Irish College of Ophthalmologists

Eye Doctors of Ireland

Protecting your Vision

Annual Conference

YEARBOOK 2013-14

2014 LIMERICK CITY OF CULTURE

Limerick Strand Hotel

Tuesday 13th – Friday 16th May, 2014

Irish College of Ophthalmologists

Eye Doctors of Ireland

Protecting your Vision

IRISH COLLEGE

OF

OPHTHALMOLOGISTS

YEARBOOK

2013-2014

Incorporating the Programme for the

Annual Meeting in the Strand Hotel, Limerick

Wednesday 14th to Friday 16th May, 2014

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IRISH COLLEGE OF OPHTHALMOLOGISTS
121 St. Stephens Green, Dublin 2.
Tel: + 353-1-402 2777

www.eyedoctors.ie
info@eyedoctors.ie

COUNCIL 2013/2014

President: Marie Hickey-Dwyer
Vice President: Pat Logan, *President Elect:* William Power
Secretary: Patricia Quinlan, *Treasurer:* Mark Cahill, *Dean*: Denise Curtin
Members of Council
Alison Blake, Paddy Condon, Paul Connell, Yvonne Delaney, Iain Harrisson, Margaret Morgan, Margaret Pierse, Paul O Brien, Philip O Reilly

STANDING COMMITTEES:

Medical Ophthalmologists Committee
Chairman: Alison Blake
Members: Paddy Condon, Michele Fenton, Iain Harrison, Fiona Kearns, Bernadette McCarthy, Catherine McCrann, Margaret Morgan, Susan Mullaney, Margaret Pierse, Grace O' Malley John Smith, John Traynor and Garry Treacy

Finance, Policy and Professional Standards Committee
Chairman: Mark Cahill
Members: Honorary Officers

Manpower, Education and Training Committee
Chairman: Paul Connell
Members: Alison Blake, Denise Curtin, Anthony Cullinane, Yvonne Delaney, Gerry Fahy, Tim Fulcher, Marie Hickey-Dwyer, Patricia Logan, John Stokes, Conor Murphy, and Shauna Quinn

Scientific Committee
Chairman: Paul O Brien
Members: Marie Hickey Dwyer, Denise Curtin, Fiona Kearns and Eugene Ng

Public Affairs Committee
Chairman; Mark Cahill
Members: Alison Blake, Marc Guerin, Pat Logan, Darragh O Doherty, Kathryn McCreery and Garry Treacy,

Ethics Committee
Chairman; Paddy Condon
Louis Collum, Patricia McGettrick, Jeremy O Connor and Patricia Quinlan

LETTER FROM THE PRESIDENT

Dear Fellow College Members

I am delighted to welcome you all to Limerick for our 2014 Annual Conference. It seems no time since we gathered together in Killarney. It has been a very busy year since then. I would like to take this opportunity to thank Pat Logan for her continuing contribution to the ICO and for her support during this first year of my Presidency.

The Council members and Committee members have done Trojan work on your behalf throughout the year. I am very mindful that all of this is done on a voluntary basis and I would like to acknowledge their selfless commitment of both their time and energy to the ICO. I would like to encourage all members to consider coming forward for committee work and Council membership.

This year in particular, I would like to thank the members of the Manpower, Education & Training Committee for undertaking the significant work of inspecting all training posts. A very special word of thanks to Paul Connell Chairperson of the Manpower and Education Committee, Denise Curtin, Dean & Yvonne Delaney Vice Dean for all of their work in ensuring the inspections were a worthwhile endeavour. Thanks to all who contributed to the inspection teams including Pat Logan, Peter Tormey, Patricia McGettrick and Brid Morris and our overseas guests, Carmel Noonan from the UK and Peter Ringens from the Netherlands who helped give a very important external perspective to the inspection.

As President for the past 12 months I have worked hard to look after the best interests of the College, you the members and trainees.

We are at a particular cross roads in delivery of care to our patients. On the one hand, there are increasing demands on our expertise to deliver timely, professional and excellent care to our patients and on the other hand, to consider cost and the supporting role of Allied Health Professionals in the delivery of this care. Under my leadership throughout this year we have been addressing these issues.

Other aspects of the ICO's work is only possible with the support of many of our colleagues who advocate for members and patients across a range of issues such as education, health policy, professional standing and health economics. Thank you to all of our colleagues who attend countless meetings and discussions to ensure that our specialty continues to develop.

A special word of thanks to our colleagues who attend overseas meetings to represent our specialty at an international level, Denise Curtin and Alison Blake at the UEMS, Gerard O Connor at the EBO, Louise O Tole at the RCOphth and Pat Logan at the SOE.

Thank you also to our North American colleagues for their ongoing friendship, particularly Charlie Zacks & Mike Brennan

I would like to acknowledge & thank Prof Eilis McGovern and her colleagues in the HSE Medical Education and Training Unit for their ongoing support for the development of ophthalmology training in Ireland.

My sincere appreciation to our colleagues in other specialties who have worked with myself and the Council in addressing challenges that affect training and practice across medicine and look forward to continuing such collaborations across the post graduate training bodies and specialty organisations.

Thank you to our CEO, Siobhan Kelly who together with Ciara Keenan and Marian Scully looks after the College's best interests day to day.

And while I look forward to greeting you all here in Limerick it is with sadness that I remember our colleagues who won't be with us, Ray Niland and Peter Eustace. I look forward to marking Prof Eustace's contribution to training at a European Level during our 2015 meeting.

With Best Wishes

Marie Hickey Dwyer
President
Irish College of Ophthalmologists

May 2014

REPORT OF COUNCIL 2013-2014

Patricia Quinlan, *Honorary Secretary*

There have been four Council meetings: May 31st 2013, September 9th 2013, December 9th 2013, March 8th 2014.

The Council Members are

Patricia Logan, Paul Moriarty, Marie Hickey – Dwyer, Patricia Quinlan, Mark Cahill, Paddy Condon, Paul Connell, Denise Curtin, Yvonne Delaney, Alison Blake, Iain Harrison, Margaret Morgan, Paul O Brien Margaret Pierse and Philip O Reilly.

All Council members have attended the minimum required number of meetings

Changes in Council Membership

The Council terms of Philip O Reilly, Paul O Brien and Margaret Morgan have concluded. On behalf of all College members I would like to thank each of them for their contribution to Council and in particular for their commitment to the College Committees.

The new appointments to Council will be announced at the AGM.

EGM December 7th, 2013

An Extraordinary General Meeting of the College was held on Friday December 7th, 2013 to resolve a procedural error with the annual accounts that had been made during the AGM on May. The 2012 accounts were approved by members.

FINANCE, POLICY AND PROFESSIONAL STANDARDS COMMITTEE

Mark Cahill, *Treasurer*

At the close of 2013, the membership for the Irish College of Ophthalmologists stood at 190, subdivided into the following categories of membership: Ordinary, Affiliate, Senior, Life, Overseas

Membership Fees

The membership fees for the Irish College of Ophthalmologists for 2013 remained unchanged.

Ordinary members	€480.00
Affiliate members	€360.00
Overseas members	€200.00
Senior members	€160.00

The full audited accounts for the year ended 31st December 2013 have been circulated to all members and will be discussed during the AGM.

The ICO is a company limited by guarantee and the current Directors are: Patricia Logan, Philip Cleary, Marie Hickey Dwyer and Paul Moriarty.

Funding for provision of Specialist Training

There are currently 53 ophthalmic trainees in structured training programmes. The ICO receives funding for all BSTs and Registrars. Funding for Higher Surgical Training goes to the RCSI.

The HSE Medical Education & Training Unit committed to providing up to €226,700 in training grants to the College for the period July 2013- June 2014 to fund the provision of specialist training and associated costs. This funding is claimed retrospectively by the College based on vouched expenses incurred.

MANPOWER, EDUCATION & RESEARCH COMMITTEE

Paul Connell, *Chairman*

Committee Members: Alison Blake, Anthony Cullinane, Denise Curtin, Yvonne Delaney, Gerry Fahy, Tim Fulcher, Iain Harrisson, Marie Hickey-Dwyer, Dara Kilmartin, Patricia Logan, Conor Murphy, John Stokes and Shauna Quinn.

The committee met on three occasions in 2012-13; July 18th, November 23rd, February 15th.

It is with great pleasure that I report on what has been a very busy but rewarding year for the Manpower and Education Training Committee. I would like at the outset to express my sincere gratitude to all my fellow committee members and the college for their time, dedication and commitment. It is a time of great change both within the college and also driven by external forces, and though a difficult year in respect of certain issues, I do feel that we are progressing very well towards achieving clarification and transparency on certain issues. What follows is an itemized list of issues that arose during the year.

Trainee Representatives: It was agreed at the outset that trainee representatives would be welcome to attend the meetings beyond their individual reports to facilitate more active engagement in issues that may affect their training.

SpR Rotations: SpR interviews took place on 2 occasions during the year and 6 new trainees were appointed in total There has been an additional 2 posts allocated awarded to Sligo General Hospital and the Royal Victorian Eye and Ear Hospital in the context of the elimination of the gap years.

All trainees have been furnished with their complete 4.5 year timetables to allow planning in advance. Furthermore the mode of altering their training rotations has been supplied to facilitate active management of the roster and accurate planning. The timelines for application of fellowship have been clarified.

The first formal exit assessment bases on OSCE type examination process was conducted in December 2013 and was a great success. I would like to thank Pat Logan, Prof Conor Murphy and Donal Brosnahan who along with myself, were the inaugural examiners of this process. All candidates were successful.

Inspections: The BST/ HST were inspected in January 23rd/ 24th and all BST and HST posts were inspected. This was a mammoth under-taking and all units have been furnished with a report based on the inspection. External governance was assured by inviting overseas representation and the conduction of the inspection followed a similar format in all hospitals to ensure conformity and fairness. It is the role of the college to support units while simultaneously having an expectation on the commitment train.

Education Supervisors (ES); ES have been identified in each unit, have pre-defined roles and it was agreed that the ES will be the source of contact to the

Training Committee. This post will rotate over a 2 year period.

ICO/RCSI Advisory Committee: This body has reformed and the main remit is to provide a link between RCSI and the ICO in their educational roles and governance. It was agreed to meet bi-annually. The board is actively looking at streamlined training (8 yr program- no gap years) and also formalizing the role that the ICO plays in the HST education process and governance issues. The issue of training length and research is the subject of ongoing but productive discussion.

SCIENTIFIC COMMITTEE

Paul O Brien, *Chairman*

Committee Members; Denise Curtin, Marie Hickey-Dwyer, Fiona Kearns, Eugene Ng

Last year's annual conference was held in the Malton Hotel, Killarney from Wednesday 29th to Friday 31st of May. Last year's meeting saw the successful introduction of two new aspects to the annual programme: an education meeting for local GPs and an eye health information session for members of the local community. Both events worked well and will be a feature on this year's programme in Limerick also.

ICO/Novartis Research Bursary
Dr Michael O Rourke was the winner of the Bursary for his research project "Clinical Characteristics and Molecular Mechanisms in Acute Anterior Uveitis". Congratulations to Michael as he continues his work.

ICO Medals
Dr Michael O Rourke was the winner of the Barbara Knox medal at the 2013 Conference for his paper on 'The Dublin Uveitis Evaluation Tool (DUET)'

The winner of the Sir William Wilde Medal was Dr Caroline Baily for her poster on evaluating endothelial cell count loss.

Montgomery Lecture
The 2013 Montgomery Lecture was delivered by Professor Nancy Newman, LeoDelle Jolley Professor of Ophthalmology at Emory University in the US. The event which took place in the RCSI on December 7th was very well attended and the ICO was delighted to welcome our colleagues from Neurology who came to hear Nancy talk on "Ophthalmoscopy in the 21st century".

This year's lecture will be given by David Wong later in the year.

Mooney Lecture
The 2013 Mooney lecture was given by Gordon Plant, Neurologist at Moorfields Hospital in London on 'Trans-synaptic Degeneration in the Human Visual System'.

This year we welcome Prof Stephen Foster from Professor of Ophthalmology at Harvard University who will be a lecture on the "MERSI (*Massachusetts Eye Research and Surgery Institution*) Guidelines for a Preferred Practice Pattern for the Care of Patients with Recurrent or Steroid-Dependent Uveitis"

MEDICAL OPHTHALMOLOGISTS COMMITTEE

Alison Blake, *Chairman*

Committee Members: Paddy Condon, Michele Fenton, Iain Harrison, Fiona Kearns, Bernadette McCarthy, Catherine McCrann, Margaret Morgan, Susan Mullaney, Margaret Pierse, Grace O' Malley John Smith, John Traynor and Garry Treacy

The committee had three meetings during the year which were well attended.

