of replacement surgery and thought to be due to possible malignant melanoma. Histology showed, however, that the black discoloration was due to pigment deposition consistent with ochronosis. In retrospect, he reported dark coloured urine on exposure to air since childhood. He noted that people had remarked on his sclerae becoming darker over the years.

Ophthalmological examination revealed dark pigmentation of the sclera consistent with ochronosis. He also had a blue tinge to his ear cartilage.
Results: Urine organic acids showed a very large quantity of homogentisic acid consistent with a diagnosis of alkaptonuria. The patient underwent aortic valve replacement for calcific aortic stenosis due to valvular involvement.
Conclusion: Alkaptonuria is a rare disorder which causes arthropathy, heart valve stenosis and pigmentation of the sclera and the ears. In this case, diagnosis was delayed until the patient was aged 52 years.

Ocular Microtremor and Extraocular Muscle Tension—a Study of Sixth Nerve Palsy

Collins N, Al-Kalbani M, Boyle G, McAleer T, Sheahan C, O'Connor R, Cassidy L, Coakley D

Department of Clinical Medicine, Trinity College, Dublin; Mercer's Institute for Research on Ageing, St James's Hospital; Royal Victoria Eye and Ear Hospital, Dublin, Ireland

Background: Ocular microtremor (OMT) is a minute high-frequency oscillation of the eyes, related to tone in the extraocular muscles (EOM). This study of sixth nerve paresis investigated the relationship between OMT frequency parameters and EOM tension and motoneuron firing, inferred based on known relationships between EOM tension and motoneuron firing in the extensive eye movement literature.
Materials/methods: Twelve patients (median age 56 years, 8 male) with unilateral sixth nerve paresis were recruited from the orthoptics department in the Royal Victoria Eye and Ear Hospital, between April 2007 and May 2008. Examination included assessment of degree of strabismus using prisms and cover test. Twelve healthy control subjects (median age 47 years; six male) were recruited for comparison. OMT recordings were performed in the primary position and in lateral gaze.
Results: OMT peak frequency was lower in paretic eyes vs. non-paretic eyes in patients with sixth nerve paresis [mean difference 4.4 Hz, 95 % CI (0.6, 8.3 Hz), $p = 0.02$], and lower in paretic eyes vs. control eyes [mean difference 9.2 Hz 95 % CI (6.2, 12.3 Hz), $p < 0.0005$]. OMT spectral distribution was significantly shifted towards lower frequencies in paretic eyes compared to controls. Paretic eyes with greater degrees of esotropia in the primary position had a greater difference in OMT peak frequency between the two eyes (Spearman's rho 0.749, $p = 0.008$). An increase in OMT frequency was seen in both abduction and adduction in controls, and in adduction in patients. However, OMT frequency did not increase in the paretic eyes in abduction.
Conclusions: The main findings were: (1) a reduction in OMT peak frequency in subjects with sixth nerve palsy, with more severe clinical limitation of lateral rectus function being associated with relatively lower OMT frequencies and (2) in lateral rectus paresis the normal increase in OMT frequency exhibited by healthy subjects when the eye is deviated in the direction of action of the lateral rectus was attenuated. The findings support the hypothesis that OMT frequency is related to EOM tension and the firing frequency of ocular motoneurons.

Proceedings of the RAMI Section of Ophthalmology, Friday 2nd December 2011, Dublin

Case Report of Basal Neoplastic Meningitis Presenting with Ocular Signs

Thacoor D, Gardiner C

Department of Ophthalmology, Mater Misericordiae Hospital, Dublin

Introduction: Neoplastic meningitis was first recognized by Eberth in 1870 and describes multifocal seeding of the leptomeninges by tumour metastases. It is most often associated with breast cancer, small cell lung cancer and melanoma. Cranial nerve palsies are the present in 94 % of cases, with III, VII AND VIII being the most commonly affected nerves. These typically occur in conjunction with spinal and cerebral signs. Ocular symptoms have been reported in 91 % of cases of neoplastic meningitis, with diplopia affecting 20–50 %. Diagnosis is primarily based on a combination of CSF cytology and gadolinium-enhanced magnetic resonance imaging of the CNS. However, repeated lumbar punctures are often required for positive cytology and only 50 % of patients have abnormal radiological findings. Prognosis is poor and treatment is usually palliative.
Materials/methods: We report a case of a 79-year-old gentleman who presented to our department with diplopia, facial palsy and mild exposure keratopathy, on a background of melanoma and follicular lymphoma in situ. Neurological and ocular examination revealed multiple cranial nerve palsies—VI, VII, VIII, XI and XII. CT and MRI imaging failed to demonstrate a space occupying lesion. In view of his clinical presentation, a lumbar puncture was performed and CSF showed atypical cells, in keeping with neoplastic meningitis.
Conclusion: Even though neoplastic meningitis is a rare condition, ocular symptoms are often the presenting complaint. It is therefore crucial for ophthalmologists to consider this differential diagnosis in patients presenting with multiple cranial nerve palsies.

References:

1. Wolfgang G, Marcus D, Ulrike S (1998) LC: clinical syndrome in different primaries. J Neurooncol 38:103–110
2. Walz J (2011) Ocular manifestations of meningeal carcinomatosis: a case report and literature review. Optometry 82(7):408–12 (epub 2011 Apr 17)

Are Goldman Visual Fields Missing Significant Field Defects?

Townley D, Logan P

Beaumont Hospital

Introduction: Currently the gold standard for monitoring visual field defects due to disturbances in the visual pathway is the Goldman Visual Field test. Here I discuss 2 cases which show a major discrepancy between the kinetic Goldman Visual Field measurements and the static Humphrey ff120 measurements.
Materials/methods/results: A discussion of 2 cases of patients with (a) an occipital injury and (b) a craniopharyngioma who described visual field defects which were not significant on repetitive Goldman Visual Field measurements but which on static Humphrey FF120 measurement showed hemianopic field defects.

Conclusion: Goldman Visual Field although the current gold standard in diagnosing and monitoring field defects as a result of visual pathway disturbance may be missing a cohort of patients with defects. Humphrey FF120 therefore may be useful as an adjunctive tool or perhaps as an alternative to Goldman Visual Field.

Ophthalmic Referrals from a Neurosurgical ICU: a 1 Year Audit

Duignan E, Fulcher T

Department of Ophthalmology, Beaumont Hospital, Dublin

Introduction: There is a paucity of literature addressing ophthalmic referrals from a neurosurgical intensive care unit (NSICU). The aim of this study was to conduct an audit of this activity in the national neurosurgical unit over a 1 year period.
Methods/materials: A retrospective chart review was carried out of all ophthalmic referrals from the NSICU in Beaumont Hospital between July 2010 and June 2011. Patients were identified from records maintained by the department of ophthalmology.
Results: Of 364 admissions to the NSICU, 19 patients were referred for ophthalmic consultation, i.e. 5.2 %. The charts of 15 of the 19 patients were available for review. There were 12 males and 3 females ranging in age from 22 to 64, with a mean age of 42. The underlying pathology was traumatic brain injury in 9 patients, and haemorrhagic, malignant and infective conditions in 6. The most common reason for ophthalmic referral was probable conjunctivitis. Other referrals were for assessment of trauma, eyelid lacerations and possible cranial nerve palsies. When first reviewed, 6 patients had multiple ophthalmic pathologies. There were 6 exposure-related injuries, 4 haemorrhagic complications, 3 cranial nerve palsies and 4 infections—3 involving the conjunctiva and 1 blepharitis. Organisms cultured included *Candida* and *Pseudomonas*. Assessment was limited by the fact that many patients were intubated and ventilated, and could not be brought to the ophthalmology department. A portable slit lamp was not available for examination. Assessment thus included physical examination of the eye and, when necessary, fundoscopy and swabs for culture and sensitivity. Formal ophthalmic and orthoptic review was carried out in the ophthalmology department when possible. The number of visits per patient ranged from 1 to 23, with an average of 4. The mainstays of treatment were topical antibiotics and lubricants. Only one patient required surgical intervention—temporary tarsorrhaphy—which was carried out in the NSICU.
Conclusion: Ophthalmic referrals are relatively uncommon in the neurosurgical ICU setting and are predominantly related to trauma. They rarely require surgery. Comprehensive ophthalmic examination is often precluded by the inability to transfer patients due to mechanical ventilation. Analysis of NSICU referrals is important (1) to document the range of ophthalmic pathology and (2) to evaluate the effectiveness of protocols to prevent exposure-related injury.

Homonymous Hemianopia in the Syndrome of Headache, Neurological Deficit and Cerebrospinal Lymphocytosis

Croghan C, Zaroog S, Kirwan C, Murray A

Cork University Hospital

Introduction: The syndrome of headache, temporary neurological deficit and cerebrospinal lymphocytosis is a distinct benign self limiting condition with a good prognosis. It is also known as pseudomigraine with lymphocytic pleocytosis. It is thought to result from an autoimmune response secondary to recent viral infection, which induces aseptic inflammation in the meningeal vascular system. Presentation may mimic migraine, cerebrovascular accident, viral meningitis, subarachnoid haemorrhage, space occupying lesion and idiopathic intracranial hypertension. It is a diagnosis of exclusion. Visual changes, including decreased visual acuity, visual field loss and cranial nerve palsies have been reported in 12 % of cases of HaNDL syndrome.
Materials and methods: Presentation of a 46-year-old man whose presentation fulfils the diagnostic criteria for HaNDL syndrome, with headache, cerebrospinal lymphocytosis and a transient neurological deficit of left sided homonymous hemianopia. Normal neuroimaging and cerebrospinal fluid lymphocytosis confirmed the diagnosis. He was treated with oral corticosteroids.
Results: Serology did not identify an aetiological agent. There was resolution of headache and visual field defects within 6 weeks.
Conclusion: This is a rare and under recognised syndrome. This case emphasises the importance of CSF analysis for a presentation of headache with neurological deficit. Diagnosis of HaNDL syndrome will reassure the patient due to the benign self-limiting nature of the syndrome.

Incidental Finding of a Choroidal Haemangioma in a Patient with Periocular Naevus Flammeus

Coakley DN, Dooley I, Fenton S

Department of Ophthalmology, Cork University Hospital

A 52-year-old female with a left periorbital port-wine stain birthmark was referred by a community ophthalmologist for left cataract extraction. She had a mature left cataract obscuring the fundal view with a visual acuity of 6/36 on the left and 6/6 on the right. The remainder of her ophthalmological evaluation including intraocular pressure was normal. She described a background history of left ambylopia but had no relevant past medical history. A pre-operative B-scan ultrasonograph revealed a left choroidal lesion. She underwent an uncomplicated left phacoemulsification and intraocular lens insertion. Postoperative fundal examination confirmed the presence of a choroidal haemangioma with overlying drusen suggesting chronicity. A fluorescein angiogram revealed an early pre-arterial patchy hyperfluorescence with patchy late staining of the tumour constant with a diagnosis of haemangioma. Management options for choroidal haemangiomas include observation, brachytherapy, transpupillary thermotherapy (TTT), and photodynamic therapy (PDT). Due to the chronicity of the lesion and the poor potential for visual recovery, conservative management in the form of observation was chosen. Choroidal haemangioma is relatively rare benign vascular tumour of the choroid. This case report illustrates, that intraocular involvement should be considered in patients with periocular port wine stains.

Effective Treatment of Choroidal Neovascularisation Secondary to Membranoproliferative Glomerulonephritis Type II with Ranibizumab

McCullagh D[1], Silvestri V[1], Moore E[1], Maxwell AP[2], Silvestri G[1]

Centre for Vision and Vascular Science[1], Queen's University Belfast, Royal Victoria Hospital, Belfast, Northern Ireland, BT12 6BA;

Regional Nephrology Unit[2], Belfast City Hospital, Belfast, Northern Ireland, BT9 7AB

Introduction: Membanroproliferative glomerulonephritis type II (MPGN II) is characterised by electron dense deposits of complement components in the glomerular basement membrane and retinal pigment epithelium. Approximately 10 % of affected individuals develop serious ocular complications similar to age related macular degeneration (AMD) but with much earlier onset than is typical for AMD. The choroidal neovascularisation (CNV) complication of MPGN II is usually ineffectively managed with photocoagulation or photodynamic therapy.
Materials/methods: We report the case of a 42-year-old woman with MPGN II presenting with decreased visual acuity and paracentral scotoma in her left eye due to an extra-foveal choroidal neovascular membrane which was treated with intra-vitreal ranibizumab (Lucentis).
Results: Visual acuity in her left eye improved to 6/9 after the first and then 6/6 after the second injection, at which time the patient reported that the distortion of vision was gone. On follow-up at 22 months visual acuity was 6/6 in the right eye and 6/5 in the affected left eye and optical coherence tomography (OCT) scan confirmed resolution of neovascular activity.
Conclusion: This case highlights the successful management of CNV secondary to MPGN II with the anti-VEGF agent ranibizumab and emphasises the potential importance of visual "distortion" symptoms in patients with MPGN II and the need for urgent referral for ophthalmic evaluation.

Retinal Vasculitis Associated with Dyskeratosis Congenita

McGuire M, Ooi M, Smith O, Brosnahan D

Royal Victoria Eye and Ear Hospital, Our Lady's Hospital for Sick Children

Introduction: Dyskeratosis congenita (DKC), also known as Zinsser-Engman-Cole syndrome, is a rare, inherited, progressive bone marrow failure syndrome characterized by the triad of reticulated skin hyperpigmentation, nail dystrophy, and oral leukoplakia. Most cases show X-linked inheritance but autosomal dominant and autosomal recessive have also been documented.
Many ophthalmic complications of DKC, including obstruction of the lacrimal system, cicatricial entropion, trichiasis and alopecia areata, have been documented but there are few reports of associated retinal vasculitis.
Materials/methods: A 7-year-old boy with pancytopenia secondary to Dyskeratosis congenital presented for routine ophthalmic examination prior to bone marrow transplant.
Results: Visual acuity at initial assessment was 6/18 OD, 6/12 OS. Anterior segment examination was normal. Fundoscopy of the right eye revealed profound peripheral retinal ischemia, vascular sheathing and telangectasia with vitreous haemorrhage while examination of the left eye showed peripheral ischemia, fibrosis, preretinal haemorrhages and abundant hard exudates in the posterior pole.
Optical coherence tomography and flouroscein angiography evidenced these findings. The patient underwent bilateral indirect panretinal photocoagulation with intravitreal anti-VEGF injection to the right eye. The vitreous haemorrhage resolved and exudates improved.
Conclusion: Patients with dyskeratosis congenita require ocular examination to exclude sight threatening retinal pathology.

Management of Choroidal Neovascularization in Pregnancy

Collins N, O'Reilly P, Kilmartin DJ

Royal Victoria Eye and Ear Hospital, Dublin, Ireland; Mid-Western Regional Hospital, Limerick, Ireland

Background: Choroidal neovascularisation (CNV) in pregnancy is a difficult problem as investigations and treatments, such as fluorescein angiography, anti-vascular endothelial growth factor (VEGF) agents and photodynamic therapy (PDT), are restricted or relatively contra-indicated during pregnancy. We report six patients who developed CNV during pregnancy, we review the reported literature regarding treatment of CNV in pregnancy and discuss the treatment options in these challenging cases.
Materials/methods: A retrospective case series at a university hospital specialist clinic. Participants included six patients (eight pregnancies) who either developed CNV while pregnant or became pregnant whilst being treated for CNV. Demographics, diagnostic and treatment approaches, visual acuity outcomes and potential effects of treatment on the pregnancies were assessed.
Results: Six patients (seven eyes, eight pregnancies) developed subfoveal CNV during pregnancy; three patients had punctate inner choroidopathy (PIC), two patients had idiopathic CNV and one had CNV related to myopia. Median age was 35 years with median follow-up of 45 months. Four patients received treatment during pregnancy, including PDT, intravitreal triamcinolone and systemic immunosuppressive therapy (tacrolimus and prednisolone). Median visual acuity decreased from logMAR 0.4 to 0.5 due to active CNV during pregnancy. Intravitreal anti-VEGF therapy (bevacizumab) was delayed until after delivery.
Conclusions: CNV management in pregnancy presents investigative and treatment dilemmas. Treatment should be individualized, and only undertaken following discussion with the patient regarding risks and benefits of potential interventions. This case series and review may help inform discussions with patients in this emerging area.

Environmental and Genetic Risk Factors in the Irish AMD Population

Ní Dhubhghaill S, Campbell M, Cassidy L, Cahill M, Humphries M, Humphries P

Royal Victoria Eye and Ear Hospital, Trinity College, Department of Genetics

Introduction: Age-related macular degeneration (AMD) is a progressive, degenerative eye condition affecting the macula, and is the leading cause of visual impairment in people over 65 in the entire Western world. The aims of this project are to characterize the association of environmental factors, comorbidities, medication history in the Irish AMD population. We have also characterized genetic risk factors (single nucleotide polymorphisms) Complement Factor H (CFH), ARMS2, HTRA1 and PEDF associated with AMD in a previously uncharacterised Irish population.
Materials/methods: Subjects were recruited from retinal clinics of the Royal Victoria Eye and Ear Hospital in Dublin, Ireland as well as from the surrounding community. Venous blood samples were obtained and participants completed a questionnaire detailing age, gender, parental and sibling family histories, smoking history, medical history and drug-use history. Clinical assessment was performed

and participants were classified as control, atrophic AMD or neovascular AMD. Genetic risk factors were assessed by designing primers and PCR amplification. Restriction endonuclease digest and electrophoresis was performed to resolve the genetic risk factors.
Results: A first-degree sibling family history of AMD was associated with AMD. Smoking was also significantly associated with AMD. It was also noted people with a smoking history were at an increased risk. A history of hypertension was the only other significant comorbidity isolated. The genetic assessment confirmed that CFH, ARMS2 and HTRA1 have a significant influence on AMD. The odds ratios associated with the risk factors characterized in the Irish population were comparable to the pooled observations reported in the literature. There does not appear to be any deviations in the homogenous Caucasian Irish population from the American, Australian and European Caucasian populations in respect to the major AMD SNPs. The minor PEDF SNP assessed did not show a significant association with AMD in the Irish population.
Conclusion: This population-based study describes the risk associations that have been associated with AMD in other Caucasian populations. The Irish population was found to be similar to other Caucasian populations in terms of environmental and genetic influences in AMD.

Ocular Tuberculosis

Smolarek-Kasprzak P

Waterford Regional Hospital

Introduction: Tuberculosis is a ubiquitos disease and a public health problem of a major importance in almost all developing and underdeveloped countries. It can involve any part of the body including the eye. I report a case of young Bangladeshi native woman presenting with ocular tuberculosis. This case merits mention due to the fact that the patient is young, immune-competent and there is no other systemic features of tuberculosis.
Materials/methods: Diagnostic investigation including: FBC, CRP, ESR, TOXO/TOXOCARA, ANA, ANCA, ACE, CXR, CT brain + orbits, FFA, OCT; Mantoux test, 3× Sputum acid fast bacilli (AFB)
Results: Strongly positive mantoux test >45 mm.
Conclusion: The possibility of tuberculosis should be considered in differential diagnosis of any inflammatory orbital disease.