My thanks, firstly, to Catherine McCrann for her safe steerage of the committee over the past three years. Thanks also to outgoing members for their contributions. Welcome to new Committee members Paddy Condon, Michele Fenton, Iain Harrisson and John Smith to the Committee

Meetings are timed to suit members and are often in conjunction with scientific meetings.

Medical Ophthalmology training is at an advanced stage of planning, and our thanks go to the Vice Dean Yvonne Delany for her hard work on this programme and to the Dean Denise Curtin for her support of the programme over many years. Trainees will attend peripheral clinics in future.

A sub committee will look at the variation in glasses provision across community clinics nationally and make recommendations to standardize same.

Thank you to Siobhan, Marian and Ciara for their support to the committee and to me during the year.

PUBLIC AFFAIRS COMMITTEE

Mark Cahill, *Chairman*

Committee members; Alison Blake, Pat Logan, Garry Treacy, Kathryn McCreery, Paddy Condon and Darragh O Doherty.

The Committee has met continuously over the past 12 months.

Ongoing Advocacy and Public Awareness Work

The Committee is continuing to actively advocate on behalf of the specialty and patients and to raise public awareness on the work of eye doctors. Ongoing contact both direct and indirect, is being maintained with the Department of Health & Children.

Ciara Keenan is continuing to work for the College developing public awareness and to capitalising on opportunities for the College in various health awareness campaigns. A public health session is being held to coincide with the Annual Meeting, together with an event for local General Practitioners.

The College will be actively engaging with CORU when the forthcoming legislation on the regulation of optometry comes into force.

The College has been an active partner in the National Coalition for Vision Health in Ireland and is engaging with the AOI and the patient advocacy groups.

The College is planning a health policy meeting on Medical Advertising Guidelines on September 24th. The meeting will be held in the RCSI and will include contributions from the specialty of dermatology and plastics. Key Health policy and decision makers and representatives from all relevant State agencies will be invited to attend.

DEAN OF POST GRADUATE EDUCATION AND TRAINING

Denise Curtin, *Dean*

In July 2013 an Induction Day for new BST trainees was held in the College and Trainees were given a 3 year training agreement with the College for specialty training years 1-3 (core training). Trainees will rotate between a minimum of two clinical sites, will sit the MRCSI, attend regular CAPA appraisals, attend the College training courses, be involved in simulator training and participate in the on-line programmes for school for Surgeons. In addition trainees are now doing the course in Human Factors and Patient Safety which is organised through RCSI.

The first meeting of the Advisory Committee in Ophthalmology was held in October 2013 at the request of HSE MET and the Medical Council. It was recommended in May 2013 that a formal inter training body structure/committee is developed to underpin the collaborative approach by the two training bodies, the ICO and the RCSI. The discussions are ongoing to review the allocation of the training fund between the two training bodies and the role of each training body in the training pathway.

As recommended by the Medical Council and HSE MET, the ICO was advised to develop its own inspection and accreditation process ensuring that all training posts utilised in Ireland for specialist training are fit for purpose. This inspection took place in January 2014 organised by Mr. Paul Connell, Chairman of the Training Committee.

The Surgical Training Programme has been clearly defined in line with all other surgical specialties as an eight year programme, to include the final year subspecialty training (three years core training BST and five years higher specialist training).

Basic specialty training will be common to both the specialty of Ophthalmology and Ophthalmic surgery for the first three years. During the third year trainees will in future be eligible to apply for the Higher Surgical Training Programme once they have been successful in the MRCSI from 2017.

It is recommended that all clinical sites have one training programme for medical ophthalmology year 4. At present the curriculum for this programme is under review. Trainees who do not access the higher surgical training pathway at the end of year 3 may do a further year at Registrar level to gain further surgical experience to become more competitive. In future trainees who have completed Year 4 and have not entered the higher training programme after 2017 will not be eligible to apply for SpR. This matter has been discussed and agreed with Prof. McGovern and Miss Mary Jo Biggs of HSE MET. The role of research; it is agreed that in future trainees will take leave of absence from the training programme to undertake a higher degree.

HSE MET has approved the following Year 1 intake numbers into Ophthalmology Specialist Training Programme from July 2014. BST – 10 posts, HST Ophthalmic Surgery – 4 posts,

an increase of 2 trainees. Specialist Training Programme in Ophthalmology Medical year 4 – 7 posts. The approval to proceed with these numbers is subject to the following conditions:

1. The standard of recruitment process is managed under the auspices of both the ICO and RCSI are maintained.

2. The principle of geographic distribution continues to be embedded and expanded in the specialist training continuum.

3. These numbers will be reviewed by HSE MET in July 2015 intake to review numbers both with a view to medical workforce planning and the ongoing development of the programmes evolve.

The expansion within the Higher Specialist Training Programme has been managed by means of upgrading existing funding Registrar posts in the public service. No new NCHD posts in Ophthalmology will be funded by HSE. This Programme has been signed off by the National Director of Acute Hospitals, Ian Carter on the understanding that the costs associated with such upgrades will be borne directly by the relevant acute clinical sites.

Interviews have taken place for both the SpR Programme and the BST Programme. Four new SpRs have been appointed.

Nine new BSTs have been recruited. An Induction Day will take place in early July.

CAPA appraisals for all trainees will be held in June and the format of the appraisals will be reviewed to focus on the curriculum, the required competencies each year of training to include workplace based assessment and clearly defined surgical log books goals. These appraisals in future will be held by year of training and not by hospital. Hospital based Clinical Directors have been appointed in each clinical site.

The European Board of Ophthalmology exam will be held in Paris next week and there are six examiners travelling from Ireland and eight trainees. The European Board of Ophthalmology acknowledges the major contribution made by Prof. Peter Eustace who co-founded the exam. The annual Peter Eustace Medal will be awarded in Paris for excellence in contributing to Medical Education and Training.

The UEMS is currently reviewing the number of specialists in Ophthalmology in Europe

The President and CEO of the Medical Council will meet with representatives of the Irish College of Ophthalmology in the near future to review the training programs the inspection reports and the PCS. A preliminary meeting took place this week.

I would like to thank in particular Siobhan Kelly for her support and encouragement during the last year, Paul Connell, Chairman of the Training Committee and Marie Hickey Dwyer, President of the College. I would like to thank all colleagues who have helped with the training courses and CAPA appraisals.

ETHICS COMMITTEE

Paddy Condon, *Chairman*

Committee members; Louis Collum, Patricia Quinlan, Jeremy O Connor and Patricia McGettrick

The Ethics Committee met on three occasions during the year. Projects undertaken were the production of the ICO Code of Ethical Practice and the ICO Standards for Laser Refractive Surgery for Ireland both of which have been approved by Council and circulated to members.

It is hoped that all members would sign up to the Code of Practice and that the document of Laser Refractive Standards be used by members to improve safety issues for patient care in refractive practices.

Patricia McGettrick has offered to run workshops for members on the professional and ethical aspects of the practice and these topics will be incorporated into the scientific and educational programme.

Members are asked to propose ongoing projects for the committee.

The Council and Members of the Irish College of Ophthalmologists appreciate the support of the following companies for College activities:

Alcon
Allergan
John Bannon & Co.
Bayer
Clarendon Medical
Eurosurgical
Grafton Optical
Hospital Services
KD Surgical
MEDA
MED Surgical
Merck Sharp & Dohme
Novartis
Nicox
Pamex
Pfizer
Raynor
Scope Ophthalmics
Sedena
Sigmacon
Topcon
Visioncare
Whelehan Surgicare
WMO Healthcare

Irish College of Ophthalmologists Annual Conference
Strand Hotel Limerick
Tuesday 13th – Friday 16th May

TUESDAY 13TH MAY
Exhibition Set-up from 3pm

7.30pm Ophthalmic Education Evening for General Practitioners
Miss Marie Hickey Dwyer
Consultant Ophthalmic Surgeon, University Hospital, Limerick

Mr Jeremy O Connor
Consultant Ophthalmic Surgeon, University Hospital, Limerick

Mr Philip O Reilly
Consultant Ophthalmic Surgeon, University Hospital, Limerick

Dr Catherine McCrann
Community Ophthalmic Physician, Limerick

DAY 1: WEDNESDAY 14th MAY

8.50am Welcome
Miss Marie Hickey Dwyer,
President Irish College of Ophthalmologists

8.55am Paper Session
Chair: Mr William Power,
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

8.55am Supracor (multifocal excimer laser in situ keratomilieusis) hyperopia and presbyopia correction: 3-month outcomes
Doyle F

9.01am The effect of pterygium excision on visual acuity and corneal astigmatism
Treacy PM

9.07am Audit of outcomes using multifocal IOLs for cataract surgery
Ellard R

9.13am Long-term results of intracorneal inlay (KAMRA) insertion for presbyopia correction
Igras E

9.19am Imaging of the retina in keratoprosthesis patients.
Duignan E

9.25am Two-year experience with multifocal intraocular implants in Galway
Vartsakis G

9.31am Q&A

9.40am Intraocular telescope surgery for ARMD -6 month follow up data
Stephenson K

9.46am Wide-field autofluorescense imaging to differentiate between retinoschisis and retinal detachment
Mongan AM

9.52am An audit of the safety and efficacy of the dexamethasone intravitreal implant (OZURDEX) in Irish patients with macular oedema.
Kennelly K

9.58am Outcomes of a shelved 20 G vitrectomy technique using Dahan infusion in primary retinal detachment surgery.
Doris JP

10.04am The ratio of focal lasers to intravitreal Bevacizumab injections conducted for diabetic maculopathy over a two month period in a Dublin hospital eye department.
Ní Mhéalóid Á

10.10am A 6 year audit of uveal fine needle aspirate biopsies performed in the Royal Victoria Eye and Ear Hospital
Thacoor D

10.16am Compliance with quality standards for diabetic retinopathy screening in the field.
Smith JJ

10.22am Audit of compliance with RCO and American Academy Plaquenil screening guidelines.
Gamble R

10.28am Q&A

10.40am Video Presentation
The History of LASIK
Producers
Prof Dan Z Reinstein, Timothy Archer, Marine Gobbe
London Vision Clinic

11.00am **Refreshment Break**

11.30am Ocular Infections Symposium
Chair: Mr Peter Barry
Consultant Ophthalmic Surgeon, Merrion Eye Clinic

Endophthalmitis and PCR
Prof Susan Kennedy
Consultant Histopathologist, Royal Victoria Eye & Ear Hospital

Endophthalmitis and anti-VEGF Injections
Mr Peter Barry
Consultant Ophthalmic Surgeon, Merrion Eye Clinic

Syphilis and Gonorrhoea - Re-Emergence of Old Diseases
Dr Susan Knowles
Consultant Microbiologist, Royal Victoria Eye & Ear Hospital

Followed by Q&A

1.00pm **Lunch**

2.00pm Poster Session
Chair – Dr Alison Blake
Community Ophthalmic Physician, Cavan General Hospital

Posters will be displayed throughout the conference. The session gives a short opportunity for the author to briefly summarise the abstract.

Descemet's stripping automated endothelial keratoplasty (DSAEK) in a patient with myotonic dystrophy: a case report
Fiorentini S

A rare cause of optic neuropathy
Fauzi F

The surgical management of macular hole.
McElnea E.