Ocular Chemical Burns in a Paediatric Population, a Retrospective Study

Fleming S, Dooley I

Cork University Hospital

Introduction: This study was conducted with the aim of evaluating the current incidence of chemical injuries from household chemicals, liquitabs in particular in the vulnerable paediatric population. This patient cohort present special difficulties when it comes to assessing the nature of the injury, examining the eye and treatment. Chemical eye injuries cause toxicity to the cornea, conjunctiva and epithelial stem cells. This can lead to corneal abrasions, as well as longer term complications such as corneal scarring, dry eyes, symplepharon and trichiasis—all of which may have long term implications on visual outcome. These are injuries which are largely preventable with adequate safety measures and awareness.
Materials/methods: This was a retrospective study carried out over a 1 year period, during the period June 2010 to June 2011. We looked at the medical records of all consecutive paediatric ocular chemical injuries, aged between 0 and 16 years, presenting to the ophthalmic emergency department of tertiary referral centre in the Republic of Ireland. The chemicals were categorised into liquid-tabs, household sprays, other household liquids and other chemicals. We then looked at the age of the patient, epithelial loss, days in hospital and number of follow ups.
Correlation was examined using Pearson's correlation coefficient and a $p < 0.05$ was taken as statistically significant. All statistics analyses were performed using the Aabel 3 statistical package (version 3.0.3, GigaWiz Ltd. Co., Tulsa, OK, USA). All means are expressed ± 1 standard deviation (SD).
Results: In a 1 year period 27 children presented to eye casualty suffering from ocular chemical burns. Of these, 8 were attributable to liquid detergent capsules, 5 as a result of household sprays, 3 as a result of household liquids and 11 as a result of other chemicals such as petrol, oil and cosmetics. The patients ranged in age from 9 months to 11 years with a mean age of 3.07. Corneal epithelial loss ranged from 0 to 100 %, with the most severe of these resulting from liquid detergent capsule. The most number of follow ups required for any of these patients was 6; some are still awaiting annual review to out-rule any long term complications.
Conclusion: This study highlights the rising incidence of paediatric ocular chemical injuries associated with household products, thus highlighting the need to ensure adequate safety measures in the home and increase awareness of what is a very distressing yet very preventable injury.

Tarantula Keratitis: a Case Report

McAnena L, O'Connor J, Murphy C

Royal Victoria Eye and Ear Hospital

Introduction: A case of an 11-year-old boy presenting with a 2-week history of a red, itchy, irritated right eye which had improved slightly over the previous week on oral antihistamines. His symptoms began after handling a Chilean Rose Tarantula at an exotic pet exhibition. Examination revealed mild periorbital oedema, injected conjunctiva, and innumerable microscopic hairs embedded at all levels of the cornea, with some breaching the endothelium and projecting into the anterior chamber (see images 1, 2). He was commenced on steroid drops with subjective and objective improvement at follow up.

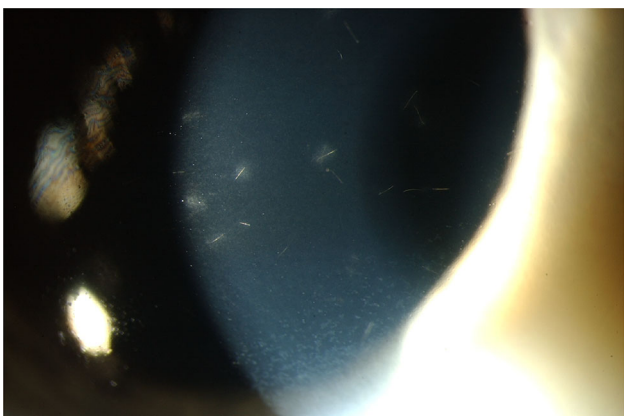


Image 1 Corneal tarantula hairs

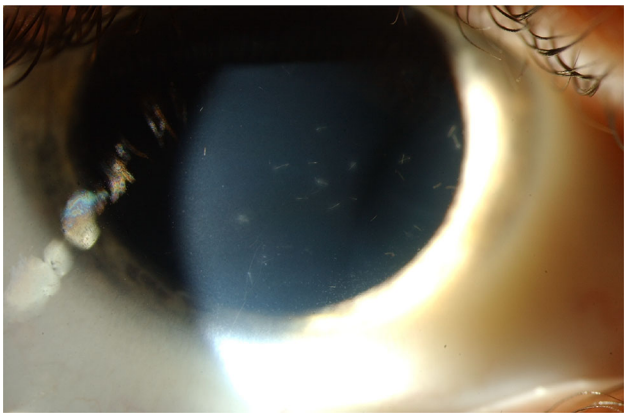


Image 2 Corneal tarantula hairs

Discussion: Tarantulas use their urticating abdominal hairs as a defense mechanism by flicking them into attackers' eyes and skin, causing intense irritation. Ocular complications ranging from simple conjunctivitis, through to keratouveitis and even pan-uveitis with chorioretinitis, have been described in the literature. Tarantula hairs are typically 0.1–0.3 mm long with a sharp-pointed head and numerous barbs (see image 3) capable of penetrating to the dermal layer of skin and beyond Descemet's membrane. Symptoms are secondary to a hypersensitivity response, and, as the hairs are almost impossible to remove, topical steroids are the effective mainstay of treatment. As exotic pets become more popular, the importance of wearing ocular protection when handling tarantulas should be stressed.

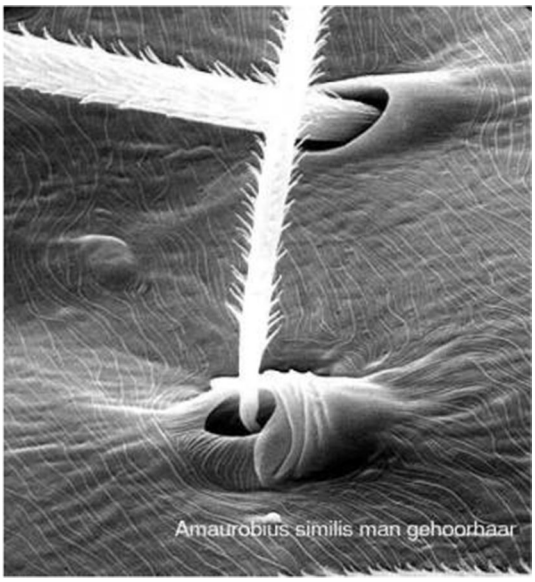


Image 3 Electron micrograph of tarantula hair

Descemet Stripping Endothelial Keratoplasty Using the TAN Endoglide Graft Insertion Device: Our Experience

Naughton A, Ryan A, Fulcher T

Department of Ophthalmology, Mater Misericordiae University Hospital

Introduction: Over the past decade corneal transplantation has undergone a paradigm shift with the development of endothelial keratoplasty. Currently the main surgical focus is to reduce iatrogenic endothelial damage caused by manipulation and insertion of the donor through a small incision. The TAN Endoglide endothelial insertion system is a device designed to minimise endothelial loss by inserting the graft in a 'double coil' configuration, thereby avoiding endothelial contact with the wound and endoforceps grip. Early clinical results published using this technique reported a short learning curve and low endothelial cell loss at 12 months post op. For these reasons, use of the TAN endoglide device was adopted at our institution, as an alternative to the 'pull-through' technique originally employed.
Materials/methods: Retrospective, single surgeon, single centre analysis of the first 6 consecutive DSEK procedures performed using the Tan Endoglide endothelial insertion system during the period February–April 2011 was performed. Analysis of subsequent re-do procedures using the original pull-through technique for patients with primary graft failure was then performed. Outcome was measured using BCVA at most recent follow up, appearance of the graft and any complications encountered including primary graft failure.
Results: Six eyes of 6 patients underwent Descemet Stripping Endothelial Keratoplasty using the TAN Endoglide endothelial insertion system. One procedure was combined with Phacoemulsification and IOL implantation. Mean patient age was 62.3 years (range 38–75). Indications for surgery were Fuch's endothelial dystrophy 66.66 % (n = 4), Pseudophakic bullous keratopathy 22.22 % (n = 1) and graft failure 22.22 % (n = 1). Average pre-operative visual acuity was 6/25. Average post-operative visual acuity was CF. None of the 6 cornea were clear at 3 months post-operative. Thus, 100 % resulted in primary graft failure. Four of these patients had a subsequent repeat DSEK procedure performed using the 'pull-through' technique. Average pre-operative visual acuity in this group was CF. Four of 4 cornea were clear within the first month post-op. Average post-operative visual acuity was 6/9.6.
Conclusion: Although designed to minimise endothelial damage during graft insertion and produce consistent, reliable results, our experience using the TAN endoglide has not reflected this. All procedures were performed by an experienced DSEK surgeon. However, graft failure was observed in all cases, prompting cessation of this method. Having reverted to the established 'pull through' technique, successful visual outcomes following DSEK have been re-established.

Case Presentation of Non-Arteritic Anterior and Posterior Ischaemic Optic Neuropathy (AION, PION), and Chronic Ocular Ischaemic Syndrome in a Patient on Haemodialysis

Feyzrakhmanova M, O'Rourke M, Cassidy L

Trinity College Dublin, Royal Victoria Eye and Ear Hospital

Introduction: Visual loss is a rare complication of hemodialysis. Although most cases of AION occur spontaneously, acute hypotension plays a clear role in a subset of patients. Patients under renal replacement therapy may be at special risk for developing AION. PION is a rare entity usually associated with profound hypotension and severe anaemia peri-operatively.
Materials/methods: We reviewed the case of a 25-year-old Caucasian female, undergoing hemodialysis for 5 years for end stage renal disease who presented to with sudden loss of vision in her right eye upon awakening. She also suffered severe pain in both eyes during dialysis. A diagnosis of non-arteritic AION, bilateral ocular ischaemic syndrome with neovascular glaucoma was made. She later developed PION in the other eye.

Results: Intervention included bilateral indirect panretinal photocoagulation for ischaemic retinopathy and maximum topical antiglaucoma therapy. She was commenced on 24 h 100 % oxygen therapy for her ocular ischaemic syndrome. This significantly reduced the pain occurring during dialysis.
Conclusion: AION and PION are important causes of loss of vision in a patient with hypotension and on haemodialysis. Oxygen therapy has been used in AION. This case it alleviated eye pain associated with dialysis.

Chalazion in a Previous Radiation Field

Ryan A, Fulcher T

Mater Misericordiae University Hospital, Dublin

Introduction: Second malignant neoplasms are the greatest threat to survivors of childhood retinoblastoma with an estimated incidence as high as 51 % 50 years after diagnosis. These second neoplasms, especially sebaceous carcinoma, frequently occur within the previous radiation field and can be difficult to diagnose initially. We report a case of poorly differentiated carcinoma of the eyelid invading into the orbit more than 50 years following enucleation and radiation therapy for a primary ocular malignancy of childhood.
Materials/methods: A 56-year-old gentleman was referred for incision and curettage of a right lower eyelid lesion. He had a history of previous enucleation of the right eye with postoperative radiation therapy aged 5 years for an uncertain primary ocular malignancy, most likely retinoblastoma. He had developed an indurated lesion on the right lower eyelid 5 months prior to referral which had been treated unsuccessfully with topical and oral antibiotics and had continued to enlarge.
Results: Examination revealed a solid and indurated right lower lid mass extending into the orbit. A transconjunctival biopsy was performed. Histology showed invasive, poorly differentiated carcinoma with both sebaceous and squamous features. An MRI orbits with gadolinium showed a 2.2 × 1.5 cm hyperenhancing mass at the floor of right orbit, in continuity with the inferior rectus. A PET CT showed no evidence of metastatic disease. A right exenteration was required to clear the tumour.
Conclusion: Sebaceous carcinoma can occur as a second primary neoplasm in patients with a history of retinoblastoma, most commonly the heritable form, and usually in association with previous radiation therapy. It has been described 5–26 years (median 11 years) following irradiation for retinoblastoma and at older ages in those without previous irradiation. Delay in diagnosis is common. The recognition of this entity is extremely important for those involved in following up patients with a history of retinoblastoma and/or radiation therapy as there is a high mortality associated with metastatic disease.

Combined Hamartoma of the Retina and Retinal Pigment Epithelium with Multiple Basal Cell Carcinomas

Ibrahim F, O'Connor G, O'Connor W

Cork University Hospital and Bon Secours Hospital, Cork

Introduction: A case of a 42-year-old female, who presented to the dermatologist with multiple basal cell carcinomas. She had previous history of multiple abdominal and jaw cysts. These led to the diagnosis of Nevoid Basal Cell Carcinoma Syndrome/Gorlin Syndrome. She presented to the ophthalmologist for evaluation of an unusual lesion in her right fundus.
Material/methods: Retrospective case review. We reviewed clinical history, medical, surgical management and imaging [including fundal flourescein angiography (FFA), optical coherence tomography (OCT), B Scan ultrasound and electrophysiology].
Results: Clinical features of Gorlin syndrome are evident: skin pits in her palms and soles, hypertelorism, and histology confirmed the presence of basal cell carcinomas in all her skin lesions. FFA, OCT and B scan confirms the diagnosis of combined hamartoma of the retina and retinal pigment epithelium.
Conclusions: This is a rare case of combined hamartoma of the retina and retinal pigment epithelium in Gorlin Syndrome, only three cases has been published internationally[1,2,3].
References:

1. Boutimzine N, Laghmari A, Karib H, Karmane M, Bencherif M, Albouzidi A, Cherkaoui O, Mohcine Z (2000) Gorlin-Goltz phacomatosis: ophthalmological aspects in one case J Fr Ophtalmol 23(2):180–186
2. De Potter P, Stanescu D, Caspers-Velu L, Hofmans A (2000) Combined hamartoma of the retina and retinal pigment epithelium in Gorlin Syndrome. Arch Ophthalmol 118(7):1004–1005.
3. Tafi A, Ghisolfi A, Bandi A, Mazzacane D, Bertoldi G (1986) The Gorlin-Goz 5th phakomatosis: ophthalmological aspects of a case. J Fr Ophtalmol 9(2):135–138.

Extending Screening Intervals in a Photographic Screening Programme for Diabetic Retinopathy—a Rational Approach in the Setting of Improved Diabetic Care?

Smith JJ

HSE Dublin North East Diabetes Watch Program/Foresight Retinal Screening Limited

Introduction: The results from screening and grading of people with type 2 diabetes at two points in time 4 years apart were analysed with the aim of establishing the risk of disease progression to the point that hospital referral would be appropriate as per recommendations of ENSPDR.
Materials/methods: The results of manually graded images from 2006 were compared against automated image reading software capable of giving a microaneuysm (MA) count for the image set. All manual grading in 2006 was still being undertaken by one ophthalmologist at that stage and as a means of quality assuring the accuracy of grading all the image sets were second graded by the automated software in the University of Aberdeen, Scotland.
Five-hundred and thirty-seven people with diabetes enrolled in the Diabetes Watch program (HSE Dublin/North East) had 2 field photography for each eye in 2006 and had microaneurysm (MA) count undertaken using an automated image reading system. The result was an aggregate count for the two eyes.

Two-hundred and eighty-seven of the double graded cases seen in 2006 were still attending screening in 2010 and their 2006 MA count was compared to their manual grading result in 2010. By 2010 the manual grading was a 3 step method by trained accredited graders with the original 2006 ophthalmologist acting as the third line arbitration grader. Automated microaneurysm counting was now used as a first line grading tool.
Results: Of a total of 208 image sets from 2006 which had an automated MA count of zero and which the manual grade was no disease 157 were screened in 2010.

Of these 137/157 (87 %) had no disease as their final grade A further 16/157 (10 %) had minimal background DR as their final manual grade.

Only one case out of 157 identified as having no disease as the manual grade in 2006 and having a MA count as zero in 2006 had a reason for referral to the hospital eye service in 2010. This represents a 4 year risk of needing hospital referral of less than 1 %.

Conclusion: The necessity for annual screening is questioned in the case of quality assured manual grading which indicates no evidence of diabetic retinopathy. Extended screening intervals for validated disease −ve cases would enable the allocation of more funds to the pursuit of those cases that do not attend for screening and who are the same cohort to suffer visual loss as a result of poor control of glycaemia, blood pressure and lipid levels.

Phacoemulsification in Patients with Deep Brain Stimulators

Martin AI, Mullaney P

Sligo General Hospital

Introduction: We describe the case of a 66-year-old lady who presented to our clinic with a visually significant cataract. She had a history of essential tremor which had been treated in a UK centre by the insertion of a Medtronic deep brain stimulating system.

Materials/methods: Case report.

Results: From our analysis of the literature and information acquired both from the Medtronic website and as a result of direct inquiry to Medtronic we retrieved very little information pertaining specifically to phacoemulsification in patients with these devices in situ. This paucity of data is most likely due to the relative youth of the therapy.

Conclusion: With increasing demand for this treatment in a cohort of patients whose age profile largely parallels that of the cataract surgery patient cohort we feel that further investigation is warranted. We have collected data on this case to contribute to a growing resource of safety information for surgeons encountering these patients.

Proceedings of the RAMI Section of Ophthalmology, Friday 1st April 2011, Dublin

Ophthalmology Case Study Angiod Streaks a Valuable Diagnostic Factor for Systemic Disorder ~ Pseudoxanthoma Elasticum

Tbarani JA, O'Brien P

Royal Victoria Eye and Ear Hospital

Pseudoxanthoma elasticum (PEX) also known as Gronblad Strandberg syndrome is an inherited systemic disorder characterized by mineralization of elastic tissue, affecting the skin, eyes and vascular system. Recent studies hypothesize PEX is a metabolic disease, and that its features arise because metabolites of vitamin K cannot reach peripheral tissues. The aim of the study is to identify ocular abnormality which gives valuable diagnostic factors of the underlying systemic disorder.

We present a 40-year-old woman with multiple systemic vascular disorders which has been put up as individual entities. At this very young age, she has been diagnosed with renal artery stenosis, upper gastrointestinal bleed, as well as type 2 diabetes, hyperthyroidism and asthma. In the ocular examination, angioid streaks appearance noted with significant scarring on left fundus but active choroidal neovascularization on right fundus. Subjects subsequently receive a course of anti ~ VEGF intravitreal injection as per treament of age related macular degeneration.

There is no treatment directly interferes with disease process but multi disciplinary approach needed im most cases to deal with systemic complications.

Further studies could well be conducted to evaluate possible correlation between PEX and endocrine disorders as found in this case study. Is it just a coincidence or these may well related?

Neurotrophic Keratopathy with Cavernous Sinus Pathology

McElnea E, Ryan A, Fulcher T

Department of Ophthalmology, Mater Misericordiae University Hospital, Eccles St., Dublin 7

Objectives: To report a series of clinical cases in which patients presenting with neurotrophic corneal ulceration were subsequently found to have cavernous sinus pathology.

Methods: In a 21-year-old lady with corneal anaesthesia and corneal ulceration initially presumed herpes simplex keratitis, MRI brain revealed a cavernous sinus meningioma. In an 80-year-old gentleman with corneal anaesthesia and corneal ulceration initially presumed exposure keratitis given the presence of a facial nerve palsy following parotid gland resection for squamous cell cancer of the same, CT Brain revealed a cavernous sinus mass suggestive of perineural spread of malignancy from this primary tumour.

Results: In both of these cases the development of further neurological deficit in the form of abducens nerve palsy prompted revision of the initial diagnosis.

Conclusions: The signs of cavernous sinus pathology may be subtle both clinically and radiologically. A high index of suspicion for the same must be maintained in all age groups and careful review of available neuroimaging is advised.

Orbital Cellulitis

Imam Y, O'Reilly P

Mid-Western Regional Hospital

A 33-year-old Nigerian lady with known HIV presented with acute bilateral proptosis and ophthalmoplegia. This was associated with lagophthalmos and secondary exposure keratopathy. She also had signs of meningism and was systemically unwell. She also had anterior and posterior uveitis evident clinically.