Autosomal dominant Retinitis pigmentosad due to a frameshift mutation in RP1 identified following next generation sequencing
Treacy M

A rare association of vitiligo and retinitis pigmentosa
Rahman N

An audit of the use of subretinal tPA in the setting of massive submacular haemorrhage.
Stephenson K

The role of peripheral dendritic cells in immune activation in anterior uveitis
O'Rourke M

Initial experience with creating a national early onset severe inherited retinal degeneration database
Saad T

Pediatric keratoprosthesis; The Irish experience
McAnena L

Paediatric adjustable strabismus surgery
Loane E

Undergraduate ophthalmology education in Ireland: A comparison with international guidelines and evaluation of doctor confidence in the management of ophthalmic conditions in the general medical setting
Mingyong L

iStent trabecular micro-bypass stent for primary open-angle glaucoma: results of four year follow-up.
McNally O

Genetically directed targeted clinical surveillance in juvenile open angle glaucoma
Armstrong, D

Treatment response of refractory neovascular age related macular degeneration following switch to intravitreal alfibercept (Eylea) from ranibizumab (Lucentis).
Bafiq R

Hypertrophic pachymeningitis and bilateral optic neuropathy in ANCA negative granulomatosis with polyangiitis – always check the scans
Hendrick L

Ocriplasmin in the treatment of vitreomacular traction and macular holes
Hendrick L

Initial experience of treatment with intravitreal aflibercept in a public hospital in Ireland
Obied O

A Rare Case of spontaneous enophthalmos
Moran S

Clinical presentation of familial exudative vitreoretinopathy: a case series
Connolly S

A case of herpes zoster ophthalmicus with occulomotor nerve involvement.
Connolly S

An unusual case of bilateral papilloedema
Ní Mhéalóid Á

Risk of progression to sight threatening retinopathy in R1M1, R2M0, R2M1 cases retained within a screening program in primary care
Smith J

Screening status of diabetic patients presenting to eye casualty with vitreous haemorrhage
Shirley K

The hospital paediatric referrals to a tertiary ophthalmic centre- A prospective study of both urgent and clinic referrals.
Chakrabarti M

Three-year visual outcomes following laser photocoagulation of diabetic macular oedema
Parker J

Oculofaciocardiodental syndrome: a description of novel ophthalmic phentotypic features
Napier M

3.30pm **Refreshments**

4.00pm ICO Annual General Meeting
Chair Miss Marie Hickey Dwyer
President, Irish College of Ophthalmologists

For ICO Members only

DAY 2: THURSDAY 15TH MAY

9.00AM Uveitis Symposium
Chair: Prof Conor Murphy
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

Infectious Uveitis - Pearls and Pitfalls
Prof Conor Murphy
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

When to Cut in Uveitis
Mr Dara Kilmartin
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

Birdshot Retinochoroidopathy
Prof Stephen Foster
Professor of Ophthalmology, Harvard Medical School

11.00am Refreshments

11.30am Keynote Talk
Minding your Mental Health in a Stressful World
Prof Jim Lucey
Medical Director St Patrick's Hospital, Dublin

12.15pm Mooney Lecture
MERSI Guidelines for a Preferred Practice Pattern for the Care of Patients with Recurrent or Steroid-Dependent Uveitis
Prof Stephen Foster
Massachusetts Eye Research and Surgery Institution

1.00pm Lunch

2.00pm Workshops
Workshops run from 2-5pm with a refreshment break at 3.30pm

Train the Trainers – Skills for Educational Supervision
Miss Melanie Corbett
Consultant Ophthalmologist, Western Eye Hospital
Chairman, Training the Trainers Subcommittee
Royal College of Ophthalmologists

This workshop has been prepared in line with HSE MET requirements for trainers

Trainee Workshop
This workshop will address a range of topics for trainees including career pathway, progression and opportunities

2.30pm **Resuscitation Workshop**
Assessment and Management of the Patient in an Emergency Situation
Dr Cormac Mehigan
Consultant Emergency Medicine, University Hospital, Limerick

6.00pm Public Eye Health Information Session
Miss Marie Hickey Dwyer
Consultant Ophthalmic Surgeon, University Hospital, Limerick

Dr Alison Blake
Community Ophthalmic Physician, Cavan General Hospital

Dr Garry Treacy
Community Ophthalmologist, Dublin & Wicklow

Dr Patricia Quinlan
Consultant Ophthalmologist, Blackrock Clinic

DAY 3: FRIDAY 16th MAY

9.00am Paper Session
Chairs: Mr Donal Brosnahan
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital
Mr Ian Flitcroft
Consultant Ophthalmic Surgeon, Mater Hospital

9.00am A new method for the measurement of microRNA and microRNA related targeted genes in conjunctival epithelial cells in Sjogren's syndrome patients.
Pilson Q

9.06am The RVEEH non-infectious anterior uveitis cohort
O'Rourke M

9.12am Rho kinase inhibitors in modulating the response of human trabecular meshwork cells to hypotonic stress.
Pokrovskaya O

9.18am The Role of methylation in regulating the expression of TGFβ in lamina cribrosa and trabecular meshwork cells in glaucoma.
Wallace D M

9.24am A molecular analysis of human lamina cribrosa and trabecular meshwork cell behaviours as determined by the surrounding extracellular matrix
McNally S

9.30am Q&A

9.40am Glaucomatous Optic Neuropathy Evaluation (GONE) Project: The effect of monoscopic versus stereoscopic viewing conditions on optic nerve evaluation.
O'Neill E

9.46am The association between macular pigment optical density and glaucoma-related structural and functional parameters
Siah WF

9.50am Retinal nerve fibre layer analysis by cirrus OCT in vigabatrin recipients
Hughes E

9.56am Q&A

10.04am Plusoptix photoscreening for potentially amblyogenic conditions in an Irish patient cohort
Ramasamy P

10.10am Elasped time for accommodative adaptation to first spectacle prescription in untreated amblyopic children.
Chen S

10.16am Forceps delivery-related ocular injuries; a case series
McAnena L

10.24am Q&A

10.30am Proficiency-based pre-training curriculum in phacoemulsificaiton surgery reduces the learning curve Of novice trainees on patients.
Lee P

10.36am Training experience and perceived challenges in training in phacoemulsification cataract surgery – a national trainee survey
Collins N

10.42am Block surgical training for cataract surgery
Stokes J

11.00am **Refreshments**

11.30am Eliminating Blinding Trachoma in Southern Ethiopia
Mr Donal Brosnahan
Director, Orbis

11.40am Sterile Inflammation and Novel Therapeutic Targets for Age-Related Macular Degeneration
Dr Matthew Campbell
Research Assistant Professor Trinity College Dublin
Head of the Neurovascular Genetics Research Group, TCD

12.00pm ICO/Novartis Bursary
Clinical Characteristics and Molecular Mechanisms in Anterior Uveitis
Dr Michael O Rourke
Research Fellow, Royal Victoria Eye & Ear Hospital

12.10pm New Technology Symposium
Chair: Mr Paul O Brien
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

Ultrasound Biomicroscopy & Anterior Segment OCT
Mr Noel Horgan
Consultant Ophthalmic Surgeon, Royal Victoria Eye & Ear Hospital

OPTOS wide field Angiography
Mr Paul Connell
Consultant Ophthalmic Surgeon, Mater Hospital

Multi-Spectral Imaging and Autofluorescense
Mr Eugene Ng
Consultant Ophthalmic Surgeon, Whitfield Clinic

1.00pm Medal Presentation

Conference concludes

WEDNESDAY PAPER SESSION

Supracor (multifocal excimer laser in situ keratomilieusis) hyperopia and presbyopia correction: 3-month outomes

Doyle F [1], Kinsella F [1,2]
1. Galway University Hospital, Galway.
2. Galway Clinic Hospital, Galway

Objectives: To investigate safety and outcomes of the corneal laser in situ milieusis procedure (LASIK), Supracor, used to treat hyperopic presbyopia.

Methods: Bilateral LASIK using a multifocal corneal ablation profile was performed on a total of 64 eyes from 32 consecutive patients. All patients underwent follow-up examinations for a minimum of 3 months postoperatively. The primary outcome measures were safety, efficacy in terms of corrected distance visual acuity (CDVA) and uncorrected reading ability, and the need for one or more enhancement procedures.

Results: Sixty-four eyes (32 patients) were treated. All surgeries were uneventful. The corrected distance visual acuity was 0.0 or better in 36 eyes with 100% maintaining a CDVA of 0.1 or better. Ninety-seven percent had an uncorrected reading ability of N8 or better. At 3 months postoperatively, 16% of eyes lost 1 line and 3% of eyes lost 2 lines of corrected distance visual acuity (CDVA). 17% of eyes required a retreatment procedure.

Conclusions: Near visual acuity outcomes following the Supracor presbyopia procedure were good. However, there was loss of one or more lines of CDVA in 19% of eyes. Further strategies must be devised to reduce the retreatment rate.

The effect of pterygium excision on visual acuity and corneal astigmatism

Treacy M, Igres E, Murphy C, Power W, O'Brien P
Royal Victoria Eye and Ear Hospital, Dublin

Objectives: Pterigium is an abnormal fan-shaped growth of fibrovascular tissue over the cornea that arises from the conjunctiva. Patients complain of poor cosmesis, discomfort and blurring of vision. This was a prospective study to investigate the effect of pterygium surgery undertaken in the RVEEH on visual acuity and corneal topography.

Methods: From July 2013 the patients listed for pterygium surgery by one consultant surgeon (P.O'B.) in the RVEEH had corneal topography measured with the Pentacam topographer (Oculus, Germany) prior to surgery and a repeat measurement was taken at the postoperative visit. From January 2014 the pterygium patients of 2 other consultant surgeons (W.P. & C.M.) were included in the study. In addition to topography preoperative and postoperative visual acuity was also measured.

All patients underwent surgery using a similar, sutureless method; the pteryigium was excised from the cornea and a conjunctival autograft was glued over the defect using Tiseel tissue glue (Baxter Healthcare Corporation, USA). The patients were reviewed approximately 4-8 weeks postoperatively.

Results: There were 19 patients in total with 19 pterygia excised On average, the visual acuity increased by 1.2 lines; the mean pre-op VA was 0.16 LogMAR and the mean post-op VA was 0.04 LogMAR (P=0.012). The pre-op central corneal curvature tended to be flatter than post-op. The mean corneal curvature was 40.49 dioptres pre-op and 43.32 dioptres post-op (P=0.0002). Furthermore, corneal astigmatisim reduced from 5.66 dioptres to 1.88 diopters (P=0.0005).

Conclusions: Pterygia cause significant distortion of the refractive surface of the cornea resulting in blurring and reduction in visual acuity. Pterygium surgery can improve visual acuity by reducing corneal distortion. This, in addition to the more obvious cosmetic problem, should be taken into account when listing patients for surgery.

Audit of outcomes using Multifocal IOLs for cataract surgery

Ellard R [1], O'Brien P [2], Power W [2]
[1] UCD Medical School, Dublin
[2] Blackrock Clinic, Dublin

Objectives: To determine the post-operative outcomes in patients undergoing cataract surgery and implantation of either a multifocal (Oculentis MPlus) or multifocal toric (Oculentis MPLus Toric) IOL by 2 surgeons (POB, BP) in a private practice between November 2010 and January 2014.

Methods: Patients with significant cataract resulting in a reduction in vision and keen for good unaided distance and near acuity were included in the study. Post-operative uncorrected distance and near acuity was documented. Post-operative complications were recorded as was the need for IOL exchange.

Results: Post-operative results from 151 eyes of 79 patients implanted with multifocal IOLs following uncomplicated cataract surgery were included in this retrospective audit. There were 101 eyes of 52 female patients (49 bilateral and 3 unilateral) and 50 eyes of 27 male patients (23 bilateral and 4 unilateral) included in this review.

11 eyes (in 8 patients) were implanted with toric multifocal IOLs (Range of cylinder; +1.3DC to+5.14DC, Mean +2.73DC). Unaided distance acuity was documented in 149 eyes. 71 eyes were 6/6 or better, 112 eyes were 6/7.5 or better, 138 eyes were 6/10 or better, 148 eyes were 6/15 or better. 1 eye was 6/36 unaided but improved to 6/6 with a -2.5DS lens. Unaided near acuity was documented in 137 eyes. 66 eyes were N5, 123 eyes were N6 or better, 135 eyes were N8 or better, 137 were N12 or better.

Only 1 multifocal IOL needed to be explanted and exchanged for a monofocal IOL due to patient dissatisfaction with their quality of vision (despite UCDVA of 6/7.5 and UCNVA of N6). They achieved 6/6 UCDVA after uncomplicated IOL exchange.

Conclusions: Multifocal IOL insertion after cataract surgery is associated with excellent post-operative unaided distance and near visual acuity and a very low explantation rate in carefully selected patients.

Long-term results of intracorneal inlay (KAMRA) insertion for presbyopia correction

Igras E [1], Power W [1 2], O'Brien P [1 2] .
[1] Royal Victoria Eye and Ear Hospital, Dublin
[2] Eye Laser Clinic, Blackrock Clinic, Dublin.

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Objectives: To evaluate the long-term efficacy and safety of intracorneal inlays (KAMRA) in presbyopic, phakic patients.

Methods: We conducted a retrospective chart review of all patients who underwent LASIK with monocular intracorneal inlay insertion (KAMRA) in the non-dominant eye for presbyopia. The study included emmetropic, hypermetropic and myopic presbyopic patients aged 45-60 years of age, attending a single Irish eye laser clinic between January 2012 and March 2014. All those included had a comprehensive eye examination including anterior segment examination, intraocular pressure measurement, dilated fundoscopy and assessment of the tear film. Preoperative examination included manifest refraction (except at 1-day), uncorrected and best corrected visual acuity (VA; distance and near). Distance VA was recorded using the Snellen chart, near by the N-chart. Efficiency was determined using binocular and monocular uncorrected distance and near VA. Postoperative follow-up assessments were scheduled at 1-day, 1-week and 1,3,6, and 12-months. Exclusion criteria were previous ocular surgery, anterior or posterior segment disease or degeneration, and any type of immunosuppressive disorder. All adverse events were recorded.