We describe the investigation and management of this patient and discuss the possible aetiologies involved.

Ocular Microtremor in Acute Stroke

Collins N, al-Kalbani M, Walsh S, Martin M, Boyle G, Harbison J, Coakley D

Department of Medical Gerontology, Trinity College Dublin; St James's Hospital, Dublin

Background: Ocular microtremor (OMT) is a minute high frequency eye movement present in all individuals. OMT frequency is related to brainstem function and is reduced in neurological disorders such as coma and brainstem death. OMT frequency can be measured rapidly and easily at the bedside, using a relatively inexpensive portable device, and may be a useful adjunct in stroke diagnosis. This case–control study investigated whether OMT frequency was reduced in patients with stroke diagnosed clinically and radiologically, when compared to neurologically normal subjects.
Methods: OMT frequency was measured using a piezoelectric transducer in patients diagnosed with an acute stroke by the specialist stroke service, based on clinical and radiological evidence. OMT measurements were performed within 2 weeks of stroke onset, the majority being performed within 7 days.
Results: We matched 20 stroke patients with 20 neurologically normal controls. The stroke group had a significantly lower OMT frequency (mean 73.0 Hz; 95 % CI 68.8, 77.2 Hz) than the control group (mean 88.9 Hz; 95 % CI 86.6, 91.2 Hz) ($p < 0.001$). Following correction for age using multivariate analysis of variance, an average OMT frequency of 75.3 Hz (95 % CI 71.7, 78.9 Hz) was obtained in the stroke group compared with 86.6 Hz (95 % CI 83.0, 91.2 Hz) in the control group ($p < 0.001$). Area under the receiver operating characteristic curve (AUC) demonstrated that OMT could distinguish between stroke cases and controls (AUC 0.973, $p < 0.001$). OMT frequency $\leq$82.5 Hz was observed in 18/20 of the stroke patients and 1/20 of the controls, affording a sensitivity of 90 % and specificity of 95 % for differentiation between stroke cases and controls in this study.
Conclusions: Ocular microtremor frequency was reduced in patients with confirmed stroke compared to neurologically normal subjects. The results suggest that OMT activity may be of value in the investigation of stroke.

Traumatic Optic Neuropathy Following an Automobile Airbag Deployment

Ibrahim F, O'Connor G

Cork University Hospital

A case of a 38-year-old male involved in a road traffic accident in January 2011 with full deployment of the car airbag presented with right altered vision (RVA Counting fingers & LVA 6/9). There were no facial lacerations or fractures and the eye examinations were normal.

MRI brain and OCT were normal, however, electrophysiology showed evidence of significant delay consistent with an optic nerve injury. He was admitted for IV methylprednisolone treatment in Cork University Hospital.
Conclusion: This is a rare case of traumatic optic neuropathy secondary to an airbag deployment during a road traffic accident. The airbag associated ocular trauma was induced by impact of the fully deployed airbag. Most common is damage to anterior structures due to either blunt, contusive forces and/or chemical injury. Posterior segment trauma is less common but generally more visually devastating because of the involvement of the retina or optic nerve. Awareness of the spectrum of airbag-associated ocular trauma will help physicians recognize these problems early and optimize their management.

Double Jeopardy (Case Report)

Ramasamy P, Horgan N, Stokes J

RVEEH, WRH

Introduction: The diagnosis and management of an atypical choroidal mass can be challenging. Frequently, the diagnosis of a primary choroidal melanoma can be made based on the clinical appearance. However, when atypical, establishing the nature of the choroidal mass is paramount, especially if it represents secondary metastasis from potentially fatal extraocular malignancy. This is a case report of oesophageal carcinoma presenting with decreased vision secondary to choroidal metastases and cancer associated retinopathy.
Methods: Data was obtained from medical notes including imaging studies.
Results: A 70-year-old male presented with decreased visual acuity (6/60 OU). Fundal exam revealed a large, creamy, raised mass at the left posterior pole and a smaller mass in the superior quadrant on the right. B scan ultrasonography showed a raised lesion with moderately high internal acoustic reflectivity throughout the lesions in both eyes. Metastatic disease was suspected. Full body CT revealed an oesophageal mass and barium swallow confirmed the presence of a mass in the distal third of the oesophagus, narrowing the lumen by a third. Antirecoverin autoantibody testing was positive, accounting for poor right visual acuity secondary to cancer associated retinopathy. External beam radiotherapy was planned for the metastases. Unfortunately, the patient died shortly after due to the extent of the disease.
Conclusion: This case report highlights a rather uncommon presentation of an extraocular malignancy. Although choroidal metastatic disease is a feature of known advanced extraocular malignancy, it may also be the presenting feature in some cases. Unfortunately, the survival rates in such cases are poor.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 6th Nov 2009, Dublin

Lacrimal Gland Repositioning for Prevention of Radiotherapy Induced Dry Eye Syndrome

Ryan A, Fulcher T

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Introduction: Orbital radiotherapy can induce a severe dry eye syndrome if high doses are delivered within the field of the lacrimal gland. We present a case of a 31-year-old female diagnosed with a right primary orbital Ewing's sarcoma who underwent surgical resection, chemotherapy and post operative orbital radiotherapy. During pre-radiotherapy planning, it was found that the entire lacrimal gland would receive more than the maximal dose (>50 Gy). This would result in a severe dry eye.
Materials/methods: We performed surgery to reposition the lacrimal gland such that 90 % of the gland would receive less than 40 Gy. This new surgical technique is described.
Results: To date, the patient has not developed signs or symptoms of dry eye syndrome.

Conclusion: Lacrimal gland repositioning is an option to prevent or reduce the risk of orbital radiotherapy induced dry eye syndrome where the risk of this complication occurring is felt to be high.

The Use of Optical Low Coherence Reflectometry in the Measurement of In Vivo Intraocular Lens Power

Ng E, Weitz C, Cummings A

Limerick Regional Hospital, Wellington Eye Clinic

Introduction: To evaluate the correlation between thickness of in vivo intraocular lens (IOL) at the visual axis as measured with a BioGraph^{TM} (Wavelight, Erlangen, Germany) and actual IOL power implanted following phacoemulsification surgery.
Materials/methods: Optical low coherence reflectometry (OLCR) measurements with the Biograph were taken 1 month after routine phacoemulsification with implantation of a known power AcrySof IOL (SN60WF—Alcon, Fort Worth, Texas). The in vivo thickness of the IOL through the visual axis was compared to the power of the inserted IOL.
Results: Thirty eyes of 22 patients were implanted with IOLs between 12.5 and 30.0 diopters (D) in power. OLCR measurements for these IOLs were in the range of 440–830 microns. All IOLs were well centered within the capsular bag with complete capsulorhexis overlap in all cases. An IOL that measured 620 microns would have an expected power of 21.0 D (95 % CI 18.3–23.7 D). One micron increase in axial IOL thickness corresponded to an average of 0.034 D increase in IOL power (SD 0.002). There was a strong linear correlation between in vivo axial IOL thickness and IOL power ($r^2 = 0.95$). The predictive accuracy of IOL power improves with decreasing IOL thickness (previously myopic patients).
Conclusion: When cross-referenced with IOL formulae (given the axial length and keratometry), this method can help investigate the cause of unexpected refractive outcome (refractive surprises). For the above IOL design, the probability that an IOL's power would Ftopirfall within a certain range can be calculated. Similarly if an IOL label was present, the probability that the IOL matches its label can be calculated.

The Masquerade Flap Re-Visited

O'Reilly P, Malhotra R

The Queen Victoria Hospital, East Grinstead, UK

Introduction: The Masquerade Flap is a largely forgotten and rarely used surgical procedure. It is a method of re-fashioning both upper and lower eyelids in cases of severe ocular injury or burn, where surrounding tissue may be severely traumatized or absent and where surgical options are limited.
Materials/methods: We describe and illustrate the use of the masquerade flap in two patients with extensive loss of eyelid tissue, associated with marked periocular injury. Patient 1 had a 'de-gloving' injury after being attacked by an animal whilst patient 2 had a 55 % total body burn, with extensive facial and periocular injury. Both patients had severe corneal exposure secondary to their injuries, necessitating urgent oculoplastic intervention. The masquerade flap involves the use of available conjunctiva to cover the cornea and this is then covered with a split thickness skin graft.
Results: In both cases, corneal coverage has been maintained. In patient 1, functional eyelids have been fashioned after division of the flap and the patient has required multiple subsequent surgeries. His cornea has, however, remained healthy and this is now his only functioning eye (the other eye was enucleated at the time of the injury). Patient 2 still has the masquerade flap in situ. Both patients will require future surgeries due to the devastating nature of their injuries.
Conclusion: The Masquerade Flap should be considered in cases of devastating facial injury, where there is loss of both upper and lower eyelids and where other forms of surgical reconstruction may not be possible.

Endoscopic Cyclophotocoagulation in Refractory Glaucoma

Jungkim S, Bloom PA

Western Eye Hospital, Imperial College NHS Trust, London

Introduction: Endoscopic cyclophotocoagulation (ECP) is an alternative method of cyclodestruction which can be used in the management of refractory glaucomas. We describe and demonstrate this technique, which involves the ablation of the ciliary body under direct view. We also present our experience using this technique and describe the categories of patients involved.
Materials/methods: The preoperative and postoperative course of 9 eyes of 7 patients who underwent endoscopic cyclophotocoagulation at our institution in the first 6 months of this year were retrospectively reviewed. Study patients had diverse forms of glaucoma, and most had failed maximal medical therapy as well as failed filtration or transscleral cyclodestructive procedures, or both. Endoscopic cyclophotocoagulation treatment encompassed 180–360 degrees of the ciliary body circumference and was performed through a limbal incision. All phakic eyes underwent concurrent cataract extraction.
Results: Preliminary results show a reduction of mean $\pm$ SD intraocular pressure from 27.7 ± 10.3 mmHg preoperatively to 17.0 ± 6.7 mmHg at the most recent follow-up, and a mean percentage reduction of 34 %. Best-corrected visual acuity was stable or improved in all eyes and no case of hypotony (intraocular pressure <5 mmHg) or phthisis was observed.
Conclusion: Endoscopic cyclophotocoagulation is a safe and effective therapeutic modality for refractory glaucoma.

Case Report: an Interesting Choroidal Lesion

Martin A, Horgan N

Royal Victoria Eye and Ear Hospital

Introduction: This is a case report of a 22-year-old Caucasian lady who presented to her optician with a 2-week history of reduced vision in her left eye with no identifiable precipitant and no associated symptoms. She was referred to the Eye and Ear A&E department and subsequently to a specialist outpatient appointment. From here she underwent multiple investigations. She was found to have a large orange coloured choroidal lesion in her left eye coupled with two smaller but similar appearing lesions in her right eye, these were accompanied by systemic findings on workup which required multidisciplinary involvement.
Materials/methods: Exploration of the relevant literature to assess current opinions as to best practice regarding diagnosis and treatment of this disease. Comparison of recommended practice with our case report.

Results: Our patient has yet to initiate treatment. Thus, critical appraisal of this case cannot be fully performed at this stage.
Conclusion: This case report highlights the difficulties encountered in the management of rare diseases and the importance of multidisciplinary expert involvement in diagnosing, treating and monitoring unusual pathology.

Apolipoprotein E Genotype is Associated with Macular Pigment Optical Density

Loane E[1,2], McKay GJ[3], Nolan JM[1], Beatty S[1,4]

Macular Pigment Research Group[1], Department of Chemical and Life Sciences, Waterford Institute of Technology, Waterford, Ireland; Ophthalmology Department[2], St. Vincent's University Hospital, Elm Park, Dublin, Ireland; Centre for Vision and Vascular Sciences[3], Queen's University Belfast, Belfast, Northern Ireland, United Kingdom; Whitfield Clinic[4], Cork Road, Waterford, Ireland

Purpose: Age-related macular degeneration (AMD) is the commonest cause of blindness in older people in developed countries, and risk factors for this condition may be classified as genetic and environmental. Apolipoprotein E is putatively involved in the transport of the macular pigment (MP) carotenoids, lutein (L) and zeaxanthin (Z), in serum, and may also influence retinal capture of these compounds. This study was designed to investigate the relationship between MP optical density (MPOD) and *ApoE* genotype.
Methods: This was a cross-sectional study of 302 healthy adult subjects. Dietary intake of L and Z was assessed by food frequency questionnaire, and MPOD was measured by customized heterochromatic flicker photometry. Serum L and Z were measured by HPLC. *ApoE* genotyping was performed by direct polymerase chain reaction (PCR) amplification and DNA nucleotide sequencing from peripheral blood.
Results: Genotype data were available on 300 (99.3 %) of the 302 subjects. The mean ± SD (range) age of the subjects in this study was 47.89 ± 11.05 (21–66) years. Subjects were classed into one of three *ApoE* genotype groups, as follows: Group 1: ε2ε2 *or* ε2ε3; Group 2: ε3ε3; Group 3: ε2ε4 *or* ε3ε4 *or* ε4ε4, and all three groups were statistically comparable in terms of age, sex, BMI, cigarette smoking, and dietary and serum levels of L and Z. There was a statistically significant association between *ApoE* genotype and MPOD, with subjects who had at least one ε4 allele having a higher MPOD across the macula than subjects without this allele (Group 1 MPOD Area: 0.70 ± 0.40; Group 2 MPOD Area: 0.67 ± 0.42; Group 3 MPOD Area: 0.85 ± 0.46; One way ANOVA $p = 0.014$).
Conclusion: Our results suggest that *ApoE* genotype status is associated with MPOD. This association may explain, at least in part, the putative protective effect of the ε4 allele for AMD, and is consistent with the view that apolipoprotein profile influences the transport and/or retinal capture of circulating L and/or Z.

Case Report of Topiramate Induced Bilateral Angle Closure Glaucoma and Transient Myopia

Tay MC, Curtin D, Doyle A

Royal Victoria Eye and Ear Hospital

Case report: A 58-year-old man presented with clinical features of simultaneous bilateral acute angle closure glaucoma. Although there was no history of refractive error, visual acuity was reduced due to new onset of myopia (−3 OD–1.75 OS). Topiramate, commenced 2 weeks previously for treatment of intractable headache, was found to be the cause of patient's clinical presentation. Ultrasound biomicroscopy demonstrated ciliochoroidal effusion as the mechanism underlying the angle closure glaucoma. Discontinuation of topiramate led to a gradual deepening of the anterior chambers, improvement in vision, and resolution of myopia. Intraocular pressure-lowering topical and oral therapy was gradually reduced as the effusion resolved.
Discussion: Topiramate is increasingly used in treating epilepsy, migraine headache, bipolar disorder and neuropathic pain. Although simultaneous bilateral acute angle closure glaucoma (BAACG) is extremely rare, there is increasing number of reported cases secondary to topiramate in the literature. This case report and literature review explains the mechanism of topiramate-induced acute-onset myopia and angle closure glaucoma. Awareness of this uncommon but sight-threatening adverse reaction to topiramate amongst ophthalmologists and neurologists is essential, as well as appropriate knowledge of appropriate management pathways which differ from that of primary angle closure glaucoma.

Analysis of the Content and Discharge Practice of a Hospital Based Ophthalmology Outpatient Service

Ryan A, Fulcher T, Logan P

Department of Ophthalmology, Beaumont Hospital, Dublin

Introduction: There is currently a strong drive by the Health Service Executive to increase the numbers of new patients seen in ophthalmology outpatient clinics, with an aspiration to achieve a 1:2 ratio of new to return patients. With this in mind, we planned to audit the content of our general clinics to determine the numbers of new/return patients seen, the case mix and discharge rate in order to assess the feasibility of such a proposal and to suggest ways in which this might be achievable.
Materials/methods: We collected data on every patient seen in three general ophthalmology clinics conducted weekly in Beaumont Hospital over a 3 month period.
Results: Eight hundred and seventy-five patients were seen. We report the ratio of new/return patients and the most frequent diagnoses encountered. We focus on those patients needing further follow up and make suggestions on how this group might be reduced if we were to work towards HSE targets.

The Effect of Protective Hurling Facemasks on Visual Function

Droney T

Department of Ophthalmology, Cork University Hospital, Cork

Introduction: Various studies have highlighted the risks of ocular injury in players playing hurling and also the benefits incurred by the wearing of protective hurling facemasks. Despite this a large number of players still refrain from wearing such equipment. A common reason cited for such reluctance is a detrimental effect on visual function.
Aims: To study the effect of protective hurling facemasks on visual function.

Methods: Visual function was tested in 10 healthy male volunteers with and without a protective facemask. The results were then compared. The tests performed were logmar visual acuity, Cambridge contrast sensitivity, Frisby stereopsis and Humphrey central 30° and peripheral 30° to 60° threshold.
Results: There was no difference found in the visual acuity or stereopsis of subjects with and without a protective facemask. There was no significant difference found in the central 30° threshold or contrast sensitivity of subjects with and without a protective facemask. There were significant differences found in the peripheral 30° to 60° threshold in the superotemporal ($p = 0.043$), inferonasal ($p < 0.0001$) and inferotemporal ($p = 0.0001$) quadrants of subjects with and without a protective facemask.
Conclusions: Although protective hurling facemasks appear to cause a subtle demonstrable change in the peripheral visual field, the practical significance of this is uncertain. The protective advantage of wearing the facemask almost certainly outweighs any possible disadvantage in terms of perceived visual impairment. The decision by the Gaelic Athletic Association to make the use of this protective equipment compulsory for all from January 1st 2010 is a positive one.

Actinomycosis—Chronic Canaliculitis

Kollipara D, Fenton S, Keohane C

Cork University Hospital

Introduction: Actinomycosis is an important cause of chronic canaliculitis.
Materials and methods: A 75-year-old female presented with a red watering eye, erythema and blepharitis to Casualty and Clinic for 10 visits over 4 years. She had a syringing and probing and a 3 Snip procedure performed. Sulphar granules were noted in the canaliculis. Histology identified Actinomycosis.
Results: A review of the pathology reports of the last 10 years in Cork University Hospital which identified Actinomycosis produced 3 cases with a similar history.
Conclusion: Even though Actinomycosis is rare it is an important cause of canaliculitis and we should be vigilant for its presence.

Assessment of Nasolacrimal Patency in Normal Population by Valsalva Bubble Test (VBT)

Malik A, Mulhern M

Waterford Regional Hospital

Introduction: Valsalva bubble test is performed to check patency of nasolacrimal duct after DCR. We performed valsalva bubble test in normal population to assess what percentage of the normal population have a positive valsalva bubble test and if it is associated with upper respiratory tract infection or recurrent conjunctivitis.
Method: Valsalva bubble test was performed in normal population. It was divided in three age groups, 20–40, 40–60, and 60–80. (Normal population was, patients without any problem associated with nasolacrimal duct (NLD) system) and were assessed for any association with upper respiratory tract infection or recurrent conjunctivitis. We recruited 390 patients.
Result: We recruited 390 patients and found VBT positive in 7 patients.
Conclusion: A small percentage of population has positive valsalva bubble test and this is associated with upper respiratory tract infection. Positive VBTcan be a rare cause of recurrent conjunctivitis or red eye.

Horner's Syndrome and Sixth Nerve Palsy Due to Maxillary Herpes Zoster (HZ)

Galea M, Guerin M, Falzon K, Logan, P

Mater Misericordiae University Hospital

Introduction: The ophthalmic division is most frequently involved in trigeminal HZ, 20 times more often than the maxillary or mandibular divisions. Partial or complete ophthalmoplegia and Horner's syndrome are well known complications of HZ mostly when the ophthalmic division is involved. We describe an unusual case of ipsilateral Horner's syndrome and sixth nerve palsy presenting as an acute complication of maxillary HZ.
Conclusion: This case illustrates that the presentation of this condition (maxillary HZ) is very variable and may involve a painful rash, tooth abnormalities, external ocular motor palsies, autonomic nerve dysfunction and occipital lobe infarction.

A Case of Pterygium Surgery Went Wrong

Lee P, Power W

St Vincent's Hospital

Introduction: Pterygium is an ocular surface condition characterized by fibrovascular proliferation commonly starting on nasal aspect of the cornea. The symptoms of pterygium include persistent redness, inflammation, foreign body sensation, dry and itchy eyes. In severe cases, the vision can be impaired due to astigmatism and cornea scarring. Surgical treatment is effective but the recurrent rate is between 24 and 89 % for bare sclera resection, 2–39 % with conjunctiva graft and 0–38 % with mitomycin-c.
Materials/methods: Surgical Case Report—this case reports the media rectus was inadvertently severed during the surgery. The medial rectus was re-attached by a hang-back suture. We followed up the patient post operatively for occurrence of diplopia.
Results: The patient did not develop diplopia post-operatively.
Conclusion: Ocular muscle damage in pterygium resection is a potentially serious complication. Early recognition and appropriate management can minimise the risk of post operative diplopia.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 21st Nov 2008, Dublin

How Effective is Safety Glasses in Preventing Corneal Foreign Body?

Mohammad KN

Cork University Hospital

Introduction: The general consensus is safety or protective glasses should provide sufficient protection against any foreign body from injuring the eye. However, significant number of patient still sustained corneal foreign body injury whilst wearing protective glass. This study is establishing the proportion and possible reason of why corneal foreign body injury with protective glasses still occurs.
Materials/methods: Prospective study and random collection of patient attending eye casualty in Cork University Hospital with corneal foreign body injury collected. Proportion of patient wearing safety glasses, location of foreign body over cornea plotted and possible origin and type of work noted.
Results: 72 patient with corneal foreign body noted and 36 (50 %) of these patient actually worn protective glasses.
Conclusion: Majority of protective glass on the market do not have sufficient protection mainly upper and lower shield incorporated in the design. It provide false sense of security, instead goggles or a tight fitting protective glasses should only be used.

Fibroblast Growth Factor Promotes Retinal Cell Survival Via Reactive Oxygen Species

Farrell SMJ[1], O'Driscoll C[1], O'Brien CJ[2], Cotter TG[1]

Cell Development and Disease Laboratory[1], Department of Biochemistry, Biosciences Research Institute, University College Cork, Cork, Ireland; Department of Ophthalmology[2], Mater Hospital and Conway Institute, University College Dublin, Dublin, Ireland

Introduction: Basic Fibroblastic growth factor (bFGF) has been shown to increase survival of photoreceptors in various animal models. Previously we have demonstrated the activation of AKT, ERK and PKA survival pathways following in vitro bFGF administration. In addition we have demonstrated the protective efficacy of bFGF in the light induced mouse retina. However, the exact mechanism by which bFGF protects photoreceptors remains to be elucidated.
Reactive Oxygen Species (ROS) such as hydrogen peroxide have traditionally been thought of as toxic by-products of cell metabolism, however, more recently they have been recognised to be important cell messengers and associated with cell protection. ROS are capable of deactivating phosphatases, allowing various enzymes to remain in the active phosphorylated form.

We hypothesised that bFGF promotes activity of survival pathways via production of reactive oxygen species in the retina.
Materials/methods: The 661 W mouse photoreceptor derived cell lines and rat retinal ganglion cell derived RGC-5 cell lines were used. For flow cytometric analysis, cells were preincubated with dihydrorhodamine probe 30 min prior to FGF administration. This probe is oxidised by Reactive oxygen species to rhodamine which is fluorescent. bFGF was administered to achieve concentration of 50 ng/ml. Cells were analysed on a BD Facscalibur flow cytometer at FL-1 530 nm. 10,000 events were recorded per sample.

To assess the effect of antioxidants on reducing the accumulation of activated AKT in response to bFGF, 661 W cells were treated with the reactive oxygen scavenger CR-6 15 min prior to bFGF administration. Total protein was obtained by cell lysis 60 min following FGF administration.
Results: Flow cytometry demonstrated a dramatic increase in intracellular reactive oxygen species levels within 15 min of bFGF administration in 661 W and RGC-5 cell lines.
Levels of pAKT were shown to be elevated following administration of bFGF. Cells treated with the reactive oxygen scavenger prior to bFGF administration showed decreased levels of pAKT compared to cells treated with bFGF alone.
Conclusion: Our data suggests that bFGF causes increased activity of the pro-survival AKT pathway by increasing intracellular levels of reactive oxygen species.

Needling With 5-Fluorouracil Following Glaucoma Filtration Surgery

Gilani F[1], Galvin M[1], Bobart A[1], Doyle A[1,2]

Royal College of Surgeons[1], Dublin; Royal Victoria Eye and Ear Hospital[2]

Introduction: Early failure of filtration following glaucoma surgery due to excessive conjunctival healing is a frequent complication. Subconjunctival division of adhesions followed by 5-FU injection is a safe and effective way of rescuing the filtration bleb and improving long term survival.
Materials/methods: Retrospective observational case series. Data was gathered on 28 eyes of 24 patients who underwent filtration surgery for glaucoma over a 12 month period followed by needling of the filtration bleb and injection of 5-fluorouracil within 3 months of the procedure. All patients had division of adhesions by sub-conjunctival needling followed by injection of 5 mg of 5-fluorouracil into the filtration site. Main outcome measures were immediate post-procedure IOP and IOP at 1 and 3 months post op and number of topical drops at final follow-up. Success was defined as a reduction of 30 % or more from baseline IOP without adjunctive topical treatment and qualified success as reduction of 30 % or more with adjunctive topical treatment.
Results: The mean preoperative IOP was 21 $\pm$ 4 mmHg with a mean number of drops of 3. The mean postoperative IOP was 13.8 $\pm$ 7.4 mmHg with a mean number of drops of 0.6. The immediate pre-needling IOP was 22.3 mmHg and needling was carried out at 4.4 weeks post-op. 10 patients required 1 procedure, 16 had 2 and 1 each had 3 and 4 injections of 5-FU. The mean IOP was 15.6 $\pm$ 6 mmHg at 1 month and 15.3 $\pm$ 3 at 3 months. 23 eyes had an immediate drop in IOP of 4 mmHg or more. 50 % had complete success and a further 21 % had qualified success. 17.8 % (5 patients) did not reach 30 % IOP reduction from baseline with or without adjunctive therapy.
Three patients developed choroidal effusions which resolved spontaneously.
Conclusion: Postoperative needling with 5-fluorouracil is a safe and effective way of rescuing failing filtration blebs if carried out in the early postoperative period.

Charles Bonnet Syndromes

Ryan A, Kirwan C, Acheson R

Ophthalmology Department, Mater Misericordiae University Hospital, Eccles St., Dublin

Introduction: The Charles Bonnet syndrome consists of complex visual hallucinations occurring in clear consciousness in a person with normal cognition and retained full or partial insight which is frequently associated with reduced vision. However, the precise definition of the syndrome varies in the literature (at least 3 different 'Charles Bonnet Syndromes' can be identified) and it is clear that it is not always confined to patients with severely reduced vision.
Materials/methods: We present six cases of patients with visual hallucinations all falling under the category of Charles Bonnet

Syndrome to highlight some of the diverse clinical scenarios in which the syndrome can arise. Their visual acuities range from advanced bilateral visual loss to visual acuity of 6/9 in at least one eye.
Conclusion: Recognition of the syndrome is important to prevent incorrect labelling of patients with psychiatric illness or dementia and to allow appropriate reassurance of affected patients that may otherwise be fearful of insanity.

A Rare Case of Ophthalmoplegia

Nasser Q, Horgan N

St. Vincent's University Hospital

Introduction: We report a case of a 39-year-old patient, who presented with an acute onset of diplopia and unsteadiness of gaze. On examination the patient had complete internal and external ophthalmoplegia, areflexia and ataxia. The patient also had a past history of gastroenteritis 10 days ago.
Materials/methods: The patient initially presented to The Royal Victoria Eye and Ear Hospital upon which he was referred to the Neurology service at St. Vincent's University Hospital for further evaluation.
Results: Following numerous investigations, the patient was diagnosed with Miller Fisher Syndrome and treated with intravenous immunoglobulins, upon which the ophthalmoplegia improved.
Conclusion: This is a rare variant of Guillain Barré Syndrome and carries an excellent prognosis once diagnosed and appropriately managed. Diagnosis was made by exclusion in our case and the patient was treated with intravenous immunoglobulins for which the symptoms significantly improved.

A Case of Heavy Eye Syndrome

Siah WF, Guerin M, Flitcroft I, Fulcher T

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Introduction: We report a rare case of a 38-year-old female who presented to us with progressive proptosis involving the right eye with unilateral high myopia, esotropia and hypotropia.
Diagnosis: Clinical and radiological assessment revealed the diagnosis of Heavy Eye Syndrome.
Management: This patient underwent orbital decompression and strabismus correction.
Conclusion: Similar case reports are very rare in the published literature. We highlight the salient features of this scenario, and provide a comprehensive background to this unusual syndrome.

Eales Disease: a Diagnosis of Exclusion

Dhillon V, Byrne S

Cork University Hospital

Introduction: We present a case of a otherwise healthy 31-year-old male with a history of recurrent vitreous haemorrhages secondary to peripheral retinal vasculitis, ischaemia and neovascularisation in the right eye.
Materials/methods: Case Report; A full work-up of multiple investigations including laboratory and imaging studies were carried out to determine the cause.
Results: All test results returned as negative/normal, except the Mantoux test which was positive. Management in this gentleman thus far included pan retinal photocoagulation of the affected retina.
Conclusion: Eales disease is rare and its cause and diagnosis remains elusive. Mantoux test as a diagnostic tool in Ireland may be helpful due to the non routine use of BCG vaccination and a hypersensitivity to tuberculin which is seen in these patients.

A Novel Diagnostic Use of Sheimflung Imaging in Congenital Cataract

Dooley I, Beatty S

Whitfield Eye Clinic, Waterford Regional Hospital

Introduction: Congenital cataract in an adult is a challenging surgical situation due to the possibility that the posterior capsule may be involved and in some cases deficient. Therefore, there is a very high incidence of anterior vitrectomy in these patients with the associated increased risk of adverse events and outcomes.
Materials/methods: We report a case of a 38-year-old lady, who electively presented to the Whitfield eye clinic for a surgical opinion, with bilateral congenital cataracts. Her best-corrected visual acuity (BCVA) was 6/18. She had previously been assessed by several ophthalmic surgeons and had not been offered cataract surgery, due to concern that the posterior capsule appeared on slit lamp exam to be involved and/or deficient. On slit lamp examination it was impossible to confirm that the posterior capsule was or was not involved. Sheimflug imaging of this patient's cataracts, revealed that the cataracts were not involving the posterior capsule.
Results: The patient underwent uneventful phacoemulsification cataract surgery in both eyes on separate days, with a final BCVA of 6/6.
Conclusion: We report this case where Scheimflug imaging has directly influenced surgical management and prognosis.

Successful Closure of a Re-Opened Macular Hole Using Autologous Platelet Concentrate and Gas Tamponade—a Case Report

James M, Cullinane A

Cork University Hospital

Introduction: Growth promoting factors such as autologous platelet concentrate (APC) have been used in the surgical management of macular holes in an effort to improve anatomic closure rates. However, its beneficial effect in macular hole surgery is controversial particularly when there has been adequate peeling of the internal limiting membrane (ILM). We present a case where a re-opened macular hole after initial surgical closure was successfully treated by injection of APC and 20 % SF_6 gas exchange, with pre and post-operative optical coherence tomography (OCT) scans demonstrating rapid restoration of the normal foveal architecture following this second procedure.

Materials/methods: A 66-year-old female presented to our Ophthalmology Department with an 18 month history of deteriorating vision in her right eye at 6/60. She was diagnosed with a stage III macular hole and subsequently underwent uncomplicated macular hole surgery involving vitrectomy, internal limiting membrane peeling and 20 % SF_6 gas exchange, which resulted in successful closure of the hole. However, 1 month post-operative OCT scan confirmed that the hole had re-opened.
Results: The second procedure involved injection of 0.03 ml of sterile APC over the hole, followed by 20 % SF_6 gas exchange, and face-down posturing post-operatively. No additional ILM peeling or vitrectomy was performed during this procedure. This resulted in complete closure of the macular hole, and restoration of the normal foveal architecture was confirmed on OCT.
Conclusion: The use of APC may be a useful tool in the management of re-opened macular holes where the initial surgery included complete peeling of the ILM. However, its use in macular hole surgery is controversial, and other factors such as gas tamponade alone may have been responsible for hole closure in this case. We look forward to opening the topic up to the floor for discussion.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 21st Nov 2008, Dublin

The Efficiency of the Differing Models of Diabetic Retinopathy Screening Using Digital Non-Mydriatic Camera

Dervan E, Hobbs H, Waters G, Flitcroft I, Acheson R

Mater Misericordiae University Hospital, Eccles St., Dublin

Introduction: Various models for diabetic retinopathy screening using a digital non-mydriatic camera have been proposed. These include the routine use of mydriasis (mydriatic model), a staged non-mydriatic approach that involves an initial non-mydriatic photograph and repeat mydriatic photographs for those that had ungradable non-mydriatic photographs (non-mydriatic model). Previously, we have proposed a model that involves predicting the requirement for dilation to achieve gradable photos (mydriatic prediction model). This involves entering age, visual acuity, pupil size, and grade of nuclear sclerosis into a formula we have devised. This model limits the negatives of mydriasis compared to the mydriatic model. It also may make the screening process more efficient by reducing the number of photographs required and the patient time in the clinic for those that require dilation compared to the non-mydriatic model. The objective of this study is to assess the effect of the three differing strategies on the workflow of a diabetic retinopathy screening clinic.
Methods: The three different models were used in the two diabetic screening clinics each of the Mater Misericordiae University Hospital between the 26th September 2007 and the 30th January 2008. The same staffs were working in each of the clinics.
The main outcome measures were the average patient time in the clinic (time visual acuity is measured to the time of the last photograph) and the average time required per patient (time of the start of clinic to the finishing time divided by the number of patients per clinic).
Results: The average patient time in the clinic using the mydriatic model is 44 min, the non-mydriatic model is 56 ½ min, and the mydriatic prediction model is 49 min. The average time required per patient using the mydriatic model is 17 ½ min, the non-mydriatic model is 19 min, and the mydriatic prediction model is 18 ½ min. The average patient time in the clinic for the patients not requiring dilation was 32 min in both the non-mydriatic and mydriatic prediction model.
Conclusion: The model of routine mydriasis is the most time efficient for all patients in total. However, it is less efficient for those not requiring dilation compared to the other two models. Of the two models that limit the effects of mydriasis the model that uses a formula to predict the requirement for mydriasis is the most time efficient.

Unusual Indications for Botulinum Toxin in Neuro-Ophthalmology

Falzon K, Townley D, Cleary C, Cunniffe G, Logan P

Ophthalmology Department, Beaumont Hospital, Dublin

Introduction: We report four patients whom we successfully treated with botulinum toxin A (BTX-A). Our first patient experienced facial synkinesis whilst our second patient had crocodile tears syndrome (CTS) or gustatory lacrimation. Both phenomena are the result of aberrant regeneration following a peripheral facial palsy. Our third patient had contralateral brow elevation following facial palsy. Our fourth patient had disabling apraxia of lid opening (ALO) and sialorrhoea as adjunctive features of progressive supranuclear palsy (PSP).
Methods: BTX-A (Dysport 0.1 ml) was delivered via a transcutaneous into the orbicularis oculi in the first patient. The second patient had a direct injection (trans-conjunctival) to the palpebral lobe of the lacrimal gland. The third patient had a direct injection to the brow. An injection of 0.1 ml BTX-A per point was given into several points in the palpebral orbicularis oculi and parotid gland via a transcutaneous route in our third patient.
Results: All four patients reported a complete disappearance of symptoms following treatment. Onset of effect was typically 24–48 h after the initial injection. No local or systemic side-effects were experienced.
Conclusion: The injection of BTX-A in these patients is a simple, safe and highly effective treatment.

Intravitreal Bevacizumab (Avastin) as Treatment for Subfoveal Choroidal Neovascularisation in Myopia

Orakzai A, Cleary PE

Department of Ophthalmology, Cork University Hospital, Wilton, Cork

Introduction: Intravitreal Bevacizumab (Avastin) as a treatment for subfoveal choroidal neovascularisation (CNV) due to myopia is fast becoming first line therapy due to encouraging results.
Materials/methods: Consecutive series of primary or recurrent CNV secondary to myopia treated with intravitreal bevacizumab 1.25 mg at Eye Department, CUH, Cork, Ireland, were reviewed retrospectively. Data from clinical examination, flourescein angiography, optical coherence tomography and visual acuity were collected.
Results: There were 8 eyes of 8 patients, and the mean age was 46.265 years (30–58 years).
Conclusion: In this relatively small series of eyes with limited follow-up, intravitreal bevacizumab apparently is safe and potentially

efficacious in eyes with choroidal neovascularisation secondary to myopia.

Uveitis in Familial Cold Autoinflammatory Syndrome: a Novel Phenotype and Its Response to Interleukin-1 Receptor Antagonist

Fauzi F[1], Ng E[1], Feighery C[2], Doyle A[1]

Royal Victoria Eye and Ear Hospital[1], Dublin; St. James's Hospital[2], Dublin, Republic of Ireland

Introduction: To describe uveitis as a novel phenotype in familial cold autoinflammatory syndrome (FCAS) and its response to interleukin-1 receptor antagonist (anakinra).
Materials/methods: Laboratory, systemic and ocular findings of all three affected members in a kindred with FCAS were reported. The proband was medically managed for glaucoma for 10 years. Trabeculectomy resulted in sterile hypopyon. The diagnosis of cold-induced uveitis and secondary glaucoma was made. Both of his 2 male offsprings subsequently presented with cold-induced uveitis.
Results: All affected members in this kindred were subsequently diagnosed with FCAS and had confirmed CIAS1 gene mutation. Although anakinra effectively abolished all systemic manifestation of tender rash, joint pains and raised acute-phase reactants in the proband, his uveitis was resistant to treatment. Anakinra was effective in treating all systemic and ocular manifestations of FCAS in both his affected offsprings.
Conclusion: The proband's uveitis was progressive and led to severe visual impairment. His partial response to anakinra is either a result of a more severe FCAS phenotype or as a result of starting anakinra therapy only in the later stages of the disease process. While there was a total response to anakinra in both his offsprings, its long term efficacy in treating FCAS associated uveitis remains unknown.

The Role of Virtual Reality Simulator Training on Phacoemulsification Surgery

Lee P, Power W

ICO and RCSI

Objectives: To announce and explain the purpose and experimental design of a research project on the effectiveness of VR simulator on the training of phacoemulsification surgery.
Abstract: Reports[1,2] highlighting an unacceptable level of medical errors have sensitized both the public and medical communities to demand a better competence based training program to ensure patient safety. Current surgical training models are limited by unstructured curriculum, financial cost, human costs, and time constraints[3]. Virtual reality (VR) training models have been used by many highly skilled professions in pilot training and carotid stent placement training[4]. The advantages of VR simulator training curriculum include broad-based and systematic exposure to possible clinical problems[3], the availability to practice difficult procedures repeatedly[5], a shortened learning curve without risking patients and lower educational cost[6]. The Irish College of Ophthalmologists currently provide all the trainees basic VR simulator training for phacoemulsification surgery. The aims of this project are to set a proficiency level on the simulator for the trainees, design a training curriculum incorporating the VR simulator and ultimately to test the VR to OR skill transferability.