Results: In total, 139 patients were available, 81 females and 58 males. The mean age of the sample was 56.6 years (range 44 to 67). Apart from refractive error, none of the eyes included had additional ocular pathology. Mean (+/- standard deviation) preoperative UNVA was 0.17 (+/- 0.08), (N24) in the implanted eye. Mean preoperative UDVA was 0.54 (+/- 0.25), (Snellen chart equivalent 6/12), mean BCDVA was 0.99 (+/-0.05), (Snellen chart equivalent 6/6). Mean preoperative manifest refraction spherical equivalent was 1.28 (+/- 0.87). The inlay was implanted in the left eye in 101 patients (72.7%). After intracorneal inlay implantation mean UNVA improved to 0.57 (+/-0.08),(N6) at one month, further increasing to 0.6 (+/-0.07),(N5) by one year. Post-op mean UDVA was 0.67 (+/-0.15), (6/9.5) at one month, improving to 0.76 (+/-0.16) (6/7.5) by one year. Median BCDVA was 0.88 (+/-0.12) at one month, increasing to 1.0 (+/-0.08), (6/6) by one year.

Refractive stability was very good with only 6% of patients experiencing a significant hyperopic shift at six months compared with 4% by one year. There was no loss of BCDVA for 83.78% of patients at one year. One line gain was recorded for 5.41 % and one line loss was recorded for 10.81% at 12 months. None lost two or more lines of best-corrected visual acuity by 12 months. There were no intraoperative complications and no adverse events noted during by one year. Two out of 139 (1.4%) intracorneal inlays were explanted during follow-up, one due to lack of adaptation, one for cosmetic reasons. Their distance vision post removal of the inlay returned to pre-treatment distance visual acuity.

Conclusions: Intracorneal inlay implantation is a safe, effective and reversible procedure for treatment of presbyopia.

Imaging of the retina in keratoprosthesis patients

Duignan E, Power W.
Royal Victoria Eye and Ear Hospital, Dublin.

Objectives: Keratoprosthesis patients are at a high risk of fundal pathology including glaucoma (in up to 75% of patients) and retinal detachment. Imaging of the posterior segment is important, especially as digital palpation is the method relied upon to evaluate the intraocular pressure. We evaluated the use of non-mydriatic ultra-wide-field scanning laser ophthalmoscopy (Optomap) along with optical coherence tomography (OCT) to image the fundi of 9 keratoprosthesis patients.

Methods: The fundi of 9 patients were prospectively imaged in the outpatient department. Of these, 8 were type 1 Boston keratoprostheses and there was one type 2 Boston keratoprosthesis. Nine patients underwent Optomap fundal imaging, of which 8 had a fluorescein angiogram. One patient was unsuitable for further imaging with angiography due to poor image quality secondary to a retro-prosthetic membrane. Three patients underwent OCT imaging.

Results: Retro-prosthetic membrane was the most common reason for inability to image the fundus. Four patients were excluded from the imaging study due to the presence of a severe membrane. Patient co-operation is vital in this setting as the camera must point straight through the centre of the keratoprosthesis optic, which is longer in the type 2 Boston keratoprosthesis. An epiretinal membrane was identified in one patient on OCT and Optomap fundal imaging. A wide-angle fundal image could not be obtained in one patient due to retro-prosthetic membrane, though a 50° angle image was obtained.

Conclusions: Optomap fundal imaging can provide wide-angle images of the retina in keratoprosthesis patients, though the biggest obstacle to imaging is retro-prosthetic membrane. OCT can also be performed through the keratoprosthesis optic.

Two-year experience with multifocal intraocular implants in Galway

Vartsakis G, Kinsella F.
University Hospital Galway

Objectives: A retrospective, surgical case-control study was carried out looking at the efficacy of multifocal intraocular lenses implanted by a cataract and refractive surgeon in the area of Galway, from January 2012 to November 2013.

Methods: Surgical data of all patients implanted with multifocal intraocular lenses were analysed and the following were recorded; age and previous ocular history, pre and post-operative visual acuity, pre and post-operative refraction, implant types and powers used, perioperative complications and finally need for postoperative corneal refractive treatment to correct residual spherocylindrical error.

Results: One hundred and forty-nine eyes of eighty patients (50 females) were included in the study. Age ranged from 37 to 77 (mean age 63 years). 80,5% of the eyes were hypermetropic, 40,3% were refracted with a spherical error between +1 and +2 dioptres and 13,4% more than +4 dioptres. A cylindrical error was found in 83,2% of the eyes and in 67,7% it was equal to or less than 1 dioptre.17,4% of the eyes were myopic. Best correct pre-operative distance visual acuity was 6/6 in 53% of the eyes, whereas only 22,1% of the eyes had BCVA equal to or less than 6/12. TECNIS® Multifocal and AcrySof® IQ ReSTOR® were the most commonly implanted multifocal lenses and 31 eyes required toric multifocal implants. 47,3% of the eyes achieved post-operative 6/6 distance visual acuity and good near vision without spectacle correction, while 88,5% had a best corrected post-operative visual acuity equal to or better than 6/7,5 (minimal residual refractive errors included).

Only seventeen eyes (11,5%) didn't reach visual acuity better than 6/9 (2 were amblyopic,1 had previous vitrectomy for retinal detachment,1 had previous cryoretinopexy and 6 had pre-operative refractive error greater than 4 dioptres). 118 of the implanted eyes (80,3%) needed no spherical correction and in 112 eyes (76,2%) zero cylindrical correction was achieved in the postoperative period. Intraoperative complications were encountered in only 2 cases (0,013%- zonular dehiscence and posterior capsule rupture) and had no effect in the final visual outcome (visual acuities of 6/6 and 6/7.5 respectively). Up to now 3 patients have been listed for LASIK corneal ablation.

Conclusions: Multifocal intraocular implants, growing in popularity among surgeons, are a safe option providing good near and distance visual acuity especially for patients seeking spectacle independence. Their use has opened the way to refractive lens exchange as a significant number of patients has no vision-impairing cataracts. Further analysis is needed to record the final percentage of patients needed additional corneal ablation and any halos or glare phenomena experienced by the patients.

Intraocular Telescope Surgery for ARMD -6 month follow up data

Stephenson, K. Keegan, D. Meynet, G.
Mater Private Hospital

Objectives: To follow up on the use of the CentraSight Implantable Miniature Telescope (IMT) for the treatment of end stage age related macular degeneration in the Irish population. Update with 6 month results.

Methods: The ARMD patients of one consultant in the Mater Private Hospital were screened for eligibility. Those with geographic atrophy or stable disciform scar, who were phakic were selected. Motivated patients without any limiting medical co-morbidities were shortlisted for the procedure. Pre-operatively, an external telescope simulator was used to confirm surgical candidates.
Post-operatively, a program of visual rehabilitation with a low vision specialist optometrist was instigated, using exercises to encourage use of the IMT.

Results: Five patients underwent IMT implantation between March 2013 and March 2014. One developed recurrence of wet ARMD and required further anti-VEGF treatments, without loss of BCVA. Four patients noted improvement in BCVA in keeping with the IMT002 study.

Conclusions: IMT surgery has been proven beneficial in meticulously selected patients with severe visual loss secondary to ARMD. It does not preclude ongoing intravitreal injections, if necessary, but a pre-operative period of stability lasting 6 months is recommended. There is a rigorous pre-operative assessment and post-operative rehabilitation program to be considered but there are significant benefits for these patients with distance and near vision.

Wide-field autofluorescense imaging to differentiate between retinoschisis and retinal detachment

Mongan AM [1], Tay MC [1], Mullaney P [1], Quinn S [1], Ng E [2]
[1] Department of Ophthalmology, Sligo General Hospital,
[2] Institute of Eye Surgery, Waterford

Objectives: To characterize the wide-field autofluorescence pattern in eyes with retinoschisis and retinal detachments

Methods: Wide-field autofluorescence images (200Tx, Optos, UK) from 12 consecutive eyes of 7 patients with retinoschisis confirmed on optical coherence tomography, has characteristic snowflakes or both were obtained. These were compared to wide-field autofluorescence images of 15 eyes with retinal detachments. A variety of retinal detachments were imaged. These included chronic and acute rhegmatogenous retinal detachments, tractional retinal detachments, serous retinal detachments and retinal breaks with a cuff of subretinal fluid.

Results: The autofluorescent signals from all eyes with retinoschisis were either iso or slightly hypo-reflective (equally bright or slightly dark) when compared to surrounding normal retina. In contrast, all recent retinal detachments demonstrated hyper-reflective signals (brighter) when compared to surrounding attached retina. A thick hyper-reflective band at the junction between attached and detached retina was seen in chronic retinal detachments. However, peripheral to this hyper-reflective band, the autofluoresent signals were hypo-reflective. These findings suggest that autofluorescent reflections are derived from the retinal pigment epithelium (RPE) and outer retinal- RPE adhesion is a requisite for physiological RPE function.

Conclusions: Chronic far peripheral retinal detachments without snowflakes can be difficult to distinguish from retinoschisis. Wide-field autofluorescence imaging is a non-invasive, objective and simple technique to differentiate retinoschisis from retinal detachments. Chronic far peripheral retinal detachments without snowflakes can be difficult to distinguish from retinoschisis. Wide-field autofluorescence imaging is a non-invasive, objective and simple technique to differentiate retinoschisis from retinal detachments.

An audit of the safety and efficacy of the dexamethasone intravitreal implant (OZURDEX) in Irish patients with macular oedema.

Kennelly K [1], Keegan D [1,2].
[1] Mater Misericordiae University Hospital, Dublin
[2] Mater Private Hospital, Dublin

Objectives: The Geneva Study demonstrated that intravitreal dexamethasone implants reduce the risk of vision loss and improve vision in eyes with macular oedema secondary to branch and central retinal vein occlusion (BRVO and CRVO)[1]. This audit was undertaken to establish the safety and efficacy of such implants in the management of macular oedema in an Irish cohort.

Methods: A retrospective chart review was undertaken of all patients who received intravitreal dexamethasone implants by a single surgeon between September 2010 and February 2014. Demographic data, diagnosis, duration of symptoms, past medical and past ophthalmic histories, visual acuity (VA, EDTRS letters and Snellen equivalent), intraocular pressure (IOP), central retinal thickness (CRT), lens status and adverse events were recorded at baseline and at 1, 3, 6, 12 and 24 months post-implantation. Unless otherwise stated, data are presented as mean ± standard deviation.

Results: 20 Irish Caucasian patients (11 female, 9 male) were treated at a mean age of 69.5 years (range 59-86 years). 6 patients received multiple (n=2-4) implants. The commonest causes of macular oedema were BRVO (50%) and CRVO (40%). Off-label aetiologies were pseudophakic cystoid macular oedema (5%) and post-trabeculectomy hypotony maculopathy (5%). Mean duration of symptoms was 30 months (range 5-96 months). Mean follow-up was 14 months (range 3-25 months). 50% of eyes (n=10) had preceding pathology in the treated eye: previous BRVO (n=2), diabetic maculopathy (n=2); macular hole repair (n=2); epiretinal membrane (n=2); previous CRVO (n=1); and amblyopia plus cataract extraction with anterior chamber intraocular lens (ACIOL) implantation (n=1).

Mean baseline VA was 50±18 letters (6/30). The proportion of eyes with ≥ 15 letters gained was 22% at Day 30, 19% at Day 90, and 7% at Day 180. The proportion of eyes with ≥ 15 letters lost was 6% at Day 30, 13% at Day 90, and 7% at Day 180. Mean baseline CRT was 445±152μm. Mean decrease in CRT was 86±68μm at Day 90 and 3±194μm at Day 180.

60% of patients suffered at least 1 ocular adverse event: 50% of phakic patients required cataract surgery within 2 years, at a mean of 12 months post-dexamethasone implantation. 30% developed raised IOP that was controlled in all cases with topical IOP-lowering agents. 20% developed a subconjunctival haemorrhage during the dexamethasone implantation. One patient with an anterior chamber intraocular lens developed corneal decompensation following migration of the dexamethasone implant into the anterior chamber.

CRT of the eye with hypotony maculopathy decreased from 537µm at baseline to 344µm at Day 90, but VA remained at 6/60 during 12 months follow-up and the IOP did not rise. The eye with pseudophakic cystoid macular oedema did not gain vision or reduce central retinal thickness during 6 months follow-up. For those eyes that received multiple dexamethasone implants the mean interval was 7 months; 67% developed raised IOP requiring IOP-lowering drops; and 80% of phakic eyes had cataract surgery during follow-up.

Conclusions: This real world audit found inferior beneficial effects and higher rates of ocular adverse events compared to the results in the Geneva study[1]. This is likely due to broader inclusion criteria (particularly the inclusion of patients with previous ocular pathology), longer duration of symptoms before treatment, off-label use and longer follow-up. Intravitreal dexamethasone implants improved vision and decreased CFT in some patients with macular oedema following BRVO and CRVO. However, the effect was temporary and often required multiple injections to maintain the beneficial effect. Ocular adverse events were common but usually treatable. Particular caution should be taken in patients with ACIOLs due to the risk of implant migration.

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Outcomes of a Shelved 20 G Vitrectomy technique using Dahan infusion in primary retinal detachment surgery.

Doris JP
Royal Victoria Eye and Ear Hospital, Dublin

Objectives: Assess outcomes of a shelved 20G vitrectomy technique for primary retinal detachment surgery.

Methods: Prospective assessment of 64 consecutive primary retinal detachments using above technique from January 2013 to January 2014 with 3 months follow up. No exclusions.

Results: Primary retinal detachment outcomes following 3 months follow up.
54 out of 64 cases attached at 3 months follow up (84% primary attachment rate).
Visual acuity outcomes.
34 patients (53%) with 6/12 or better vision.
46 Patients (72%) with 6/24 or better vision.
55 patients (86%) with 6/120 or better vision.
Analysis of the causes of primary failures.

Conclusions: 20G vitrectomy with a shelved sclerotomy technique using a Dahan infusion is a superior technique to traditional 20G vitrectomy. The shelved incisions offer a protection from intraoperative hypotony and retinal incarceration. The technique is comparable to 23G.

The ratio of focal lasers to intravitreal Bevacizumab injections conducted for diabetic maculopathy over a two month period in a Dublin hospital eye department.

Ní Mhéalóid Á, Keegan D, Connell P.
Mater Misericordiae University Hospital, Dublin

Objectives: To quantify the number of patients who underwent focal laser treatment and intravitreal Bevacizumab injections for diabetic macular oedema (DMO) over a two month period. To determine the ratio of laser treatments to injections.

Methods: Retrospective analysis, which involved the collection of a list of all patients who underwent laser treatment and intravitreal injections over a two month period. Assessment of each patient's optical coherence (OCT) scan and fundus fluroescein angiography scan to determine the presence or absence of DMO. This category was further subdivided into non-centre involving clinically significant macular oedema (CSMO) and centre involving DMO (CIDMO). Breakdown of the ratio of laser treatments to injections. Literature review of current clinical trends and recommendations.

Results: A total of 29 patients underwent focal laser treatment: 28 for non-centre involving CSMO, 1 for branch retinal vein occlusion (BRVO). 388 intravitreal injections were carried out: 238 for wet age-related macular degeneration (AMD), 61 for vein occlusion, 2 had triamcinolone injections, 81 for CIDMO; 65 eyes injected, 13 of which had multiple injections. 8 patients had both eyes injected. 6 miscellaneous. The Laser: injection ratio was 1:2.32

Conclusions: DMO is a leading cause of visual impairment in patients with diabetic retinopathy[1]. The Early Treatment of Diabetic Retinopathy Study (ETDRS) was the first study to provide a treatment paradigm for DMO using focal laser therapy as a method of reducing the risk of moderate vision loss in patients with CSMO. Recent studies have demonstrated that intravitreal anti-vascular endothelial growth factor (VEGF) injections, either as monotherapy [1,2,3,4] or when combined with laser treatments [1,2,5] provide superior visual acuity and reduced residual oedema. Our results show a move towards the increasing use of intravitreal anti-VEGF injections which is likely due to a higher prevalence of CIDMO compared with non-centre involving CSMO.

References

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A 6 year audit of uveal fine needle aspirate biopsies performed in the Royal Victoria Eye and Ear Hospital

Thacoor D, Horgan N
Royal Victoria Eye and Ear Hospital, Dublin.

Objectives: Fine needle aspirate biopsy (FNAB) is a minimally invasive procedure used to investigate atypical uveal lesions. Cells are collected directly from the tumour bed using a small gauge needle under indirect ophthalmoscopic guidance. The sample is then processed for cytology, immunohistochemistry and genetic analysis. The aim of our audit was to review all uveal fine needle aspirate biopsies performed in the Royal Victoria Eye and Ear Hospital and compare our results with those of similar audits in other centres.

Methods: All uveal FNAB performed between Sept 2008 and Jan 2014 by a single surgeon were analysed. Data was retrospectively collected from clinical files and pathology reports. Approach (transvitreal/ transcleral) gauge of biopsy needle, yield and histopathological results were recorded.

Results: Our cohort consisted of 19 patients with an average age of 63.8 years. 17 FNAB were performed via a transvitreal approach, 1 via a transcleral approach (dense vitreous haemorrhage) and 1 iris lesion was biopsied via a transcorneal approach. 84% were performed using a 25G and 16% with a 27G needle. 74% of biopsies were diagnostic and 5 cases were diagnosed clinically in the absence of conclusive cytological analysis. 63% of cases were confirmed malignant melanomas, 26% were metastatic lesions and 11% were non neoplastic (astrocytoma and peripheral exudative haemorrhagic chorioretinopathy). Our yield was comparable to those in larger centres.

Conclusions: Although most uveal lesions can be diagnosed clinically, FNAB is particularly useful in ambiguous cases. Performed by an experienced surgeon, it has high diagnostic accuracy. FNAB is also increasingly used for genetic analysis and prognosis of uveal melanomas.

Compliance with Quality Standards for Diabetic Retinopathy Screening in the Field.

Smith J
Foresight Eye Care /HSE Dublin North East Diabetes Watch Program

In October 2013 a set of quality standards for the newly established diabetic retinopathy screening program for Ireland were published on line. Little attention has been paid to these quality standards to date but as the national screening program becomes established adherence to these standards will be essential to ensure that the program is functioning adequately. Foresight Ltd. had provided retinopathy screening for people with diabetes in the HSE Dublin North East region from 2006 -2013 until its contract was terminated with the establishment of the national retinopathy screening program under the auspices of the National Screening Service(NSS). The results of the 2013 screening cycle undertaken between March and August of that year were used as the basis for this audit which examines the compliance with the quality standards subsequently published later that year.

Identification of Cohort/Call Recall Process: All new clients will be invited to participate in the screening program within 1 month of the program being notified of eligibility. Foresight undertook screening on 1466 people in the second quarter of 2013 with the remaining 341 seen in the third quarter. This indicates a capacity to screen 6000 people per annum using the existent staff.

To maximise uptake: To maximise the number of invited persons receiving the test the proportion of those invited to screening who attend and have a satisfactory outcome*. 70% Foresight screened 1807 out of 1941 referred for screening =93% attendance with a satisfactory outcome in 99% of cases i.e. a retinopathy grade was issued to the patient and GP in all but 5 cases where the patient failed to attend recall appointment despite being offered two opportunities to attend. Out of 1807 who attended for screening, 221 of those screened used slitlamp as first line means of screening.

To maximise performance of screening test: To ensure photographs are of adequate quality. Percentage of clients where a gradable digital image cannot be obtained. 7% total minimum standard but with the aim of achieving between 2.5 and 6.3% ungradable.

Foresight 37/1588= 2.3% unassessable following photography.(Foresight does not invite to photography screening patients who had been previously identified as having failed photoscreening but invites them to slitlamp biomicroscopy as a first line screening mechanism thereby reducing the incidence of unassessable images being obtained).

To minimise harm: To ensure timely consultation for all screen-positive clients (those with referable retinopathy) Time between notification of positive test and consultation. Urgent (R3aM0, R3aM1, Age-related Macular Degeneration*). 1a. 60% ≤ 12 business days Foresight had 17 urgent cases of whom only 1 was seen in 12 days. There were 12 others seen in 60 days or less ie 75% were seen <60 days. Routine (R2M0, R2M1, R1M1, R3sM1, R3sM0, non-diabetic 70% ≤ 78 business days 95% <108 business days Foresight had 56 routine cases. 49 out of 56 or (88%) were seen <78 days and 100% were seen <108 business days Range 12-100 days

To minimise harm: To follow-up screen positive clients (those with referable retinopathy) (failsafe) All screen positive clients who do not attend for further assessment/treatment are contacted by the program and an outcome recorded for each.
Foresight has 100% follow-up on these cases.

To minimise harm: To ensure timely slit lamp biomicroscopy assessment of clients recorded as Ungradable-Maximum time between digital screening visit and attendance for assessment by slit lamp biomicroscopy to be no more than 42 business days- 80% <42 business days

Foresight had a total of 37 cases photographed that were unassessable and required follow-up. 28/37 (76%) were seen in <42 days Range 12-95 days

Governance – reporting: Reports must be produced at regular intervals to ensure the public and health care professionals are informed of performance of the screening program

The following summary was sent to the commissioning body on 25/11/2013 as the summary results of the 2013 screening cycle
1807 screened out of 1941 notified as eligible for screening = 93% attendance
Urgent referral for treatment 1.05%
Routine referral to further investigation of risk of sight threatening retinopathy 4.4%
Stable treated retinopathy 1.55%
Advise GP of co-existent ophthalmic condition 2.3%
Annual rescreen -minimal retinopathy 17.66
Annual rescreen -no retinopathy 72.3%
Result not established ie initial unassessable who did not re-attend 0.1%

Audit of compliance with RCO and American Academy Plaquenil screening guidelines

Gamble R, Murray T, McLoone, E
Royal Victoria Hospital, Belfast

Objectives: To assess compliance with guidelines for Plaquenil screening from a joint care perspective. To establish clear guidelines for screening within Northern Ireland between the care of rheumatologists and ophthalmologists.

Methods: Patients on plaquenil were randomly selected by members of the Rheumatology department at the Royal Victoria Hospital. Patients charts were reviewed from a rheumatology perspective detailing age at onset, indication for plaquenil, dosage and blood monitoring. The ophthalmology notes were also reviewed assessing for ore existing retinal disease and recording Visual acuity, colour vision, red amsler chart use, fundal examination,fundal photography, OCT, 10-2 visual field, FfERG, MfERG, fundus autoflurescence, FFA, other. Any change to treatment and review arrangements were also recorded.

Results: We found that there was a lack of consistency in approach to referral from rheumatologists with some being referred to opticians, others to a specialist nurse service and some with no screening. We found that most ophthalmologists were simply recording visual acuity, performing a fundal check, colour vision and amsler chart visual field assessments with no further tests being requested and the majority of patients being discharged to the care of the rheumatologists.

Conclusions: We suggest that clear guidelines for Plaquenil screening are set up within Northern Ireland so that there is a consistent approach to these patients. We hope to raise awareness of the recent American Academy recommendations among rheumatologists and ophthalmologists. With easier access to OCT, electrophysiology and visual field assessments, patients will be screened to identify early signs of retinal toxicity. In this way we can prevent and hopefully reverse early visual loss by stopping the Plaquenil treatment.

FRIDAY PAPER SESSION

A new method for the measurement of microRNA and microRNA related targeted genes in conjunctival epithelial cells in Sjogren's syndrome patients.

Pilson Q[123], Ní Gabhann J[1], Jefferies CA[1] and Murphy C[23].
[1] Molecular and Cellular Therapeutics Department, RCSI.
[2]Ophthalmology department, The Royal Victoria Eye and Ear hospital.
[3]Ophthalmology department, RCSI.

Objectives: Sjogren's syndrome (SS) is a poorly understood systemic autoimmune disorder characterized by inflammation that of the exocrine glands causing dry eyes and dry mouth. In addition, extraglandular manifestations such as pulmonary fibrosis and lymphoma, may increase the morbidity of this disease. Patients with SS usually present with aqueous deficiency dry eye disease (ATD) and it is well known that a combination of reduced lacrimal flow from gland destruction and increase tear osmolarity leads to inflammatory damage to the ocular surface. Mechanisms that regulate pathogenic cytokine production are dysregulated in patients with SS ATD. MicroRNAs (miRs) are known to regulate the expression of inflammatory cytokines and play an important role in the pathogenesis and progression of autoimmune disease. We have demonstrated differential expression of certain miRs in peripheral blood mononuclear cells (PBMC) in SS patients compared with healthy controls. The aim of this present study is to demonstrate for the first time that miR and mRNA levels can be measured in conjunctival epithelial cells using impression cytology. There are no published reports of miR measurement in conjunctival epithelial cells. In the longer term, this study will investigate miR expression in conjunctival epithelial cells from SS patients and correlate this with the expression of miR related targeted genes and cytokine levels in ocular washes, as well as miR expression profiles from PBMC and clinical parameters of the disease. In this way, our long term goal is to target specific miRs with topical therapeutic agents to control inflammation at the ocular surface.