References:

1. Kohn LT, Corrigan JM, Donaldson M (1999) To err is human: building a safer health system. Institute of Medicine, Washington
2. Senate of Surgery (1998) Response to the general medical council determination on the Bristol case: senate paper 5. The Senate of Surgery of Great Britain and Ireland, London
3. Khalifa YM, Bogorad D, Gibson V, Peifer J, Nussbaum J (2006) Virtual reality in ophthalmology training. Surv Opthalmol 51(3) 259–273
4. Gallagher AG, Cates CU (2004) Approval of virtual reality training for carotid stenting: what this means for procedural-based medicine. JAMA 292:3024–3026
5. Sandrick K (2001) Virtual reality surgical simulator: has the future arrived? Bull Am Coll Surg 86:42–43
6. Ota D, Loftin B, Saito T, Lea R, Keller J (1995) Virtual reality in surgical education. Comput Biol Med Mar 25(2):127–137

Demographic Analysis of Patients with Ocular Foreign Body Injuries During a One Month Period

Dooley I, Fulcher T

Mater Misericordiae University Hospital, Eccles Street, Dublin

Introduction: Preventable ocular foreign body injuries result in significant morbidity and loss of earnings. The demographic make-up of Irish society has changed, more non-nationals are working in sectors such as construction and are now presenting with these injuries. This prospective study was designed to analyse the workplace protection available.
Materials/methods: Fifty consecutive patients presenting, during April 2006 with ocular foreign body injuries, were questioned with a standardised questionnaire. Their subsequent examination was documented.
Results: 82 % (41/50) of injuries occurred in the workplace. The construction sector accounted for 63 % (26/41) of workplace injuries. 26.9 % (7/26) of construction sector injuries occurred in non-nationals, where English was not their first language. Eye protection was available in 98 % (40/41) of workplaces, but on day of injury, was only worn in 51 % (21/41) of cases. English safety information was available in 87.8 % (36/41) of workplaces, but safety information in other languages, was only available in 2.4 % (1/41) of cases. Safety procedures were actively enforced by employers in only 58.5 % (24/41) of workplaces.
Conclusion: There is a serious shortfall in safety practices and their implementation in the Irish workplace. This especially affects the construction sector and non-national workers are particularly vulnerable. It is the responsibility of employers to ensure all workers are adequately trained and consistently use the safety procedures.

Superior Orbital Fissure Syndrome in Herpes Zoster Ophthalmicus

Kirwan RP, Abdalla M, Hogan A, Tubridy N, Power W

The Royal Victoria Eye and Ear Hospital, Adelaide Road, Dublin; St. Vincent's University Hospital, Elm Park, Dublin

Introduction: To report a case of superior orbital fissure syndrome in a patient with herpes zoster ophthalmicus.

Materials/methods: A case report.
Results: A 71-year-old male with right herpes zoster ophthalmicus (HZO) presented acutely to accident and emergency complaining of a 3 day history of gradual right vision loss, double vision and drowsiness. On examination, the right visual acuity was counting fingers. He had a right interstitial keratitis, ptosis, proptosis and right total ophthalmoplaegia. There was no relative afferent pupillary defect and the right optic disc was pink and healthy. The signs indicated HZO complicated by superior orbital fissure syndrome (i.e. proptosis, complete paralysis of cranial nerves III, IV and VI with sparing of cranial nerve II). Brain imaging and lumbar puncture also confirmed the diagnosis of varicella zoster encephalitis. Systemic acyclovir and prednisolone led to recovery of visual acuity and ocular motility in addition to resolution of his proptosis and ptosis.
Conclusion: Superior orbital fissure syndrome is a rare complication of herpes zoster infection. With prompt and appropriate treatment, patients can expect satisfactory recovery of their visual acuity and ocular motility.

Topiramate Induced Bilateral Secondary Acute Angle Closure and Instantaneous High Myopia

de Boer B, Ibrahim F, O'Connor G, Ng E

Cork University Hospital

Introduction: Bilateral acute angle closure and high myopia occurred within 3 h in an otherwise healthy 32-year-old male 1 week after starting Topamax (Topiramate) for cluster headaches.
Materials/methods: Case report and literature review.
Results: A previously emmetropic healthy patient presented with a 3 h history of bilateral loss of vision to less than 6/60 and severe headache. The patient described his headache as dissimilar to the cluster headaches for which he was started on topiramate by his neurologist 1 week before presentation. Examination revealed 360̊ iridocorneal touch, intra-ocular pressures (IOP's) in excess of 40 mmHg, microcystic corneal oedema, anterior chamber depth under 2.3 mm (IOL Master, Zeiss) and refraction in excess of 7 diopters of myopia in both eyes. Supportive treatment with systemic and topical anti-glaucoma medication was initiated and over the next 5 days his anterior chamber deepened to over 3.2 mm, IOP's normalized and he regained full unaided emmetropic vision of 6/6. A literature review will be presented.
Conclusion: Although extremely rare, topiramate induced angle closure and myopia is a well described syndrome due to ciliary body swelling. Laser iridotomy also has no role in its management. The prognosis can be excellent, but only if prompt treatment is initiated to prevent long term disability because this is a bilateral condition.

Stickler Syndrome

Dhillon V, James M, Ng E, Cullinane A

Department of Ophthalmology, Cork University Hospital

We describe the management of two patients with Stickler Syndrome, who each presented with light perception vision in one eye secondary to chronic retinal detachment. They subsequently had prophylactic treatment of the fellow eye by means of 360° prophylactic retinal cryotherapy. There were no intraocular complications and their post operative course was uneventful. Specifically, there has been no occurrence of retinal detachment in either eye to date.

As Stickler Syndrome is rare and randomized controlled trials are limited in number, controversies exist with respect to prophylactic treatment of the fellow eye. The possible complications which may arise from such treatment versus the possibility of retinal detachment if the natural history is allowed to take its course is discussed.

Bilateral Central Retinal Artery Occlusion

Khalid MI, Hickey-Dwyer M, Fraser A

Department of Ophthalmology Limerick Regional Hospital

Introduction: A 59-year-old man presented with sudden visual loss in both eyes combined with weakness of all limbs and a petechial rash involving his legs and fingers.
He has past history of asthma. Investigations revealed eosinophilia, positive pANCA, elevated ESR and C-reactive protein.

Ophthalmic examination revealed bilateral central retinal artery occlusions with sparing of the cilio-retinal arteries. With this constellation of signs and symptoms he was diagnosed with Churg Strauss syndrome. He was treated with high dose intravenous steroids.
Materials/methods: Churg Strauss syndrome is a necrotizing vasculitis resulting in occlusion of small and medium sized blood vessels. Ocular complications previously reported in this condition are unilateral central retinal artery occlusion and one case of bilateral combined central retinal artery and vein occlusion.

This is the first reported case of bilateral simultaneous central retinal artery occlusion in this condition. The mechanism of occlusion of the central retinal arties in this case will be discussed.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 14th Dec 2007, Dublin—Peter Eustace Silver Medal Inaugural Meeting

A Comparison of a Single Orbital Floor Injection of Triamcinolone Versus Conventional Steroid and Antibiotic Drops Used Post Operatively in Uneventful Phacoemulsification Surgery

Prendiville C, Khan F, Mullaney P

Sligo General Hospital

Introduction: Cataract extraction is one of the most common operative procedures performed throughout the world. Conventionally, patients are discharged with postoperative drops of steroids and antibiotics or a combination of both. These drops are to be administered for 2–6 weeks depending on individual eye unit protocol. Many patients find the post operative drops arduous and non compliance can cause prolonged inflammation and discomfort. Patients with cognitive, physical and visual impairments require assistance from family or community nurses to administer drops. A single perioperative injection of Triamcinolone has been shown to be an effective replacement for drops postoperatively in two previous studies[1,2].

Aims and objectives: The aim of this study is to see if a single orbital floor injection of Triamcinolone is equivalent to conventional steroid and antibiotic drops used post operatively in uneventful phacoemulsification surgery in treating postoperative inflammation.
Methods: This is a prospective randomized control trial of 100 patients undergoing routine phacoemulsification cataract extraction. The patients will be randomly assigned to receive the triamcinolone injection or post operative topical treatment of G Maxitriol QDS 1/52 tapering over 1 month. Forty mg of triamcinolone is injected inferior temporally immediately post operatively prior to undraping the patient in theatre in those randomized to this group. The patients will be reviewed at week one and at 1 month.
Keratitis will be graded depending on the area of the corneal surface affected. Anterior chamber activity is graded according to the number of observed cells in the anterior chamber graded as ±, +1, +2, and 3. Aqueous flare is observed under the same conditions and graded as +1, +2, and +3. Cytoid macular oedema is judged clinically or with fluorescein angiography in suspicious cases.
Results: There is a significant reduction of ocular inflammation at 1 week using the triamcinolone injection. There was no difference between the groups at 1 month follow up. The results at the time of writing this abstract are incomplete.
Conclusion: Our study shows that the 2 methods are equivalent in reducing post operative inflammation at 1 month. Patients prefer the injection. With further evaluation and investigation, this study may lead to a drop free cataract extraction.

Primary Orbital Leiomyosarcoma: Case Report of a Rare Cause of Frozen Orbit

Malik A, James M, Cleary P

Cork University Hospital

Introduction: Orbital leiomyosarcoma is an extremely rare cause of orbital mass and is usually a result of metastasis from a distal site. We present a case of primary orbital leiomyosarcoma causing a frozen orbit.
Materials/methods: Observational case report correlating clinical, radiological and histological findings.
Results: An 82-year woman presented with right orbital pain and increasing proptosis of a long standing blind eye. CT of orbits showed a large mass involving the whole orbit with calcification. Following biopsy of the orbital mass, a diagnosis of leiomyosarcoma was made. This was deemed to be a primary tumour, after extensive work up failed to reveal any other definite lesions systemically. The patient underwent a course of orbital irradiation, with consequent reduction in tumour size and relief of symptoms.
Conclusion: Primary orbital leiomyosarcoma with calcification involving the whole orbit is rarely encountered, but can be a potentially life threatening cause of proptosis.

A Case of Right Inferior Quadrantinopia

Nasser Q, Curtin D

Royal Victoria Eye and Ear Hospital

Introduction: We report a case of a 57-year-old patient, who presented with a 4 week history of blurring of vision in both eyes. On examination, the patient had a right inferior homonymous incongruous quadrantinopia. He was referred for neuroimaging, and was diagnosed with a left intra axial parietal lobe lesion.
Materials/methods: The patient was referred to Beaumont Hospital where he underwent an emergency craniotomy with brain biopsy.
Results: Pathology showed lesion to be a metastatic poorly differentiated carcinoma. CT thorax/abdomen/pelvis confirmed a mass lesion in the upper lobe of the right lung—non small cell carcinoma (Stage IV).
Conclusion: To our knowledge, this is a very rare presentation of lung cancer that has not been previously documented in the literature. The patient had no systemic symptoms prior to his blurring of vision. Doing a thorough ophthalmic assessment including visual fields is essential in patients who present with a vague history of blurring of vision.

Changing Trends in Ocular Injury in the South East of Ireland

Saeed A, Khan I, Dunne O, Beatty S

Waterford Regional Hospital, Waterford, Ireland

Purpose: Severe ocular trauma remains an important cause of visually consequential ocular morbidity, and many cases may be preventable with appropriate health and safety (H&S) measures. In this paper, we review cases of ocular trauma admitted to our department over a 6-year period, and investigate whether recent socio-demographic changes and whether recently introduced H&S measures have impacted on trends of ocular trauma in our catchment population.
Materials/methods: We retrospectively reviewed 517 cases of ocular trauma admitted to our department between October 2001 and September 2007, and the following data were retrieved in each case: demographic details; mechanism of injury; place of injury and nature of injury.
Results: During the study period, 517 patients were admitted with acute ocular trauma, representing 31.5 % of emergency admissions to the Department of Ophthalmology. The mean age was 23.3 ± 20 years, and the male:female ratio was 447:68 (87:13 %). Ocular trauma was sustained in the workplace in 154 (32.2 %) cases and in the home in 129 (26.9 %) cases, whereas 111 (23.2 %) injuries were sustained in sports and/or recreational activities; assaults and road traffic accidents accounted for 44 (9.2 %) and 18 (3.7 %) cases, respectively. After 25th August 2003, when the offence of not wearing a seat belt was added to the traffic penalty point system in Ireland, the proportion of ocular injuries attributable to RTA dropped significantly [prior to the new rule 10 (6.6 %): following the new rule 9 (2.4 %); $P = 0.03$]. Between October 2002 and September 2003, inclusive, acute ocular injury was sustained by 65 Irish persons and by 3 persons of *non*-EU origin, representing 95.5 % and 4.5 % of ocular injuries admitted during that 12 month period. In 2006/2007, and following the influx of migrant workers from the 10 new EU accession states, 78 (86.6 %), 9 (10 %) and 3 (3.3 %) acute ocular injuries warranting hospitalization were sustained by persons of Irish origin, persons originating from the new EU accession states and persons from non-EU countries, respectively, reflecting a significantly greater incidence of acute ocular injury amongst persons originating from the EU accession states (80 per 100,000) versus those of Irish origin (19 per 100,000) in this 12 month period.
Conclusion: Admission for acute ocular injury account for almost one-third of emergency hospitalizations to a large regional eye unit. The inclusion of the offence of not wearing a seat belt in the traffic

penalty point system has resulted in a significantly lower proportion of hospitalized ocular injuries attributable to RTA. Also, the demographic profile of patients admitted because of ocular trauma has changed over the last 6 years, reflected in an ever increasing proportion of these injuries in persons coming from the EU accession states. These data will inform healthcare providers and planners, and those involved in developing health and safety guidelines for the workplace.

Uncorrected Visual Acuity One Hour Following Uncomplicated Cataract Surgery: Bimanual Microincision Cataract Surgery Versus Standard Coaxial Phacoemulsification

Saeed A, O'Connor J, Cunnife G, Mulhern M, Beatty S

Waterford Regional Hospital, Waterford, Ireland

Purpose: To compare bimanual microincision cataract surgery (MICS) and standard coaxial phacoemulsification (CAP) in terms of uncorrected visual acuity (UCVA) recorded 1 h and 2 weeks postoperatively.
Materials/methods: This was a prospective, non-randomised comparative study. All MICS procedures were performed by one surgeon (MGM) and all CAP procedures were performed by another surgeon (SB). Eyes with visually consequential ocular morbidity were excluded. The primary outcome measure was UCVA recorded 1 h postoperatively.
Results: One hundred eyes underwent MICS and CAP (50 eyes in each group). The treatment groups did not differ significantly in terms of preoperative mean best corrected visual acuity (6/24 $\pm$ 4.3 lines and 6/20 $\pm$ 4.4 lines in the MICS and the CAP groups, respectively; $P = 0.65$). Also, there was no significant difference in terms of postoperative UCVA at 1 h or at 2 weeks [mean ($\pm$SD) UCVA 1 h postoperatively: MICS 6/36 $\pm$ 5.7 lines; CAP 6/30 $\pm$ 4.7 lines; $P = 0.80$; UCVA 2 weeks postoperatively: MICS 6/10 $\pm$ 1.9 lines; CAP 6/10 $\pm$ 2.2 lines; $P = 0.90$]. However, 9 eyes (18 %) and 1 eye (2 %) achieved an UCVA of $\geq$6/12 at 1 h following MICS and CAP, respectively, and this difference was statistically significant (P value = 0.02).
Conclusion: Mean UCVA at 1 h and at 2 weeks following cataract surgery was not significantly different between eyes undergoing MICS and CAP. However, a greater proportion of patients achieved an UCVA of $\geq$6/12 following MICS when compared to CAP.

Acute Sixth Nerve Palsy in a Young Man, Beware of the 'Red Herring'

O'Neill EC, Connell PP, Kadare S, Tormey PT

Ophthalmology Department Waterford Regional, Waterford

Case report: A 17-year-old male presented to the eye casualty with a 2-day history of binocular horizontal diplopia on a background of significant head trauma 6 weeks earlier. Ocular examination revealed a partial sixth nerve palsy confirmed by Hess assessment (figure 1).It was an otherwise normal examination. Specifically there were no other signs of raised intracranial pressure (ICP). Computerised tomography (CT) brain revealed no space occupying lesion. Initial differential diagnosis included traumatic sixth nerve palsy and he was discharged for review in 2 weeks.
Ten days later he represented with increasing horizontal deviation and diplopia. He volunteered new associated symptoms of orthopnoea, intermittent left sided chest pain, left arm numbness, generalised weakness and one episode of loss of consciousness. Ocular examination showed progressive sixth nerve palsy and he was admitted for further investigations.

Systemic examination revealed a sinus tachycardia, elevated blood pressure, engorged chest wall veins and enlarged axillary and inguinal lymph nodes. Serological investigations included a normal full blood count and renal profile. Liver function tests showed a mildly elevated bilirubin and significantly elevated lactate dehydrogenase. Radiological investigations included a chest X-ray, revealing mediastinal widening, lymph node enlargement and bilateral pleural effusions. Subsequent CT thorax, abdomen and pelvis showed extensive mediastinal adenopathy impinging on his right superior vena cava, with pre-cardial effusion. His left kidney was enlarged (figure 2). Echocardiograph confirmed the pre-cardial effusion.

A subsequent diagnosis of acute lymphoblastic (ALL) was made on bone marrow biopsy. Magnetic resonance imaging (MRI) brain was normal, specifically revealing no central nervous system (CNS) involvement. The patient was commenced on appropriate chemotherapy. Subsequently his superior vena cava syndrome (SVCS) symptoms have significantly improved; however, his diplopia has remained.
Comment: We describe an unusual ocular presentation of progressive sixth nerve palsy due to intermittently raised ICP secondary to a large mediastinal mass causing SVCS. We believe this is the first reported case of such findings and emphasis the importance of full systemic examination and looking beyond the 'red herring'.

Resource Utilization and Treatment Patterns of the Different Types of Glaucoma

Quill B, Dervan E, O'Brien C

The Mater Misericordiae Hospital, Dublin

Introduction: Glaucoma is a significant health and economic burden in Ireland today. It is important to assess the impact of glaucoma on healthcare resources. This burden may depend on the type of glaucoma and the management options utilised to treat them.
Purpose: To obtain knowledge of the resource utilization, costs and treatment patterns of the different types of glaucoma.
Methods: The distribution and the different types of management options utilised for the different types of glaucoma were examined by retrospective medical chart review of patients attending the Mater Misericordiae University Hospital, Dublin glaucoma clinic over a 6 month period, from February 2006 to July 2006. The diagnosis of primary open angle glaucoma (POAG), ocular hypertension (OHT), normal tension glaucoma (NTG), secondary glaucoma, pseudoexfoliation glaucoma (PXF) and primary angle-closure glaucoma (PACG) primarily based on ICD-10 classification. The requirement for surgical intervention and medical therapy was noted. Also, among the medically managed group whether multiple medications were required.
Results: The three largest patient cohorts were POAG (n = 126/365, 35 %), OHT (n = 97/365, 27 %) and PXF (n = 53/365, 15 %). Surgical intervention was required in 29 % (n = 36/126) of the POAG cases (n = 36/126), 41 % (n = 22/53) of the PXF patients and 50 % (n = 17/34) of the secondary glaucoma patients. Medical

therapy alone was required in 71 % (n = 90/126) of the POAG patients with 37 % of these (n = 33/90) on monotherapy. Patients with OHT were treated in 72 % (n = 70/97) of cases with the majority on monotherapy (n = 53/70, 76 %). Many of the patients with PXF glaucoma who were medically managed (n = 29/53, 55 %) required multiple medications (n = 20/29, 69 %).
Conclusion: PXF and secondary glaucoma's appear to be the most difficult and expensive to treat requiring multiple surgeries and a large percentage of patients on multidrug regimes.