Methods: 11 patients who fulfilled the American-European Consensus criteria for pSS and 5 healthy controls were recruited. Conjunctival epithelial cells were isolated by impression cytology (IC) and mRNA was isolated using Trizol according to manufacturer's instructions. Isolated mRNA samples were sent for miR and mRNA screening. Simultaneously ocular washes were taken using Drummond micropipette which will be processed in the future using multiplex ELISA platform (Luminex) to detect the presence of tear cytokines. Future work will involve measuring and validating target miRs and mRNA using real time PCR. This data will be correlated with clinical features (including ocular surface staining, Schirmer's 1 test and tear break up time (TBUT)) and inflammatory markers from blood tests. Questionnaires like NEI VFQ-25, OSDI and SF-36 as well as SS indices including the European League Against Rheumatism Disease Activity Index (ESSDAI) and Patient Reported Index (ESSPRI) will be completed to analyze disease severity, impact of dry eyes and associated systemic symptoms on quality of life.

Results: Preliminary studies from miR screening of peripheral blood mononuclear cells (PBMC) from pSS patients showed differentially expressed miRs compared to healthy control. 3 different membranes were used to optimize the IC technique for maximum yield of mRNA/miR on healthy controls. These studies demonstrated that Milicell biopore membrane inserts and Immobilon PFQ had comparable yields. Milicell biopore membrane was chosen as it gives more patient comfort. The mRNA isolated from the pSS patients and healthy controls using the Milicell Biopore membrane show significant yield of mRNA with a mean 213.5 ng/µL ± 167.4 (range 88.1-766.5). Figure 1 shows that appreciable levels of miR targeted genes (SHIP-1, SOCS-1 and PDCD4), miR-155 and miR-21were detected from the conjunctival epithelial cell samples using impression cytology.

Figure 1: Detection of miRs and miR targeted genes in conjunctival epithelial cells from healthy controls using impression cytology.

Conclusions: We have demonstrated that IC can be used to isolate mRNA from conjunctival epithelial cells and that expression levels of miRs and miR targeted genes can be detected by PCR. This novel technique, which has not previously been described, enables the measurement of these key inflammatory mediators at the site of ocular surface inflammation. Future studies will focus on development of novel miR based therapeutics to modulate miR expression and thus function to treat SS ATD as well as other autoimmune related ATD.

The RVEEH non-infectious anterior uveitis cohort

O'Rourke M [1], Ramasamy P [1], Haroon M [2], FitzGerald O [2], Murphy C[1]
[1] RCSI Dept. of Ophthalmology, Royal Victoria Eye and Ear Hospital, Dublin
[2] St Vincent's University Hospital, Dublin

Objectives: The have been no recent epidemiological studies of anterior uveitis in an Irish cohort. The aim of this study is to evaluate the patterns of acute and recurrent non-infectious anterior uveitis in a tertiary referral centre.

Methods: Patients presenting with anterior uveitis to the emergency department at the Royal Victoria Eye and Ear Hospital (RVEEH) were invited to attend a dedicated research clinic. Infectious causes or a known associated systemic disease were excluded. All patients were over 18 years of age. HLA-B27 status checked and other blood and imaging investigations carried out as indicated by history and examination. All patients were subsequently examined by a rheumatologist for the presence of a spondyloarthritis. Patients were treated with a standardised tapering topical corticosteroid and cycloplegia until revolution of inflammation.

Results: A total of 184 patients were recruited over a 16 month period in 2 phases of which 107 were male and 77 were female. HLA B27 was positive in 52% of patients with male predominance of 59% in the HLA B27 positive group. 9.6% of patients presented or developed bilateral uveitis. Iridocyclitis was present in 4 patients. Augmented treatment was required in 21 patients with 17 patients receiving subconjunctival corticosteroid and mydricaine and 4 patients receiving orbital floor corticosteroid depot for the treatment of cystoid macular oedema. The most common newly diagnosed systemic disease was spondyloarthritis (n= 78) of which 74 were ankylosing spondylitis and 4 were associated with psoriasis followed by sarcoid (n=5). The median (interquartile range) LogMAR VA of the affected eye at baseline and resolution were 0.1 (0-0.22) and 0 (0-0) respectively. In a subset of 80 consecutive patients, ocular coherence tomography (OCT), erythrocyte sedimentation rate (ESR) and C reactive protein (CRP) was measured at baseline and resolution of inflammation. There was no correction between ESR, CRP and OCT thickness with the degree of anterior chamber inflammation.

Conclusions: This study emphasizes the key role of ophthalmologists in identifying previously undiagnosed systemic diseases. ESR, CRP and OCT are not warranted routine investigations in AU. Most patients respond to topical corticosteroid treatment with 11% requiring additional local treatment. Visual prognosis in AU remains good.

Rho kinase inhibitors in modulating the response of human trabecular meshwork cells to hypotonic stress.

Pokrovskaya O[1], McNally S [3], Wallace D [1,3], Clarke A [2], O'Brien C [1,3]
[1] School of Medicine and Medical Science, University College Dublin
[2] North Texas Eye Inst., University North Texas Health Center, USA
[3] Dept. of Ophthalmology, Mater Misericordiae University Hospital, Dublin

Objectives: The trabecular meshwork (TM) forms the major route of aqueous outfow in primary open angle glaucoma (POAG). The TM is exposed to mechanical stresses that can lead to changes in the normal physiology of the tissue [1]. This contributes to pathological changes that alter outflow resistance, thus leading to elevated intraocular pressure (IOP). Hypotonic stress has been previously used as an in vitro model for mechanical stress, and the Rho kinase pathway has been shown to be a key regulator of the morphological changes observed in cells secondary to hypotonic stress [2, 3]. The objective of our work is to modulate these morphological and cytoskeletal changes via the use of the Rho kinase inhibitor Y-27632.

Methods: Confluent human TM cells were pre-treated with Y-27632 (10μM for 20 minutes) in serum free conditions. Control cells were maintained in serum free media. Cells were then either subjected to hypotonic stress for 20 minutes, or kept in an isotonic solution for the same time period. F-actin organization was examined using rhodamine-phalloidin labeling and fluorescence microscopy.

Results: Hypotonic stress induced rearrangement of the actin cytoskeleton with disruption of stress fibres, when compared to control cells in an isotonic solution. Pre-treatment with Y-27632 reduced these changes, resulting in a more normal cell morphology following hypotonic stress.

Conclusions: Rho kinase inhibitors may be used to modulate the reorganization of the actin cytoskeleton in TM cells exposed to biological stresses such as hypotonic stress. This is valuable information in the consideration of Rho kinase inhibitors as a potential treatment in POAG.

The Role of Methylation in Regulating the Expression of TGFβ in Lamina Cribrosa and Trabecular Meshwork Cells in Glaucoma.

Wallace D [1,2], McDonnell F [1], Clark A [3], O'Brien C [1,2]
[1] School of Medicine and Medical Science, University College Dublin, Dublin
[2] Dept. of Ophthalmology, Mater Misericordiae University Hospital, Dublin
[3] North Texas Eye Inst., University North Texas Health Center, Ft. Worth, USA,

Objectives: Current treatment for glaucoma focuses on lowering intraocular pressure (IOP), but despite well-controlled IOP some patients continue to suffer progressive damage. Other possible methods of treatment include targeting the fibrotic pathology associated with glaucoma. In glaucoma fibrosis is observed in the lamina cribrosa (LC) and trabecular meshwork (TM) regions, with increased expression of pro-fibrotic genes such as transforming growth factor β (TGFβ). These areas are also subjected to a hypoxic environment in POAG. Hypoxia has been shown to induce epigenetic changes in other fibrotic diseases. The purpose of this study was to investigate the role of hypoxia-driven changes in epigenetic regulation of TGFβ in LC and TM cells.

Methods: Primary human LC and TM cells (n=3) were obtained from donors with (G) and without primary open angle glaucoma (POAG) glaucoma (N). Global methylation levels were determined by an ELISA assay. Gene expression levels of TGFβ and DNA methyltransferases (DNMTs) were examined by q-PCR using gene specific probes. Methylation status of the TGFβ promoter was examined using methylation specific PCR (MSP). Cells were subjected to hypoxia at 1%O2 for 6 & 24 hours. 5-Azacytidine (5-Aza) (0.5□M/24hr) was used to inhibit methylation levels.

Results: Increased levels of global DNA methylation were observed in GLC cells compared to NLC cells (P=0.1). Similar results were observed for TM cells. qPCR analysis showed increased DNMT1 and TGFβ1 expression in GLC cells compared to NLC cells (P<0.05). MSP showed increased levels of unmethylated DNA in the TGFβ1 promoter of the GLC cells. Hypoxia increased the level of global DNA methylation in NTM cells compared to normoxic cells (P=0.3). qPCR analysis showed that hypoxia decreased DNMT1 (P<0.05), and increased TGFβ1 (P<0.01). 5-Aza treatment of GTM cells decreased gene expression of DNMT1 (P=0.08) and TGFβ1 (P<0.01).

Conclusions: We have shown that the hypoxic environment in glaucoma may affect epigenetic mechanisms specifically methylation. Furthermore, expression of key fibrotic genes such as TGFβ is also affected. Treatment with 5-Aza reduces expression of TGFβ. A new avenue for treatment may be using available epigenetic modulators to alter the fibrotic phenotype seen in glaucoma associated with glaucoma.

A molecular analysis of human lamina cribrosa and trabecular meshwork cell behaviours as determined by the surrounding extracellular matrix

McNally S [1], Wallace D [1,2] and O'Brien C [1,2].
[1] Dept. of Ophthalmology, Mater Misericordiae University Hospital, Dublin
[2] School of Medicine and Medical Science, University College Dublin, Dublin.

Objectives: Our lab and others have demonstrated that both Lamina Cribrosa (LC) and Trabecular Meshwork (TM) cells are central to the glaucoma disease process by producing Extracellular Matrix (ECM) proteins which harden the respective tissue (pro-fibrotic process). In addition, previous work from our group has shown that there are higher levels of ECM proteins in LC cells obtained from glaucoma donors compared to normal controls. The purpose of this research project was to assess the differential ability of normal and glaucomatous human LC and TM cells to interact with their surrounding extracellular matrix and to subsequently, direct cell behaviour.

Methods: Human LC and TM cells were grown on a range of cellular matrices of varied stiffnesses (including on 5-30kPa of deformable silicon). The response of cells to differing environments was assessed by analysis of cell movement, growth and contractility processes. An analysis of the in-vitro migratory, proliferative and contractile capacity of trabecular meshwork and lamina cribrosa cells obtained from normal and glaucoma patient donors was performed by means of scratch wound assays, indirect immunofluorescence, and quantitative PCR analysis of monolayer versus 3D culture conditions.

Results: Our data shows the ability of the stiffening-ECM to induce phenotypic changes in both LC and TM cells. Additionally, we have found cellular processes of migration, proliferation and contractility to be altered in the glaucomatous disease state. Interestingly, normal and glaucomatous TM cells seeded onto a laminin-rich ECM display disparate patterns of cellular network organisation and glaucomatous TM cells have a higher proliferative index than normal TM cells (as judged by Ki67 staining and MTS assay). TM cells treated with the pro-fibrotic cytokine Transforming Growth Factor beta (TGF-beta 1) express elevated levels of fibrotic markers (e.g. snail, thrombospondin (TSP1), vimentin; $P < 0.05$). Finally, a wrinkle assay of cell contractility highlighted enhanced lamina cribrosa cell contraction in response to treatment with TGFβ1.

Conclusions: Cells from the glaucomatous human trabecular meshwork and lamina cribrosa are characterised by altered rates of cell proliferation and altered propensity to engage in matrices of increasing stiffness. We believe that TGFβ is a primary mediator of abnormal cell-matrix signaling in glaucoma disease.

Glaucomatous optic neuropathy evaluation (GONE) project: The effect of monoscopic versus stereoscopic viewing conditions on optic nerve evaluation.

O'Neill E, Chan H, Ong D, Kong Y, Pandav S, Coote M, Crowston J
Department, of Ophthalmology, Mater Misericordiae University Hospital, Dublin
Centre for Eye Research Australia, University of Melbourne, Royal Victorian Eye and Ear Hospital, Melbourne, Australia.