Increased Central Corneal Thickness (CCT) Results in a High False-Positive Rate of Glaucoma Referrals by Optometrists

Falzon KMG, O'Brien CJ

Ophthalmology Department, Mater Hospital, Eccles Street, Dublin

Introduction: Nearly half of those referred by optometrists for specialist glaucoma assessment are discharged at the first visit, whilst a diagnosis of ocular hypertension (OHT) is made in approximately 30 % (Salmon 2005). A significant number of patients with OHT have a normal intraocular pressure (IOP) if CCT is taken into account (Argus 1995).
Purpose: To assess whether CCT is a confounding factor in patients referred by optometrists with high IOP for specialist glaucoma assessment.
Methods: The charts of 54 patients referred with high IOP to one glaucoma specialist between January and September 2007 were analysed. IOP was determined by Goldmann applanation tonometry (GAT) and CCT measured by ultrasonic pachymetry (Pachmate®). Both were measured by the same specialist. Measured IOPs were defined as being normal or borderline/high ($\leq$18 or $\geq$19 respectively). A 2-sample, 2-tailed T-test was used to compare the 2 groups.
Results: Mean referral optometric IOP was 25.9 $\pm$ 3.5. Clinic-based GAT showed that 28/54 eyes (51.9 %) had normal IOP (mean CCT 597 micron, 95 % CI 586–608). The rest had borderline/high IOP (mean CCT 573 micron, 95 % CI 566–580). The differences of mean CCT between the groups were highly significant ($P < 0.001$). Furthermore, when corrected for CCT, 65 % (17/26) of eyes with borderline/high IOP had normal IOP.
Conclusions: 80 % of optometric referrals (45/54) with high IOP were found to have normal values following GAT and correction for CCT. Thus corneal pachymetry should be considered by optometrists for glaucoma screening.

Review of Retinal Vascular Occlusion Predisposing Factors

Brady J[1], Murphy T[2], Cullinane A[1], O'Shea S[2]

Departments of Ophthalmology[1] and Haematology[2], Cork University Hospital

Introduction: Vascular occlusions of the eye include thrombosis of central retinal veins (CRVO), central arteries (CRAO) and anterior ischaemic optic neuropathy. Recognised risk factors include cardiovascular risk factors, glaucoma in the case of vein occlusions and hyperviscosity syndromes. However, the role of thrombophilias, both inherited and acquired is debated. Furthermore, there is little evidence to guide treatment options for these patients.
Materials/methods: We performed a retrospective review of patients referred with retinal vascular occlusions to the thrombosis clinic at Cork University Hospital from January 2006 to date. Results of thrombophilia testing performed and outcomes following treatment with either antiplatelet, oral anticoagulantant or no therapy were examined.
Results: Six patients with retinal thrombotic events were referred for evaluation, three male and three female. The mean age was 48 (range 29–79 years). Five had a CRVO and one had a CRAO. All patients had thrombophilia testing performed. This included Protein C, Protein S, antithrombin III, Factor V Leiden, Prothrombin gene variants and antiphospholipid antibody. 2 patients were heterozygous for the Factor V Leiden polymorphism, 3 had antiphospholipid syndrome and the screen was negative in one. Two patients were treated with warfarin and the four others with aspirin. Both patients treated with warfarin had previous thrombotic events.
Conclusion: Thrombophilia may play a role in retinal vascular occlusions, particularly in young patients without other identifiable risk factors. At present there are no definitive guidelines for antithrombotic therapy. The decision to start aspirin or warfarin should be influenced by results of thrombophilia testing, past history of thrombosis and on-going risk factors for thrombosis. Consequently it is important to consider early referral of such patients to a Haematology service for optimal management.

Efficacy of Interferon-Alpha in Behcet Disease

Saddik T, Kilmartin D

Royal Victoria Eye and Ear hospital

Introduction: Results of Interferon-alpha treatment in patients with Behcet uveitis.
Materials and Methods: Case series of 3 patients with Behcets disease.
Results: Remission of ocular vasculitis was achieved in 2 patients with good tolerance of IFN-alpha.
Conclusions: IFN-alpha is proposed as second line treatment to control Behcet uveitis not controlled with immunosuppressive drugs.

A National Survey of NCHD Knowledge of Phacoemulsification Technology & Techniques

Kelliher C, O'Neill E, Tormey P

Waterford Regional Hospital

Introduction: This study involved a survey of all ophthalmology NCHDs in the country. Formal teaching with regard to phacoemulsification has not previously been routine during training. This study sought to ascertain current levels of knowledge amongst NCHDs.
Materials/methods: A questionnaire was administered by phone, investigating existing knowledge of phacoemulsification technology.

Topics examined included:
Trainees' familiarity with the phacoemulsification machine they currently used and their use of various settings available on that machine.

Techniques they utilised in cataract extraction.
Awareness of risk factors leading to endothelial cell loss following surgery and strategies they employed to reduce same.

Their knowledge of newly developed techniques and technology
Results: The survey showed:

A paucity of knowledge with regard to the phacoemulsification machine used, leading to under-utilisation of appropriate settings on the machine.
Majority use of a single technique, i.e. 'divide and conquer', using coaxial instrumentation.
Poor awareness & documentation of phacoemulsification power during surgery.

Conclusion: This survey highlighted a current deficiency in knowledge amongst trainees with regard to phacoemulsification and there was widespread support for the inclusion of this topic on the basic and specialist training programmes.

The Therapeutic Use of Bevacizumab (Avastin) in a Case of Corneal Neovascularisation

Hartnett C, Hickey-Dwyer M

Ophthalmology Department, Mid-Western Regional Hospital, Limerick

Introduction: Corneal neovascularisation is a devastating consequence of corneal inflammation or infection. To date, steroids remain the primary treatment for corneal neovascularisation, despite their potential complications. We report the use of subconjunctival Bevacizumab (Avastin) in the management of a child with corneal neovascularisation.
Case study: A 4-year-old girl presented to our eye casualty complaining of an intermittently red and irritating right eye for the previous 2 years. Visual acuity was markedly reduced in the affected eye. Examination under general anaesthesia revealed corneal neovascularisation of her right cornea. A subconjunctival injection of 5 mg of Avastin was administered intraoperatively.
Results: On re-examination 10 days later, the corneal vessels were noted to have regressed dramatically. A second subconjunctival injection was given. At follow up 2 weeks later, again further regression of the vessels was noted. Visual acuity improved dramatically.
Conclusion: This is the first reported case of the use of Bevacizumab treatment in a child with corneal neovascularisation. The response to the treatment was rapid despite the long duration of symptoms. From our experience, we would advise clinicians to consider Bevacizumab as a potential adjunctive treatment in cases of corneal neovascularisation.

Case Presentation on Ocular Ischaemic Syndrome

Mohammad KN

Cork University Hospital

Introduction: A 56-year-old lady presented with sudden loss of vision RE with amourosis fugax previous 3 days. Background of bilateral carotid endaterectomy and CVA.
Materials/methods: Examination reveals right cilioretinal artery occlusion and bilateral mid-peripheral dot haemorrhage and rubeosis with raised IOP of 32 mmHg on right and normal 10 mmHg on left eye. CT carotid angiogram and Carotid Doppler reveals performed followed by florecein angioram (FFA).
Results: CT carotid angiogram and Carotid Doppler reveals shows >90 % stenosis on right internal carotid and recurrence of >80 % stenosis on left internal carotid artery. FFA shows delayed and patchy choroidal filling.
Conclusion: Ocular Ischaemic Syndrome.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 30th March 2007, Limerick

The Role of Combination Therapy with Intravitreal Triamcinolone and Avastin in the Treatment of Retinal Disorders

O'Doherty M, Hartnett C, Hickey-Dwyer M

Limerick Regional Hospital

Introduction: Intravitreal triamcinolone has become an important treatment for macular oedema secondary to vein occlusions. Similarly, intravitreal Avastin has been widely used in the treatment of neovascular membranes secondary to ARMD. In this study, we report the outcome of patients treated with both intravitral triamcinolone and Avastin for macular oedema secondary to vein occlusion or neovascular ARMD.
Materials/methods: This was a retrospective review of the case notes of 12 patients treated with combination therapy.
Results: Combination therapy led to improvements in visual acuity and flurescene angiographic appearance in the majority of patients.
Conclusion: Combination therapy may have a role in treatment of vein occlusions and neovascular ARMD.

Audit of Patients Receiving Intravitreal Avastin for Conditions Other than Age Related Macular Degeneration: Indications and Outcomes

Darcy F, Kilmartin DJ

Research Foundation, Royal Victoria Eye and Ear Hospital, Dublin

Objectives: To review the indications and medium term outcomes of intravitreal bevacizumab (Avastin) in patients with conditions other than age related macular degeneration.
Methods: 11 eyes of 10 patients with non-AMD related sub foveal CNV were assessed prospectively. All patients had undergone prior treatments with photodynamic therapy and/or intra vitreal kenalog and/or systemic immunosuppression.* Best corrected standardised logMAR acuity (BCVA), dilated fundoscopy and optical coherence tomography were performed at baseline and monthly intervals. Dosage of Avastin (1–1.25 mg/0.05–0.1 ml).
Results: All patients in the study were female with a mean age of 36 years. Average follow up was 5 months with a range of 1–11 months. 7 eyes received 1 injection, 4 had 2 injections of Avastin. Diagnosis in table below.

Diagnosis	Number
Myopic CNV	3
PIC associated CNV	4
Choroiditis with CNV	2
Idiopathic CNV	1
POHS	1

Visual acuity

Four patients (36 %) showed improvement of vision by 3 or more lines.

Seven patients had no change in visual acuity.

No patients disimproved by more than 2 lines.

OCT

Four (36 %) eyes showed a reduction in cft of >50 μm, 5 remained within 50 μm of baseline and 2 had thickened more than 50 μm.

Conclusion: Intravitreal Avastin may be of benefit in the treatment of CNV associated with myopia or inflammatory conditions. Some patients in study were receiving concurrent oral immunosuppression, making isolated response to avastin difficult to determine. A larger study group in needed over a longer timeframe to obtain statistically significant results.

"Not Just a Simple Proptosis"

Hartnett C, O'Doherty M, Young B

Ophthalmology Department, Mid-Western Regional Hospital, Limerick

Case presentation: A 72-year-old lady self-referred to casualty on 29/01/07 with progressively decreasing visual acuity of her left eye for the previous year and left eye proptosis for 3 months.
The patient had no significant past ocular or medical history.

On examination, visual acuity was counting fingers in the left eye. There was an obvious left sided proptosis, mild ptosis and RAPD. Isihara testing was reduced on the left side and there was restriction of abduction and adduction. Intraocular pressures were elevated bilaterally. The optic discs appeared asymmetrical with a slightly paler looking disc in the left side.

Urgent MRI brain showed a large anterior temporal lobe mass with oedema occupying the sphenoid, extending across the midline and encasing the left internal carotid artery and left optic nerve.

Maxillofacial teams were consulted and a left maxillary sinus biopsy was performed. This was reported as a meningothelial meningioma.

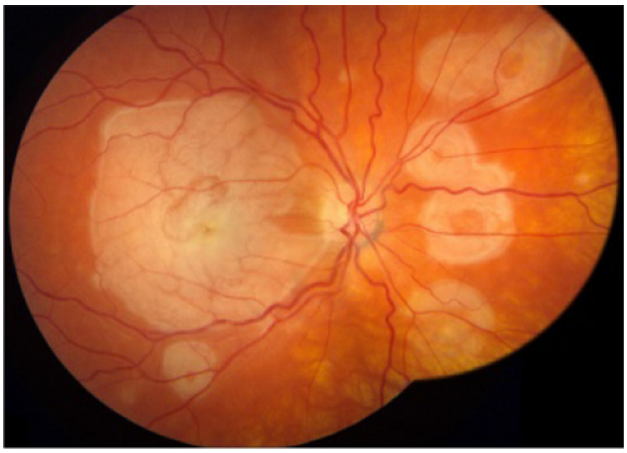
The patient was immediately referred for neurosurgical opinion in CUH and is currently undergoing radiotherapy treatment.

This interesting case highlights the importance of good clinical assessment in the initial stages of diagnosing potential serious pathology.

Rapidly Progressive Blindness in a 24 Year Old Woman with Cerebral and Retinal Vasculitis: a Diagnostic Dilemma

Kennelly K, Jungkim S, Keohane C, Sweeney B, Kaar G, Cullinane A, Cleary PE

Department of Ophthalmology, Cork University Hospital



Case report: A 24-year-old female presented to Ophthalmology with a 1-month history of profound, rapid loss of vision in both eyes. This occurred on a background of an 18-month history of neurological signs and symptoms with cerebral white matter changes on MRI suggestive of inflammation or vasculitis. Her neurological symptoms began 6 weeks post-partum. The aetiology of her central nervous system disease remained undetermined despite extensive investigation. On examination her vision was reduced to hand movements in the right eye and counting fingers in the left eye. Anterior segments were normal and quiet. Fundoscopy revealed bilateral chorioretinal vasculitis with large multifocal areas of choroidal infarction and retinal infarction. Brain biopsy of cortical grey and white matter showed splitting of the walls of the parenchymal blood vessels with a T-lymphocytic perivascular inflammation together with secondary parenchymal ischaemic changes. This patient proved an extremely interesting diagnostic and therapeutic challenge. She never recovered her vision and has been registered with the National Council for the Blind of Ireland.

Cytogenetic Analysis of Uveal Melanoma

Lee P, Nasser Q, Curtin D

Royal Victoria Eye and Ear Hospital

Introduction: Uveal melanoma is the most common primary ocular tumour. Despite the advances in the treatment modalities, large size uveal melanoma remains an ocular and life threatening condition. The management of young patients with large size uveal melanoma

poses challenges in the choice of treatment modality and in counselling for the prognosis and life expectancy. We have two cases of large ciliary body melanoma in young patients (32 and 24 year old). Both patients received enucleation and have mixed cell type histology, but differ in cytogenetic analysis. Cytogeneic analysis of uveal melanoma offers additional information to the natural history to this condition, therefore is a useful parameter when counselling patients with regards to the prognosis for survival.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 17th November, Dublin

Idiopathic Sclerosing Orbital Inflammation

Malik A, Altaie R, Devi, Kollipara D, Murray A

Cork University Hospital

Introduction: A young 36-year-old man, who presented in eye casualty with unilateral proptosis, investigated, nonresponsive to steroid therapy, further investigated and managed.
Materials/methods: Case report.
Result/conclusion: Unilateral proptosis, with recti muscles enlargement, investigated further by biopsy, which showed Idiopathic sclerosing orbital inflammation responsive to immunosuppressive treatment.

Eyelid-Sparing Orbital Exenteration: an Audit of Indications and Outcomes

Horgan N, Shields CL, Marr BP, Shields JA

Wills Eye Hospital, Philadelphia, USA

Introduction: Orbital exenteration is a surgical procedure of last resort in the management of orbital malignancies. Eyelid-sparing orbital exenteration offers the advantages of more rapid wound healing and earlier fitting of orbito-facial prosthesis when compared to eyelid-sacrificing exenteration.
Materials/methods: All case-notes of patients who underwent eyelid-sparing orbital exenteration over a 2-year period at the Ocular Oncology Service of Wills Eye Hospital were reviewed. Interval from first diagnosis to date of exenteration, preceding surgical procedures, indications for exenteration, adjunctive treatments, post-operative complications, metastatic status and patient survival were audited.
Results: Twenty-three cases of eyelid-sparing exenteration were performed over the study period. Mean patient age at time of exenteration was 62 ± 19 years. The most common indications for exenteration in this practice were invasive conjunctival melanoma (7 cases), adenoid cystic carcinoma of the lacrimal gland (5 cases) and orbital melanoma (4 cases). Three patients died from metastatic disease by 2 year follow-up (one case of conjunctival melanoma, two cases of orbital melanoma).
Conclusion: Orbital exenteration with an eyelid-sparing technique is an appropriate surgical option in the management of life-threatening orbital disease.

The Use of Infliximab in Inflammatory Orbital and Optic Nerve Disease

Prendiville C, O'Doherty M, Moriarty P, Cassidy L

The Royal Victoria Eye and Ear Hospital, Adelaide Rd., Dublin

Infliximab, a monoclonal antibody against tumour necrosis factor alpha, has been used for the treatment of numerous auto immune disorders. In Ophthalmology, it has a demonstrated efficacy for refractory uveitis. There are few published case studies for its use in orbital inflammatory disease.

We describe the use of infliximab in a series of patients with refractory pseudotumour, thyroid eye disease, and chronic relapsing inflammatory optic neuropathy.

Infliximab was used when other steroid sparing agents proved inadequate for inflammatory control. A dose of 5 mg/kg was administered at week 0, 2, 6 and 6 weekly intervals. Four of five patients achieved stabilization with infliximab. No patient had adverse reaction to infliximab.

Infliximab is a valuable adjunctive treatment in refractory orbital and optic nerve inflammation.

A Study of the Management and Diagnoses' of All Patients Presenting to the A&E Department of the Mid-Western Regional Hospital, Limerick with Ophthalmic Complaints

Hartnett C, Hayes B, Hickey-Dwyer M

Ophthalmology Department Mid-Western Regional Hospital, Limerick

Introduction: Prior to August 2006, all patients who attended the A&E department of the Mid-Western Regional Hospital Limerick with ophthalmic complaints were referred directly to the ophthalmic NCHD on call.
In response to the European Working Time Directive (EWTD), a pilot project in ophthalmology was commenced on the 21st of August 2006 with the aim of analysing the on-call duties of the ophthalmic NCHD's and where clinically appropriate, reducing their call rate.

Prior to the commencement of this project, casualty doctors and nurses received guidelines and instructions from senior ophthalmology doctors regarding basic assessment and management of patients with ophthalmic complaints.
Methods: All patients presenting to the A&E department with ophthalmic complaints were commenced in this study. Data was collected daily from both A&E administration and the ophthalmic NCHD on call.
The following information on each patient was documented:

- Time of presentation to A&E and presenting complaint.
- GP/Optician referral or self-referral.
- Management in A&E or management by the ophthalmic doctor on call.
- Diagnosis made and treatment instigated.
- Follow-up.

Results: Over a 5-week period from 21/8/06 to 24/9/06, 338 patients were seen in the A&E with ophthalmic complaints. Of these, 214 were GP or optician referrals. One-hundred and twenty four were self-referrals.

Ninety-nine patients were assessed by the casualty doctor and discharged. Fifty-nine patients were assessed first by the casualty doctor and then referred to the ophthalmic doctor on call. One-hundred and sixty patients were referred direct to the ophthalmic doctor, by the casualty nurse. Twenty-three patients were referred to the OPD clinic.

The average number of casualty patients seen by the ophthalmic doctor on call per day is 6.5.

In the 5 weeks prior to the commencement of this project, 8.1 casualty patients were seen per day.