Objectives: To determine whether monoscopic versus stereoscopic viewing impacts on evaluation of optic disc photographs for glaucoma diagnosis in an expert population.

Methods: A Prospective observational study. Twenty pairs of high-quality monoscopic and stereoscopic photographs of similar size and magnification (i.e. forty images) were selected to demonstrate a range of optic disc features from a total of 197 eyes of 197 patients with glaucoma and normal subjects recruited from a tertiary clinic. These were presented in randomised order via an interactive platform (http://stereo.gone-project.com/). Participants assessed nine topographic features and estimated glaucoma likelihood for each photograph. Main outcome measures were intra- and inter-observer agreement.

Results: There was good intra-observer agreement between monoscopic and stereoscopic assessments of glaucoma likelihood (κw=0.56). There was also good to substantial agreement for peripapillary atrophy (κw=0.65), cup shape (κw=0.65), retinal nerve fibre layer loss (κw=0.69), vertical cup:disc ratio (κw=0.58) and disc shape (κw=0.57). However, intra-observer agreement was only fair to moderate for disc tilt, cup depth and disc size (κw=0.46-0.49). Inter-observer agreement for glaucoma likelihood in monoscopic photographs (κw=0.61, CI=0.55-0.67) was substantial and not lower than stereoscopic photographs (κw=0.59, CI=0.54-0.65). Monoscopic photographs did not lead to lower levels of inter-observer agreement compared to stereoscopic photographs in the assessment of any optic disc characteristics, for example disc size (mono κw=0.65, stereo κw=0.52); and CDR (mono κw=0.72, stereo κw=0.62)

Conclusions: For expert observers in the evaluation of optic disc photographs for glaucoma likelihood, monoscopic optic disc photographs did not appear to represent a significant disadvantage compared to stereoscopic photographs.

The association between macular pigment optical density and glaucoma-related structural and functional parameters

Siah W F[1], Loughman J [2], O'Brien C [1]
[1] Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin
[2] Department of Optometry, Dublin Institute of Technology, Dublin.

Objectives: Glaucoma subjects have recently been observed to exhibit significantly lower macular pigment optical density (MPOD) compared to age-matched healthy controls. Macular pigment consisting of lutein, zeaxanthin and meso-zeaxanthin, is highly concentrated at the macula. It possesses antioxidant properties and has a vital role in visual performance. This study comprises an analysis of the baseline glaucoma-related structural and functional data collected as part of the Macular Pigment and Glaucoma Trial (ISRCTN56985060).

Methods: All glaucoma participants underwent a detailed slit-lamp exam, MPOD measurement (heterochromatic flicker photometry), spectral domain optical coherence tomography (SD-OCT, Optovue), contrast and glare sensitivity, Humphrey Visual Field (HVF) standard 24-2 and 10-2, and vision-related quality of life questionnaires. Results were analysed using the SPSS statistics software (version 21).

Results: A total of 82 glaucoma subjects were recruited to the trial, of which 44 were male, and 38 female (40 primary open angle glaucoma, 30 low-tension glaucoma, 9 pseudoexfoliation glaucoma, 3 pigment dispersion glaucoma). The mean age of participants was 65.5 years (range 36-84 years). A positive, and statistically significant relationship was observed between ganglion cell complex (GCC) measures and MPOD levels at 0.25 degrees ($r = 0.36$, $p = 0.01$) and 0.50 degrees ($r = 0.29$, $p = 0.05$) of retinal eccentricity respectively. An inverse and statistically significant correlation was found between mesopic glare disability and MPOD at 0.25 degrees ($r = -0.28$, $p = 0.044$) and 0.50 degrees ($r = -0.33$, p 0.007) of retinal eccentricity. Glaucoma severity, as determined by HVF mean deviation (dB), was positively correlated with MPOD at 0.25 degrees [$r = 0.29$, $p = 0.047$ (standard 24-2 test)], at 0.50 degrees [$r = 0.32$, $p = 0.015$ (HVF 24-2 test) and $r = 0.29$, $p = 0.022$ (HVF 10-2 test)] and at 1.0 degrees [$r = 0.35$, $p = 0.018$ (HVF 24-2 test)] of retinal eccentricity, respectively. Visual field loss was also inversely and statistically significantly correlated with average GCC, average retinal nerve fibre layer and retinal (fovea and parafovea) thickness.

Conclusions: There is emerging evidence that the macula is affected early in glaucoma. Our baseline results suggest a significant relationship between MPOD and glaucoma structural-functional parameters. Increased oxidative stress or compromised ocular blood flow levels with chronicity of glaucoma may be linked to low MPOD.

Retinal Nerve Fibre Layer Analysis by Cirrus OCT in Vigabatrin recipients

Hughes E [1], Dooley I [2], McCormack M [3], Slattery L [4], Cavalleri G L [3], Delanty N [3,5]
[1] Department of Ophthalmology, Beaumont Hospital,
[2] Department of Ophthalmology, Whipps Cross University Hospital, London,
[3] RCSI Molecular & Cellular Therapeutics (MCT) Royal College of Surgeons in Ireland,
[4] Epilepsy Research Group Royal College of Surgeons in Ireland,
[5] Department of Neurology, Beaumont Hospital

Objectives: The exact pathogenesis of visual field loss in vigabatrin exposure remains unknown, and it is a very unpredicatable side effect of an otherwise well tolerated anti-epileptic drug. The aim of this study is to describe the features of the peripapillary retinal nerve fibre layer (RNFL) as measured by ocular coherence tomography (OCT) in patients who have a history of vigabatrin treatment for epilepsy. A secondary objective is to correlate these findings to visual field findings, and determine if there is any relation with cumulative drug dosage or length of exposure.

Methods: Patients were recruited from the epilepsy outpatient service in the Department of Neurology in Beaumont hospital. Ethics approval was granted by the hospital. A review of case notes identified those with a history of vigabatrin exposure, and after written contact respondents underwent OCT scans of the peripapillary RNFL. Case notes were reviewed to establish the duration of vigabatrin treatment, cumulative dose, reason for stopping where relevant, ophthalmic examination findings including Goldmann visual field (GVF) testing (mean radial diameter), and relevant medical/surgical history (including neurosurgical intervention for epilepsy). The average of the total and quadrantic RNFL thickness was compared to an age-matched inbuilt Cirrus database of a ‘normal’ Caucasian population. These findings were compared to the mean radial diameter on GVF.

Results: The study data is currently under analysis, with a total of 60 patients having undergone OCT scanning.

Conclusions: Pending.

Plusoptix photoscreening for potentially amblyogenic conditions in an Irish patient cohort

Ramasamy P, Shukla J, O'Keeffe L, McCreery K
Our Ladys' Childrens Hospital Crumlin and Blackrock Clinic, Dublin

Objectives: To evaluate the efficacy of photoscreening with the Plusoptix photoscreener A12 in detecting potentially amblyogenic refractive errors in patients presenting to paediatric ophthalmology

Methods: All patients presenting for paediatric ophthalmology evaluation between 4/11/13 – 14/3/14 (20 weeks) who underwent photoscreening with an infrared binocular photoscreener (Plusoptix A12), visual acuity testing, orthoptic evaluation and cycloplegic refraction were included. Photoscreening resulted in either a "pass" or" fail" result based on predetermined referral criteria. The results of cycloplegic refraction and motility evaluation were compared to photoscreening results.

Results: A total of 229 patients were included in the study. The mean age of patients was 5.38 years (range 0.42-16.58 years). There were 49.34% males and 50.66% females (n=113, n=116 respectively). Insufficient photoscreening results or inability to perform the test occurred in 20.1% of patients (n=46). The number of patients who passed and failed photoscreening test were 67 and 116 respectively. There were 7 false positives and 29 false negatives. Sensitivity was 78.99% with a negative predictive value of 56.72%, while the specificity was 84.44% with a positive predictive value of 93.97%.

Conclusions: Photoscreening is a very useful clinical tool in the detection of potentially amblyogenic refractive errors in the paediatric population. With optimization of the referral criteria, a higher sensitivity and specificity can be reached thus minimizing under and over referrals. Our study validates its use in achieving this objective, and is ongoing using other referral criteria. Once proficient in using the device it is conceivable that photoscreening combined with orthoptic evaluation could be utilized for primary screening for visual defects in the community.

Elasped time for Accommodative Adaptation to first spectacle prescription in untreated amblyopic children

Chen S, [1 2] Chandna A,[2] Norcia AM.[3]
[1] The Galway Clinic, Galway [2] Ophthalmology Dept, Royal Liverpool Children's Hospital, Liverpool [3] Dept. Psychology, Stanford University, Stanford, California

Objectives: To provide an evidence-base for timing of post-spectacle acuity check in untreated amblyopic children. To measure the time for amblyopic children to adapt accommodatively to their new spectacles. These data are critical in both making a diagnosis of amblyopia and deciding what modality of treatment is appropriate immediately thereafter.

Methods: Untreated children were recruited consecutively and assessed clinically and retinoscopically for strabismus and anisometropia. Ultimately 29 were included that were given first spectacle prescriptions and followed monthly until accommodative adaptation was achieved (taken as the first visit when the acuity in the Dominant eye was better than or equal to its acuity in the unaided state or in those unable for optotype acuity the time taken for spontaneous wear to reach 80% waking hours). A diagnosis of amblyopia was then possible. Clinical characteristics related to the study group are quantified and described.

Results: Anisometropic (7), Strabismic (10) and Strabismic-Anisometropic (12) patients with amblyopic interocular acuity differences between 0.2 to 1.42 (mean 0.59) logMAR (ETDRS Lea Symbols). Mean time to accommodative adaptation for the entire group was 54.31 days (24.76 SD) and for those capable of performing optotype acuity 51.11 days (20.50 SD). Those too young for optotype acuity (n=11) took on average 59.55 days (30.87 SD) to reach accommodative adaptation. There was no statistically significant difference between the two groups (p=0.38).

Conclusions: To our knowledge this is the first study reporting on accommodative adaptation in a typical group of previously untreated amblyopic children. The second visit post spectacle prescription for children with presumed amblyopia should be scheduled no earlier than 8 weeks after which time any problems such as incorrect prescription, failure to adapt can be corrected or addressed. This study directly informs clinical practice in a practical manner that should be helpful for clinical decision makers.

Forceps Delivery-Related Ocular Injuries; a Case Series

McAnena L[1], Murphy J [1], O'Keefe M [1], Kirwin C [2]
[1] Children's University Hospital, Temple Street, Dublin
[2] Mater Private Hospital, Dublin

Objectives: The rate of obstetric forceps delivery has declined in recent years. Complications are rare and can include maternal injury and foetal cervical or cephalic injury, including ocular trauma. We aim to present a case series of forceps-induced ocular trauma, to illustrate the spectrum of presentations and associated morbidity.

Methods: A retrospective chart review of cases of forceps-induced ocular trauma, presenting to two ophthalmic Consultants (MO'K and CK) from 2008 to 2014

Results: Eight cases presented in this time period. 7 patients were assessed in the first month post-natally, one patient was referred at age 8, for second opinion, and one patient presented, de novo, age 4. There were 3 cases of unilateral corneal injury resulting in vertical scars in Descemet's membrane with secondary astigmatism and resultant amblyopia. One case was diagnosed with traumatic left third nerve palsy, necessitating ptosis repair at 5 weeks and with persistent amblyopia at four years old. One child presented ith a facial nerve palsy There was one case of total hyphaema and one case of vitreous haemorrhage, both of which completely resolved. There was one case of unilateral lid bruising which fully resolved with no further sequelae.

Conclusions: Forceps-assisted vaginal delivery can be associated with a broad spectrum of ocular injuries, ranging from limited bruising to significant amblyogenic eye injuries. Obstetricians and paediatricians need to be aware of these potential injuries, and early referral to, and close follow-up by ophthalmologists is essential to limit long-term morbidity.

Proficiency-Based Pre-Training Curriculum In Phacoemulsificaiton Surgery Reduces The Learning Curve Of Novice Trainees On Patients.

Lee P
Royal Victoria Eye And Ear Hospital, Dublin, Ireland

Objectives: To evaluate the effectiveness of a proficiency-based phacoemulsification training curriculum for novice trainees prior to start operating on real patients in the theatre.

Methods: Novice trainees, without any previous ophthalmic surgical experiences, underwent a comprehensive, proficiency-based phacoemulsification training curriculum prior to start operating on patients in the theatre. This curriculum includes didactic components and dry lab exercises of all the steps in phacoemulsification surgery. Particular emphasis is made on the instrument handling, the hand-eye-foot coordination and the knowledge potential risks in each step of the surgery.