In week 1 of the study, 15 patients were referred to the NCHD between the hours of 5 pm and 9 pm. In week five this number had fallen to 8.

Conclusion: As a result of this project, the ophthalmology department has seen a noticeable drop in both the average number of casualty patients being referred to the NCHD on call and in the number of after-hours referrals. This study aimed to improve the casualty ophthalmology service in the Mid-Western Regional Hospital, Limerick. As a consequence, it has also reduced the call rate of the ophthalmic NCHD.

A Rare Case of Multiple Ocular Sequelae Subsequent to a Blunt Traumatic Injury Involving an Upturned Goalpost

Townley D, Jungkim S, Hickey-Dwyer M

Ophthalmology Department, Mid-Western Regional Hospital, Dooradoyle, Limerick, Ireland

Introduction: Ocular trauma is the leading cause of monocular blindness in children worldwide[1]. Sports injuries accounts for on third of theses[2]. Useris estimates that 500,000 years of lost eyesight are lost annually. Optic nerve injuries without orbital fracture or orbital rupture occur due to impact at the superior orbital rim causing a tortional acceleration and deceleration. A literature search of pubmed and google revealed no goal post related. Cases reported in pubmed included sports injuries such as rugby[3], golf[4], hockey, basketball[5], blunt trauma[6] and from a fall[7] RTA. The long term impact of these injuries is significant both from and ocular and a psychosocial point of view and therefore need to be considered.

Case report: This case describes a high impact ocular injury with multiple ocular sequelae without orbital bony fracture. An 8-year-old boy presented with a painful proptosis and ptosis and reduced visual acuity.

On examination his visual acuity was perception of light. He had ptosis and proptosis, dilated unreactive pupil and no ocular movement. On fundoscopy there was retinal oedema an emergency lateral canthotomy with conjunctival dissection was preformed. He was treated with oral clavulanic acid and 4 mg intravenous dexamethasone. On CT orbit there was retraction of the optic nerve, retro orbital haematoma, swelling of the inferior and superior muscles and exophthalmos.

At 2 months his visual acuity is still perception of light. The ptosis has resolved but there is still some residual depression of elevation, adduction depression and abduction. His pupil is still unreactive and dilated and there is some stippling of the RPE at the macula.

Discussion on optic nerve avulsion, its mechanism of action and associated features.

Taking into account the long term sequelae including impact on psychological wellbeing and vocational achievement in different age-groups.

References:

1. Strahlam E, Elmain M, Daub E (1990) Causes of paediatric eye injuries a population based study. Arch Ophthalmol 108(4): 605–606. PMID 2322164
2. Jan S, Khan S, Khan MN, Igbal A, Mohammad SJ (2004) Coll Physicians Surg Pak 14(6):333–336
3. Chong C, Chang A (2002) Emerg Med J 19:475–476
4. Chaudhry IA, Shamsi FA, Al-Sharif A, Elzaridi E, Al-Rashed W (2006) Br J Ophthalmol
5. El Kettani A, Benhaddou M, Hamdani M, Amraoui A, Zaghloul K (2005) Fr Ophtalmol 28(8):e5
6. Optic nerve avulsion from door-handle trauma in children. Br J Ophthalmol. [Avulsion of the optic nerve: two case studies]

Fluocinolone Acetonide Intravitreal Implant (Retisert) for Non-Infectious Posterior Uveitis

Timoney P, Pearson PA

Department of Ophthalmology and Visual Sciences, University of Kentucky, Lexington, Kentucky, USA

Introduction: Treatment approaches for posterior segment diseases are limited by the lack of effective drug delivery to this region. In an effort to provide long-term direct delivery of a therapeutic agent in treating chronic non-infectious posterior uveitis, an intravitreal fluocinolone implant (Retisert) has been recently implemented with successful results.

Methods: The Retisert implant was surgically implanted into the vitreous cavity through a pars plana incision in two patients who continued to experience relapses of posterior segment uveitis despite maximal medical treatment. Both patients were reviewed at regular intervals post-implantation. Outcome measures such as visual acuity, need for adjunctive therapy, rate of recurrence and adverse effects were assessed and recorded.

Results: At 3 months post-implantation, the best corrected visual acuity in both patients remained stable at 6/12 or better in the treated eye. The anterior chamber and posterior inflammation resolved completely within 2–3 days post-implantation in both patients. There have been no clinical recurrences, no complications or adverse effects observed to date. Adjunctive systemic immunosuppressive therapy continues to be slowly tapered in both patients.

Conclusion: At 3 months post-implantation, the Retisert implant has produced a marked anti-inflammatory effect in the treated eye and has consequently led to an improvement and stabilization in visual acuity, decrease in inflammatory recurrences and reduced need for adjunctive therapy. There are four ongoing clinical trials designed to evaluate the safety and efficacy on this novel approach in treating patients with non-infectious uveitis affecting the posterior segment.

Familial Retinal Dialysis

Brady J, Hickey-Dwyer M

Department of Ophthalmology, Midwestern Regional Hospital, Dooradoyle, Limerick

Introduction: Retinal detachment associated with inferotemporal dialysis comprises approximately 10 % of all retinal detachments. We

describe the case of two family members (mother and son) who presented in sequential weeks with this pathology.
Materials/methods: AM a 45-year-old lady presented with a 3 month reduction of vision in her left eye. Examination revealed a retinal detachment secondary to a retinal dialysis. Five days later her 3-year-old son presented with the incidental finding by the optician of reduced vision in his right eye. Neither patient had any history of trauma. Both patients underwent successful retinal detachment surgery. All other siblings were examined and none had a retinal dialysis.
Results: The role of genetic factors in retinal dialysis is controversial with no consensus regarding this in the literature. However, there have been a number of reported cases of dialysis occurring in family members including identical twins.
Conclusion: We believe that the cause of inferotemporal dialysis is multifactorial and there is a definite subpopulation in which a genetic predisposition is present.

Buckle-Related Complications Following Surgical Repair of Retinal Dialysis

James M, O'Doherty M, Beatty S

Waterford Regional Hospital, Waterford, Ireland

Introduction: To describe buckle-related complications following surgical repair of retinal dialysis.
Materials/methods: A retrospective study of 28 consecutive cryobuckle procedures for retinal detachments secondary to retinal dialysis is reported, with particular attention directed towards postoperative complications relating to the buckle. Stata 8 statistical software and Fisher's exact test were used to analyse the data.
Results: Of the 28 cases, anatomic success was achieved with a single procedure in 26 (92.9 %). Postoperative complications were seen in 20 cases (71.4 %), with complications attributable to the buckle noted in 19 (67.9 %). Buckle-related complications included exposure (7; 25 %), strabismus (5; 17.9 %), and infection (3; 10.7 %). Surgical removal of the buckle was indicated in 13 cases (46.4 %), typically within the first 6 postoperative months. of these, the retina remained flat following removal of buckle in 12 cases (92.3 %), whereas the retina redetached in 1 case (7.7 %).
Conclusion: Cryotherapy with explant is an effective primary procedure for the surgical repair of retinal detachment secondary to retinal dialysis. However, there is a high rate of postoperative complications relating to the buckle following this surgical approach, although, the buckle can be safely removed without compromising the anatomic success of the primary surgery in the vast majority of cases.

Design, Materials & Methods of Full Thickness Macular Hole and Internal Limiting Membrane Peeling Study (FILMS)

Orakzai A, Beatty S

Department of Ophthalmology, Waterford Regional Hospital, Dunmore Road, Waterford

Introduction: A multicentre randomized controlled clinical trial to investigate if internal limiting membrane (ILM) peeling improves the success of macular hole surgery with regards to improvement in visual function, anatomic closure of the macular hole, quality of life and cost- effectiveness.
Materials/methods: Eight hospitals are participating in this study including Aberdeen, Dundee, Glasgow, Inverness and Bristol in the UK while 2 hospitals in Ireland, i.e. RVEEH, Dublin and Waterford. This trial is expected to last at least 24 months, recruiting at least one patient per month depending on the population area. **Inclusion criteria:** Patients with idiopathic FTMH, stages 2–3 of less or equal than 18 months duration. VA <20/40. **Exclusion criteria:** Patients with stages 1 and 4 FTMH. Duration >18/12 duration. FTMH section to high myopia (−6 D). Traumatic FTMH, etc. A randomisation service (automated Interactive Voice Response (IVR) telephony system, in Aberdeen) is employed to obtain a randomised code of the surgical code (ILM peel or no ILM peel). A confidential list of these codes accessible only to the surgeons help keep the optometrist and participant remain masked. The surgery includes pars plana vitrectomy with PVD induction, air-fluid exchange and air-gas (12 % C3F8) exchange. The ILM peeling will be done per randomisation service. Follow up visits will be at 1, 3 and 6 months post surgery. During these visits BCVA, contrast sensitivity, near vision and reading speed, colour photos, quality of life and health questionnaires are carried out. All the data sent to the Trial office in Aberdeen.
Results: The primary outcome is the mean difference between treatment groups in the ETDRS distance VA score at 6 months. 64 patients in each group sought to detect a 6 ETDRS score difference using a 2 sample 2 sided t-test ar a 5 % level of significance and 80 % power (128 patients). More than 400 patients will be offered this surgery over 24 months. A 50 % agreement to participate and 10 % loss to follow up is anticipated.
Conclusion: This study will establish the hypothesis that ILM peeling improves visual function and anatomical closure of the hole, subsequently improving the quality of life of patients and is cost-effective.

Unilateral Optic Nerve Head Swelling: an Unusual Presentation of Ocular Toxoplasmosis

Kennelly K, O'Reilly P, Jungkim S, Fenton S

Department of Ophthalmology, Cork University Hospital

Case report: A 22-year-old medical student presented with a 2-week history of a "shadow" over his left eye and a painless deterioration of left visual acuity. He was physically fit with no significant past medical or ophthalmological history. Best-corrected visual acuity was 6/5 in the right eye, but was reduced to 6/12 in the left eye. Right ocular examination was entirely normal. His left anterior chamber was quiet; he had no vitritis. Left fundal examination was entirely normal apart from optic nerve head swelling. Visual field analysis revealed a left inferior-temporal quadrantanopia. A visual evoked potential showed a delayed response in the left eye. An MRI scan of the brain and optic nerves was normal, and lumbar puncture was negative for oligoclonal bands. Haematological, biochemical, immunological, and microbiological blood tests were all normal, apart from a positive toxoplasma IgM. A diagnosis of left optic nerve papillitis secondary to primary toxoplasmosis infection was made. The patient was commenced on oral prednisolone, clindamycin, pyramethamine, and folinic acid. Three months following diagnosis, his optic disc swelling had markedly improved, and importantly, his corrected left visual acuity had returned to 6/5.
Comment: Toxoplasmosis typically presents as a white-yellow chorioretinal lesion with overlying vitritis. There is often an associated old pigmented chorioretinal scar. Neuroretinitis may also occur, and rarely, as with the patient described, this can occur without an associated chorioretinal lesion and with little or no inflammatory reaction. In such a patient this causes a diagnostic challenge as the presentation of a unilateral optic disc swelling and decreased visual acuity

simulates optic neuritis. The laboratory finding of a positive toxoplasma IgM titre signified the presence of an active infection, and confirmed our diagnosis of unilateral toxoplasma neuroretinitis. It is important to reach such a diagnosis early as prompt treatment of toxoplasma lesions involving the optic nerve or macula is necessary in terms of limiting the ultimate size of the scar and optimising the visual outcome. This case highlights the importance of including toxoplasma in the differential diagnosis of a patient presenting with an isolated optic nerve head swelling with little or no other clinical signs.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 24th March 2006, Cork

A Case Report of Patent Foramen Ovale Presenting with Acute Onset of Visual Disturbance in a 45-Year-Old Woman

Kennelly K, Ravikumar K, Cleary P

Department of Ophthalmology, Cork University Hospital

Case report: A 45-year-old woman with a past history of migraine presented to Ophthalmology with acute onset of visual disturbance following an episode of blackout. Visual acuity and ocular examination were normal, but Humphrey visual field test revealed a left homonymous hemianopia. MRI brain demonstrated occipital lobe infarcts. She was referred to Neurology and investigated for prothrombotic state with nothing abnormal found. MRI and CT angiographies of the brain and carotids showed no other abnormality. However, there was evidence of a patent foramen ovale (PFO) and aneurysmal atrial septum on echocardiogram. She was commenced on aspirin, but suffered a further episode of neurological disturbance with acute weakness of the left arm. She has been referred to Cardiology regarding possible closure of her PFO.
Discussion: PFO is a flaplike opening between the atrial septa primum and secundum at the location of the fossa ovalis that persists after age 1 year. It has been hypothesized that many cryptogenic strokes are caused by small emboli that travel from the legs to the right atrium. During straining (such as a Valsalva manoeuvre) these emboli can cross a PFO into the left atrium and then travel to the brain, producing a stroke. Surgical closure of PFO results in elimination of the right-to-left shunt. Closure during cardiac catheterization is an emerging therapeutic option. After more than 5 years of follow-up observation, the results are promising.
Conclusion: Patent foramen ovale is an uncommon cause of cerebrovascular accident. However, it is an important cause in patients with cryptogenic stroke. This case serves as a poignant example of the importance of cardiovascular, as well as neurological, assessment in young patients who present with visual disturbance and visual fields suggestive of stroke.

A Case Presentation of a Lady with Sudden Onset Disconjugate Eye Movements, Its Course, Sudden Resolution and Discussion of Differential Diagnosis

Townley D, Hickey-Dwyer M

Limerick Regional Hospital

A 53-year-old lady presented initially with a lower respiratory tract infection. She was treated with intravenous antibiotics and received analgesia and stemetil. She suddenly developed diplopia, associated with a severe headache and nystagmus. On examination there was a restriction of horizontal gaze, more marked on left gaze, which was both variable and intermittent. It often increased in severity and was associated with a severe headache both of which would reach a peak then ease. This was occasionally accompanied by a corrective head jerk.

A definitive diagnosis was not attained as hematological and radiological tests were all normal including TFT's and MRI brain. A tensilon test was arranged but her signs and symptoms abated suddenly a few hours prior to the test.

A discussion of the ophthalmological and neurological sequelae and the differential diagnosis.

The Effect of Supplemental Local Anaesthesia on Recovery from Squint Surgery

Altaie R, Eller M, Nicholson C, Tormey P, McCaul C

Departments of Ophthalmology and Anaesthesia and Intensive Care Unit, Waterford Regional Hospital

Background: Squint surgery may be associated with significant postoperative pain, nausea and vomiting. We sought to investigate the effect of intraoperative supplementary local anaesthesia on postoperative pain, nausea and vomiting and rates of unanticipated admission to hospital. We hypothesized that supplementary local injection (subtenon's) would (1) reduce post operative pain (2) reduce postoperative nausea and vomiting (3) reduce unanticipated hospital admission.
Methods: Retrospective chart review of consecutive patients having squint surgery between January 1st and June 30th 2005. Data for demographic, surgical technique, anaesthetic technique, postoperative medications (analgesia and anti-emetics) were obtained.
Results: Sixty-five patients had surgery during the time period. All patients received general anaesthesia. 25 patients had supplementary local anaesthesia (LA + GA group). Groups were similar in terms of age, surgery, anaesthesia and intraopertaive analgesia technique (see table). Patients who received LA were less likely to receive postoperative opiates (2/25 vs. 12/40 NNT 4.1, 95 % CI 3.9–4.1). There were no differences in postoperative anti-emetic use or unanticipated admission.

	LA + GA (N = 25)	GA (N = 40)	P value
Age	16.3 ± 13.6	15.3 ± 4.1	NS
Gender (M/F)	13/12	19/21	NS
UNI/bilateral	22/3	33/7	NS
PACU			
Opioid	2	8	NS
Paracetamol (n)	2	0	NS
NSAID (n)	3	3	NS
Ward			
Opioid	0	0	NS
NSAID	1	4	NS
Paracetamol	90	10	NS
Complications			

Table b continued

	LA + GA (N = 25)	GA (N = 40)	P value
Vomited	5	6	NS
Unplanned admission	1	0	NS
Time to first analgesia (min)	187 ± 148	240 ± 45	NS

Conclusion: In the setting of general anaesthesia technique where intra-operative opioids and NSAID are commonly administered supplementary local anaesthesia slightly reduces the requirement for post-operative opioids but does not influence postoperative vomiting or hospital admission.

Retrospective Review of Intraocular Fluid Samples Sent for PCR, Between Sept 2003 and January 2006, Indications, Clinical Diagnosis and Yield from Sampling

D'Arcy F[1], Kilmartin DJ[1], Fick C[2]

RVEEH,[1] Warwick[2]

Polymerase Chain Reaction (PCR) analysis of intraocular fluid can be helpful in atypical, aggressive or refractory uveitis.

Over a 16-month period, 9 vitreous and 8 aqueous samples were analysed from 16 patients.

According to clinical diagnosis, specific viral or bacterial DNA testing by PCR was requested. In 6 cases of clinical toxoplasmosis uveitis, one sample only was positive for toxoplasma DNA. The serum IgG was positive for toxoplasmosis in all patients.

In the 4 cases of acute retinal necrosis, all showed either HSV or VZV DNA. Four cases of uveitis sent for Toxoplasmosis, Mycobacterium, CMV, HSV, VZV had no yield.

One case suspicious for lymphoma (as detected by histopathological testing from vitreous sample) had no yield on PCR sampling for HSV, VZV, CMV, Mycobacterium.

Conclusion: PCR was found to be helpful in ARN but not in toxoplasma uveitis.

Intravenous Avastin Treatment for End Stage Proliferative Diabetic retinopathy—a Case Study

Lee P, Townley D, Hicky-Dwyer M

Limerick Regional Hospital

Neovascularization is common sequelae of many ophthalmic pathology. Once new blood vessels are detected, the aim of the management is to curtail their growth and thus minimize the deleterious effect of these fragile vessels.

Neovascularization is a result of a cascade of molecular events. Vascular endothelial growth factor (VEGF) has been speculated to be the primary mediator for intraocular neovascularization particularly in proliferative diabetic retinopathy (PDR).

Retinal laser photocoagulation has been the mainstay treatment for proliferative diabetic retinopathy. Although effective, it is a destructive procedure with profound side effects in which 5 % still progress to visual loss. The management of persistently active PDR, despite maximum laser treatment, remains a difficult challenge.

Current research has been focused on the pharmocological intervention of intraocular neovacualarization. Agents with anti-VEGF activity such as pegaptanib (Macugen), ranibizumab (Lucentis) and bevacizumab (Avastin) are undergoing clinical trials for diseases in which intraocular neovascularizations are implicated.

We report the use of intra-venous Avastin treatment in a patient with PDR who lost sight from tractional retinal detachment in one eye whilst developing rubeotic glaucoma in the remaining functioning eye despite maximum laser treatment and vitrectomy. Anti-VEGF therapy may be an effective treatment to induce regression in intraocular neovascularization.

Endogenous Endophthalmitis; a Previously Undescribed Complication of Ipsilateral Carotid Endarterectomy

Orakzai A, Beatty S

Department of Ophthalmology, Waterford Regional Hospital, Dunmore Road, Waterford

Introduction: Post operative endophthalmitis (POE) is a rare complication of cataract surgery. We report a case of POE 5 days following uneventful carotid endarterectomy on the same side.
Materials and methods: Case report.
Result: Methicillin sensitive staphylococcus aureus (MSSA) were cultured on the vitreous sample. Microbiological studies of the swabs taken from the carotid endarterectomy wound and from the central venous line were culture-negative.
The patient was treated with intravitreal antibiotics (Vancomycin and Ceftazidime) on two occasions.
Conclusion: This case represents the first report of endogenous endophthalmitis as a result of ipsilateral carotid endarterectomy, indicating that the patients undergoing this procedure should be made aware of this potential complication.

An Unusual Manifestation of Ophthalmic Gonnacoccal Infection

Jungkim S, Kennelly K, Fenton S

Department of Ophthalmology, Cork University Hospital

Abstract: This is a case of a 20-year-old man who presented with a 3 days history of sore right eye. Ocular examination revealed a severe periorbital swelling, marked conjunctivitis with purulent discharge, large corneal epithelial defect and hypopyon. Patient was found to have microbiological proven gonococcal infection and responded to topical and intravenous anti-gonococcal treatment.
Conclusion: Retrospective ophthalmic referrals to STD clinics in Cork were looked at and a steady yearly increased was found. Because of the increased incidence in STD, ophthalmologist should be aware of the atypical ophthalmic presentation of same.

Orthokeratology—Initial Experiences

Condon PI

Waterford Eye Specialists, 4 Parnell Street, Waterford

Introduction: Ortho-K involves the remolding of the surface of the cornea using reverse geometric gas permeable contact lenses (CL) which produce a central optical zone flattening effect to correct myopia up to −4.00 D.
Materials/methods: Six patients aged 9–17 years with progressive myopia between −1.50 and −4.00 D were fitted with ortho-k lenses based on accurate topographic assessment of their corneas. After detailed instruction in the handling and hygiene aspects of CL, they were instructed to wear them at night while asleep and remove them on awakening and not to wear glasses or contact lenses during the day.
Results: Whereas all patient had 6/6 vision wearing their CL on the 1st day within a week, all had 6/6 vision lasting all day without any glasses or CL. Topographic testing confirmed the molding process in the cornea which was reversible within 2–3 days.
Conclusion: Night-wear ortho-k newer high DK reverse geometric GP/CL with improved topographically guided fitting techniques is a treatment which appears to be successful in reversing the effects of myopia.

The Role of Calpains in Apoptosis of a Rat Retinal Ganglion Cells: Implications for Glaucoma

Guerin M, McKernan D, Donovan M, O'Brien C, Cotter TG

Department of Biochemistry, University College Cork, Ireland; Mater Misericordiae Hospital, Eccles St., Dublin 7

Purpose: Retinal ganglion cells (RGCs) undergo a form of programmed cell death in glaucoma known as apoptosis. Calpains are a family of calcium dependent enzymes that have been shown to play a role in apoptotic cell death in several neurodegenerative paradigms, but not in RGC apoptosis. In this study we have examined the role of these calcium dependent proteases in RGC death.
Methods: Cells from a retinal ganglion cell line (RGC-5) were subjected to two apoptotic stimuli relevant to the pathophysiology of glaucoma. These conditions included the addition of calcium ionophore (excitotoxicity), and serum starvation of the cells (neurotrophin deprivation). Intracellular calcium levels and subsequent percentage apoptotic cell death was analysed by flow cytometry. Protein expression of latent and active calpains was studied by immunoblot analysis. Western blotting was also done to establish the downregulation of the calpain inhibitor calpastatin, and the calpain products of parp and fodhrin cleavage.
Results: Western blots demonstrated the presence of active calpains in both models. Calpain products of parp and fodhrin cleavage were also noted.
Furthermore, calpain activity assays confirmed the presence of calpain activation in the GCL of the retinal explants and ONT retinas.
Conclusions: Interestingly, calpains appear to play a role in apoptotic death of RGCs in serum starved and excitotoxic conditions. As these conditions are believed to play a role in the aetiology of glaucoma, inhibition of calpains may be necessary in any neuroprotective therapeutic strategy.

Proceedings of the RAMI Section of Ophthalmology Meeting, Friday 18th November 2005, Dublin

Occupational Related Eye Injuries in Non-Speaking English Patients

Saddik T, Connel P, Harrison I, Collum LMT

Royal Victoria Eye and Ear Hospital

Aim: Due to the perceived increase in the incidence of occupational related eye injuries in non-speaking English workers, We carried an analysis of these injuries in this group of patients and compared with a subset of Irish patients with the same risk of occupational injuries during 3 months period in RVEEH.
To make recommendation on improvement of occupational health safety.
Methods: Prospective study of 100 patients presented with occupational eye injuries.
Results: Average age of patients is 32, ranges between 18 and 57 years. All male
Average waiting time in Emergency Department is 3–4 h.

40 % of total patients did not use eye goggles for different reasons. 60 % of total patients attended safety course. 76 % of total patients had corneal foreign bodies. 6 % of total patients corneal abrasions. 1 % STFB and 1 % severe blunt injury, 7 % of patients had penetrating ocular injuries and so needed admissions and further surgical intervention. Two of them had IOFB. 10 % of them needed x-ray orbit. 7 % of them needed admission, 10 % of them needed further follow up.

10 % of them needed x-ray orbit.

52 % poor English speaking workers (50 % EU nationals and 2 % non EU nationals) 30 % attended safety course. One patient severe blunt injury.

Seven patients had penetrating ocular injuries and so needed admissions and further surgical intervention. 2 of them had IOFB.

48 % of the patients are nationals. 60 % attended safety courses.

All (100 %) had minor injuries. All severe eye injuries occurred in poor-English speaking workers.
Cost analysis: A minimum of 55 euros is the cost for every patient presenting with eye injury. This includes patients with only one visit to the Emergency Department
Maximum cost will be 4000–5000 euros for patients needed admission and investigations like x-ray, CT scan and surgical ocular intervention like IOFB removal by vitrectomy.
Discussion: Occupational ocular injuries are largely avoidable through emphasis on attending and understanding occupational safety courses and wearing of protective device during their job.
Poorly speaking English worker may need more attention. May be translation of the courses to their own language.

These injuries generate a significant and unnecessary toll in terms of medical care, long-term disability, low productivity, and loss of employment, socio-economic cost and legal costs.

Audit of Patients Attending the Mater Misericordiae Eye Casualty in September 2004

Kennelly K, Fulcher T, Burke E

Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin

The objectives of this study were to identify the sources of referrals to the eye casualty, to identify how many of the patients attending

were appropriate for the eye casualty setting, and to determine where these patients were being followed-up. There were a total of 738 visits to the unit during this month with an average of 34 patients seen per clinic day. 720 visits (98 % of total) by 481 patients were analysed. 48 % of visits were reviews of patients already seen in the eye casualty, 26 % were G.P. referrals, 12 % were self-referrals, 5 % were referred by an optician, 4 % from another hospital, 4 % from the Mater Hospital A&E Department, while 2 % came from other sources. Cases were classified into five broad categories.

Inflammatory/infective cases were the most common reason for attendance, accounting for 39 % of presentations. Injuries accounted for 28 % of presentations. The remaining cases were classified as posterior segment (12 %), other anterior segment (8 %), while 13 % did not fit into these four categories. Foreign body injury (12 %) was the single most common diagnosis. 48 % of patients seen were asked to return for further review, 35 % were discharged, while 12 % were referred to the Outpatients Department. The remainders were either listed for a procedure (2 %), admitted (2 %), or referred for further investigation (1 %). To decrease the throughput of inappropriate cases and help limit the service to true ophthalmological emergencies, self-referrals should be limited and referral via a G.P. or optician encouraged. As almost half of all patients seen are reviews, some up to 6 times in 1 month, another suggestion is to either limit the number of visits to eye casualty before a patient is referred to the OPD, or to set up a special review clinic to free up the service for more acute presentations.

Ocular Injuries in Orbito-Zygomatic Fractures

Townley D, Idrees Z, Barry CP, Kearns GJ, Hickey-Dwyer M

Limerick Regional Hospital

Introduction: A retrospective study was jointly carried out between the ophthalmology and the maxillofacial departments in Limerick Regional Hospital the period of the study was from 1998 to 2004 and included 148 patients with orbital fractures.
The aim was to determine the incidence of ocular injuries in patients with orbito-zygomatic fractures, and whether or not the severity of the fracture related to the severity of the ocular injury.
Materials/methods: The bony injuries were divided into: simple, commuted and blowout fractures. The aetiology of the injuries was varied including: assaults, sports injuries, falls and R.T.A's. The mean age was 33.7 ranging from 10 to 65, with a peak incidence of 20–29 (36.5 %). The M:F ratio was 130:18.
Results: Ocular sequelae occurred in 9 % (8) of those with simple fractures, 25 % (15) of those with commuted fractures and 60 % (10) of those with blowout fractures.
Resolution occurred in 80 % (4) of those with simple fractures, 90 % (10) of those with commuted fractures and 50 % of those with blowout fractures.
Conclusion: There was a high rate of ocular injuries in those with orbito-zygomatic fractures (22.2 %), the highest incidence being in blowout fractures (60 %). The severity of the injury was not related to the severity of the fracture but rather due to whether there was direct ocular contact or not. This suggests that an ophthalmology examination is advised in all incidences of orbitozygomatic fractures but particularly in those with blowout fractures.

Case Report of Orbital Non-Hodgkin's B Cell Lymphoma

Kennelly K, Fenton S

Department of Ophthalmology, Cork University Hospital

This is a case presentation of a 65-year-old male who presented with a 2 month history of a painless erythematous swelling at his right medial canthus. On examination his right visual acuity was 6/60 unaided, improving to 6/24 with pinhole. The swelling was firm and associated with non-axial proptosis and limited adduction of his right eye. CT scan revealed an intraorbital tumour which enhanced post gadolinium and partly extended through the medial orbital wall. A biopsy was taken and histological examination led to a diagnosis of high-grade large cell B lymphoma, diffuse non-Hodgkin's type. He was referred to haematology and further investigations revealed an elevated LDH, but normal MRI brain, CT thorax/abdomen/pelvis, and lumbar puncture. He was commenced on CHOP [cyclophosphamide, doxorubicin hydrochloride, vincristine (oncovin), prednisolone] with rituximab and intrathecal methotrexate. He is currently making a good recovery.

Long-Term Follow Up of Nasolacrimal Intubation in Adults

Connell P, Fulcher T, Chacko E, O'Connor M, Moriarty P

Royal Victoria Eye and Ear Hospital

Background/aims: We have previously reported on short term mean 15 month follow up of nasolacrimal intubation in adults. The effectiveness of this procedure for long-term (mean 78 months) control of epiphoria is assessed.
Methods: 65 eyes from 40 patients who underwent nasolacrimal intubation were followed. Mean age at intubation was 59.2 years. Mean follow up period was 6.2 years. The results were based on long-term symptomatic improvement.
Results: Complete long-term resolution of symptoms was reported in 50.7 %. A partial improvement was reported in 38.5 %, and no improvement in 10.7 %. A better outcome was associated with a canalicular than a nasolacrimal duct obstruction. On long term follow up 16.9 % required DCR.
Conclusion: Nasolacrimal intubation, a minimally invasive procedure is successful in the long-term control of epiphora. Selection of patients with canalicular duct obstruction gives higher success rates with fewer patients subsequently requiring DCR procedure.

A Case of Familial Uveal Melanoma

Lee PW, Cunniffe MG, Kilmartin D

Royal Victoria Eye and Ear Hospital

Introduction: A 78-year-old lady presented with reduction of vision in her right eye for 6 months. Clinical and histological examination

confirmed choroidal melanoma. Her sister had an enucleation 16 years ago because of choroidal melanoma and died 12 years later due to metastatic lesions.
Materials/methods: Case report.
Conclusion: Uveal melanoma is the most common primary intraocular malignancy. Familial uveal melanoma (FUM), however, is a rare occurrence. This is a case report of a confirmed FUM presenting to the same institution.

A new presentation of Familial Von Hippel Lindau Syndrome

Dooley I; Acheson R

Mater Misericordiae University Hospital, Dublin

Materials/methods: A 46-year-old asymptomatic man was referred by his optician with a painless optic nerve lesion. He had a cerebellar haemangioblastoma resected 20 years ago, pancreatitis and renal calculi. His mother had a nephrectomy for an unknown cause.
Results: Fundoscopy revealed 3 retinal angiomata, confirmed by FFA. MRI brain showed a pons lesion. Results of chromosomal analysis are pending.
Conclusion: This may represent a new presentation of familial Von Hippel Lindau Syndrome.

The Effects on Murine Retinal Function and Structure of Combined Heterozygous Mutations in the Rhodopsin and RDS/Peripherin Genes

Siah WF[1], McNally N[2], Kenna P[2,3]

[1]AMNCH Tallaght; [2]Ocular Genetics Unit, Trinity College, Dublin; [3]Research Foundation, Eye and Ear Hospital, Dublin

Purpose: RDS-peripherin is responsible for the formation and maintenance of normal photoreceptor outer segments disc morphology. This study set out to investigate the effects of combined heterozygote mutations in both these genes on retinal function and structure.
Methods: Rhodopsin knockout ($Rho^{-/-}$) mice were crossed with RDS-peripherin codon 307 deleted ($Rho^{+/+}\Delta307^{-/-}$) mice to generate offspring of $Rho^{+/-}/\Delta307^{+/-}$ genotype. Rhodopsin heterozygote ($Rho^{+/-}$) mice and rds-peripherin heterozygote ($Rho^{+/+}\Delta307^{+/-}$) mice were used for comparison. Retinal function was assessed by Ganzfeld electroretinography (ERG). A 2-sample *t*-test was used to compare a-wave and b-wave amplitude and timing of rod and cone responses. Mouse eyes were resin embedded and thin retinal sections (1 μm) obtained and examined under the light microscopy. Outer nuclear layer (ONL) cells were counted. DNA was extracted and amplified via PCR. PCR products were sequenced and then analysed on an ABI 310 Genetic Analyser to verify genotype.
Results: $Rho^{+/-}/\Delta307^{+/-}$ mice showed a greater reduction in both the a-wave and b-wave ERG amplitudes of rods and cones in comparison with $Rho^{+/-}$ and $Rho^{+/+}\Delta307^{+/-}$ animals. $Rho^{+/-}/\Delta307^{+/-}$ mice showed greater loss of ONL cell counts compared to $Rho^{+/-}$ and $Rho^{+/+}\Delta307^{+/-}$ animals. The ERG responses mirrored the pattern of photoreceptor cell loss seen in retinal histology.
Conclusions: The combination of heterozygote mutations in both the rhodopsin and peripherin genes results in a more severe retinopathy. A possible explanation is that the rhodopsin protein may have both phototransduction and photoreceptor outer segment disc membrane stabilising functions.

An Audit of Optical Coherence Tomography Usage in a University Teaching Hospital

Keane P, Jungkim S, Cullinane A

Cork University Hospital

Background: Optical coherence tomography (OCT) is a noninvasive imaging technique that uses low-coherence interferometry to create high-resolution cross-sectional and topographic images of any optically accessible tissue.
Methods: The objective of the audit was to study our current usage of OCT in the diagnosis of retinal disease and to make recommendations as to areas where OCT is being underutilized. An OCT-2 machine (Carl Zeiss Meditec) was acquired in 2002 and data from all subsequent scans (covering a 3 year period) was entered into a database. 1364 scans were performed [2002—82; 2003—383; 2004—514; Jan–Sept 2005—385]. During the same time period 3914 fluorescein angiograms were performed. 1120 OCT scans (82 %) were performed from specialist retinal clinics; 200 scans (15 %) were performed from general clinics; 40 scans were performed directly from eye casualty and 8 scans were performed for outside institutions. The most common indications for the study were: 479—diabetic macular oedema, 222—macular hole, 121—retinal vascular occlusion, 64—age-related macular degeneration, 60—epiretinal membrane, 59—retinal detachment. Each category was further subdivided into areas such as pre- and post- surgery, intravitreal triamcinolone and photodynamic therapy.
Conclusion: We increasingly use OCT to evaluate and manage a variety of retinal diseases. We continue to perform more fluorescein angiography than OCT, however, at many institutions, OCT has supplanted fundus photography and fluorescein angiography as the most commonly performed method to image the retina.

Primary Conjunctival Amyloidosis

Keane P, Ravikumar K, Keohane C, Cleary P

Cork University Hospital

Background: A 62-year-old woman presented with a 3 week history of a painful red left eye. Examination revealed a yellowish elevated growth involving the tarsal conjunctiva of the lower lid. There were no other conjunctival lesions and ocular examination was otherwise normal. The patient was unable to recall any recent history of trauma or any previous ocular disease. Bacterial, viral and fungal cultures of the conjunctiva were normal. A biopsy of the lesion revealed extensive deposition of amyloid associated with a focal multi-nucleated giant cell reaction. Extensive systemic investigation included quantitative immunoglobulins, serum protein electrophoresis and β2 microglobulin and was entirely normal. The patient is now being treated symptomatically with topical lubricants and monitored for systemic disease.
Conclusion: Primary conjunctival amyloidosis is difficult to diagnose in the early stages. The yellow waxy deposits, which bleed easily, are diagnostic but are not usually obvious initially. Once there is

histopathological verification, neoplastic plasma cell disease must be excluded. Localized conjunctival amyloid usually arises secondary to chronic infection or secondary to trauma to the eye. It is rare to find significant deposits of amyloid involving the conjunctiva alone in the absence of a previously known infective, traumatic or familial disorder.

Amniotic Membrane Grafts in Corneal Disease

Khan R, Jibran S, Murray A

Cork University Hospital

Purpose: This retrospective study was carried out to assess the efficacy of amniotic membrane grafts in the management of corneal disease.
Methods: Sixteen patients underwent single and triple layered amniotic membrane grafts in the last 18 months, in the Ophthalmology unit of Cork university hospital. Out of these 8 were males and 8 were females. Four patients had persistent epithelial defects or thinning secondary to herpetic eye disease, 4 had corneal melting secondary to an autoimmune disease, 3 had corneal thinning secondary to bacterial ulcers, 3 had corneal endothelial decompensation, 1 had pterygium and 1 band keratopathy. The first 4 categories were refractory to medical treatment. The outcome parameters evaluated were epithelialization time, duration of healing and best visual acuity.
Results: In the herpetic eye disease group 3 out of 4 had epithelial healing within 4 weeks, there was, however, no improvement in the vision.
In the group with corneal melting secondary to autoimmune diseases and bacterial ulcers, epithelial healing took place within 6 weeks.

In corneal decompensation group epithelial bullae reduced resulting in relief of symptoms, one patient continued to wear bandage contact lens.

The patient with pterygium had no recurrence at the end of 11 months follow up.

The patient with band keratopathy had recurrence of the disease within the first 8 weeks. The average time for epithelialization and healing was 21 days; there was no change in the visual acuity in any of the cases.
Conclusion: Amniotic membrane grafts are effective in management of corneal diseases and may be an alternative to keratoplasty in some cases especially if the chances of graft rejection are high.

A Case of Capsule Distension Syndrome

Kelliher C, Flitcroft I

Mater Misericordiae University Hospital, Dublin

Introduction: We present a case report of a patient with unexpectedly poor best corrected visual acuity (BCVA) and myopia following cataract surgery with lens implantation and continuous circular capsulorhexis.
Materials/methods: On examination the patient was found to have shallowing of the anterior chamber with dramatic posterior distension of the posterior capsule. A diagnosis of capsular bag distension syndrome (CBDS) was made. The patient underwent Nd-YAG capsulotomy of the peripheral anterior capsule.
Results: The colloidal suspension within the capsular bag posterior to the lens was released with a marked improvement in the patient's visual acuity.
Conclusion: Treatment of CBDS can correct unwanted myopia, improve UCVA and BCVA, and restore normal anatomic relationships in the eye.