The length of pre-training is dependent on the acquisition of skills rather than the time spent. The trainees have to pass an assessment at the completion of training before they are permitted to operate on real patients in the theatre.

The effectiveness of this training methodology is measured by the number of patient required for the trainees to reach their first full case under supervision.

Results: A total of three novice trainees participated in this study (N=4). The first trainee completed a full case by the 8th patient. The second trainee did the same by the 4th patient and the same for the third trainee by the 9th patient. The average number of patients required for the three trainees to reach their first full case is 7 patients. The fourth trainee is currently doing partial cases.

The average training time needed to reach the required proficiency is 50 hours spread over 6-12 weeks.

Conclusions: A proficiency-based pre-training curriculum shifts the trainees' learning curve for cataract surgery from patients in theatre to a safe, controlled environment. The trainees can learn the necessary knowledge and skills at their own pace without sacrificing precious theatre time and incurring risk to patients. Pre-training allows the trainees to predominantly demonstrate what they can do instead of discovering what they cannot do when operating on real patients.

Training experience and perceived challenges in training in phacoemulsification cataract surgery – a national trainee survey

Collins N, Hendrick L, Fahy G.
University College Hospital, Galway

Objectives: To identify perceived challenges in training in phacoemulsification (phaco) cataract surgery among ophthalmic surgical trainees in Ireland, and to examine differences by training year, surgical experience and training site.

Methods: Cross-sectional study of all ophthalmic surgery trainees in Ireland completing a survey in March 2014. Trainees were asked about experience in terms of numbers of modular or complete phacos performed, experience in supervising juniors in phaco, and experience in performing anterior vitrectomy. Trainees were asked to rank 12 different potential problems in phaco training in terms of how problematic they were on a 5-point scale, at both their current training unit and in ophthalmic training nationally. Trainees were also asked to recommend one change to improve training in phaco for ophthalmic trainees in Ireland.

Results: Of 51 ophthalmic surgery trainees invited to participate, 23 (45%) responded to the survey. All 7 national ophthalmic surgical training units were represented among respondents. Surgical experience among respondents ranged from <10 modular cases to >500 complete phacos. Seven respondents (30%) had experience in supervising juniors in phaco surgery, and 17% had supervised juniors in >50 phaco cases. Among trainees supervising juniors, experience in performing anterior vitrectomy varied from no experience in 1 case, to experience in at least 10 cases in 4 of 7 respondents. “Lack of protected time in theatre for trainees” ranked as the number one perceived problem in phaco training nationally (average rank 3.6 out of 5), with “theatre closures” ranking a close second (average rank 3.5). The highest ranked issue at trainees’ current units differed between units, however “lack of protected time in theatre for trainees” also received the highest average rating (3.2). Trainees offered many constructive suggestions for improving phaco training in Ireland, key themes being protected theatre time, and a structured approach to the use of that theatre time.

Conclusions: Ophthalmic trainees of varying levels of phaco surgical experience perceived similar challenges in training in phacoemulsification cataract surgery. While some challenges are local to individual units, theatre closures and lack of protected theatre time for trainees are perceived as major issues in training in ophthalmology nationally.

Block Surgical Training for Cataract Surgery

Stokes J.
Waterford Regional Hospital, Waterford

Objectives: 1. Assess surgical progression of BST Trainees in cataract training following Intensive Block Surgical Training.
2. Assess advantages and disadvantages of Block training system for BSTs
3. Assess potential application of block surgical training for HST
4. Discuss the challenges in delivering surgical training to BSTs

Methods: BST Trainees at Waterford Regional Hospital underwent Block training in Cataract Surgery. Initially a nominated BST trainee attended theatre 4 mornings a week for a 3 week period. Duties in Eye Casualty, Ward and Clinic were covered by Fellow BST trainees. BST trainees not on Block training continued to attend one theatre session per week. Following the first cycle of block training the next cycle of training was shortened to 2 weeks and finally to one week.

Results: BSTs expressed a high degree of satisfaction with the block training for cataract surgery. 2/3 Trainees progressed to complete full case completion following 1-2 rounds of block training. Trainee's preferred length of block training depended on level of competence attained.

Conclusions: Block Surgical Training is an effective method of training BST Trainees in Cataract Surgery.

POSTER SESSION

Descemet's stripping automated endothelial keratoplasty (DSAEK) in a patient with Myotonic Dystrophy: a case report

Fiorentini SF, Siah WF, O'Brien P.
Royal Victoria Eye and Ear Hospital

Objectives: Introduction: Myotonic dystrophy(MD) is a progressive genetic disorder affecting 1 in 8000 people worldwide(1). The world literature presented 4 cases of Fuchs endothelial corneal dystrophy (FECD) in patients with MD and suggested a mechanism for their association based on the molecular genetics and pathophysiological parallels of MD and FECD(12).

DSAEK surgery was done before in only one patient among the 4 worldwide case series of Fuchs Dystrophy in patients with MD with no outcomes reports in the literature.

Methods: Case Report: a 38 years old female, Caucasian, referred to Royal Victoria Eye and Ear Hospital because of visual difficulties during work. In 2010 the patient underwent combined surgery: DSAEK and phacoemulsification cataract surgery with intra ocular lens implantation. Four years following surgery the unaided acuity remains 6/7.5 in the operated eye.

Discussion: FECD and MD were recently published as very rare association. The rarity is not the main point to be highlighted in this case. Among the ocular manifestations in MD(3,4,5), most of them could bring post operative complications. Nevertheless, the patient presents good result after 4 years of surgery. This good post op with no recurrence of guttata in the donor endothelium might contribute in future studies to corroborate or not with the noncoincidental mutual pathogenic theory referred in literature (12). If the genetic association really occurs, the damage of the donor endothelium after the DSAEK in MD patients would also be expected to happen again in some degree.

Conclusion: Further investigations and long term surgical follow up are needed to help future studies.

A rare cause of optic neuropathy

Fauzi F, Horgan N
St Vincents' University Hospital, Dublin

The authors present a case of a rare cause of optic neuropathy

The clinical and investigations record of this case report are reviewed. A 40 year-old lady was initially referred to the ophthalmology team in SVUH with decreased visual acuity in both eyes.

She has extensive medical and surgical history of Crohns' disease. Initially transferred to a bowel unit in the UK for a planned bowel transplant. Her stay was complicated with a sudden deterioration of vision in both eyes. Procedure was deferred and was also seen by the team there. It was concluded then that one of her long-term antimicrobial medication was the cause of her optic neuropathy. She was transferred back to Ireland for further management of the Crohns' disease.

Conclusion: This case report highlights the importance of considering certain medications that could potentially cause optic neuropathy and also the implications of it to the patient.

The Surgical Management of Macular Hole

McElnea E. Dooley I. Stephenson K. Connell P. Keegan D.
The Ophthalmology Department, Mater Misericordiae University Hospital, Dublin.

Objectives: To review the surgical management of macular hole.

Methods: The clinical notes of all patients who underwent pars plana vitrectomy with stain assisted internal limiting membrane peel and intraocular gas tamponade for the treatment of macular hole in the Mater Misericordiae University Hospital in 2012 and 2013 were obtained. Patient waiting times for their initial review and their subsequent operation, the anaesthesia employed for surgery, whether concurrent phacoemulsification and intraocular lens implant was undertaken, the internal limiting membrane stain and gas tamponade utilized, best corrected visual acuity postoperatively, hole closure at optical coherence tomography and the occurrence of complications following surgery were analysed in this review of the preoperative, intraoperative and postoperative management of macular hole in this centre.

Results: 54 eyes of 50 patients had macular hole repair. The majority of patients had macular hole surgery as a day case procedure under local anaesthetic within 3 months of their initial presentation. 24% of patients underwent concurrent phacoemulsification with intraocular lens implant. Improved best corrected visual acuity was observed in 78% of eyes. Hole closure was achieved in 83% of eyes.

Conclusions: Trans pars plana vitrectomy with internal limiting membrane peel and intraocular gas tamponade remains a fast, safe and effective treatment for macular hole. Concurrent cataract extraction does not alter the anatomical or visual outcome of macular hole surgery and is not associated with additional complications.

Autosomal Dominant Retinitis Pigmentosa Due to a Frameshift Mutation in RP1 Identified Following Next Generation Sequencing

Treacy M, Carrigan M, Dempsey H, Collins K, Farrar GJ, Kenna P
The Research Foundation, The Royal Victoria Eye and Ear Hospital Dublin, Smurfit Institute of Genetics, School of Genetics & Microbiology, Trinity College Dublin

Objectives: To investigate the phenotype associated with a previously unreported frameshift mutation in the RP1 gene, ascertained following Next Generation Sequencing
Methods:
1) Prospective recruitment of patients with a variety of inherited retinopathies attending the Research Foundation at the Royal Victoria Eye and Ear Hospital, Dublin,
2) Next Generation Sequencing of 200 retinal candidate genes in 200 probands, ascertained over a 2-year period,
3) Validation of potentially pathological gene mutations in family studies,
4) In-depth clinical characterization of affected individuals, using a variety of psychophysical and electrophysiological tests.

Results: An identical frameshift mutation was detected in the RP1 gene in probands from 2 apparently unrelated families. Co-segregation of the RP1 gene mutation with the disease phenotype was confirmed in family studies. Clinical characterization of affected individuals demonstrated that while night blindness is an early onset symptom in this form of Retinitis Pigmentosa, symptomatic visual field loss and compromise of central vision is of much later onset. Phenotypic variability was observed, with some affected individuals showing a much milder clinical picture compared to others.

Conclusions: The phenotype resulting from this RP1 frameshift mutation is associated with retention of good central vision until late in the disease. Next generation sequencing will revolutionize the identification of retinopathy-associated gene mutations and facilitate the identification of potential candidates for therapy trials.

A rare association of vitiligo and retinitis pigmentosa

Rahman N, Goetz R, Brosnahan D
Department of Ophthalmology, Royal Victoria Eye & Ear Hospital, Dublin

Objectives: Retinitis pigmentosa (RP) most typically affects individuals in early adult life with symptoms of night blindness and progressive reduction in peripheral visual field. There is a rare association of vitiligo and RP with only a few cases being reported in literature.

Methods: Case description of 11 year old boy of Afghan origin who presented with reduced visual acuity in the left eye. A few years previously he was treated for vitiligo with ultraviolet treatment. He also gave a history of nyctalopia.

Result: A significant lens opacity with extensive iridescent changes to posterior capsule explained the reduced vision of the left eye. Fundoscopy showed pigmentary retinopathy with features of RP, vascular attenuation and waxy discs. Electrophysiology showed evidence of rod/cone dystrophy, with rods more severely affected. Given his lenticular changes with extensive vitiligo, a possible inflammatory cause such as Vogt-Koyanagi-Harada or sympathetic ophthalmia needed to be excluded.

Conclusions: Association between vitiligo and RP in uncommon compared to its well-established relation with ocular inflammation. Systemic vitiligo may cause destruction of melanin containing cells which include the RPE, to cause sufficient RPE degeneration to produce RP-like syndrome. A study of 223 patients with vitiligo and RPE hypopigmentation/degeneration reported only 2 cases with vitiligo and RP [1]. Vitiligo could be a clinical feature that should be observed for in cases with RPE degeneration as correlation between vitiligo and RP could be more than just random.

[1] Albert DM et al. Vitiligo and disorder of the retinal pigment epithelium. British Journal of Ophthalmology; 1983; 67; 153-156.

An Audit of the use of Subretinal tPA in the setting of massive submacular haemorrhage.

Stephenson, K. Keegan, D.
Mater Misericordiae Univsersity Hospital

Objectives: To assess the efficacy and safety of subretinal tissue plasminogen activator for the treatment of massive subretinal macular haemorrhage.

Methods: A retrospective review of the patients of one Dublin eye hospital suffering massive submacular haemorrhage that were treated with vitrectomy, subretinal tPA and fluorocarbon gas. The BCVA was recorded pre-operatively, 1 month, 6 months and 1 year post-op. OCT and fundus photography was performed at baseline, and fundal examination at each visit.

Success was defined as displacement of haemorrhage away from the fovea at 1 week post-operatively. The number of intravitreal anti-VEGF agents required over the first year post-op was documented.

Results: Despite anatomical success (haemorrhage displacement), visual outcomes did not significantly improve. The main side effects following surgery were recurrent retinal detachment and accelerated cataract formation.

Conclusions: The use of subretinal tPA for massive submacular haemorrhage is of limited benefit and potential risk to vision if used after 1 week.

The role of peripheral dendritic cells in immune activation in anterior uveitis

O'Rourke M [1 2], Sweeney C [2], Connolly M [2], Fearon U [2], Murphy C [1]
[1]RCSI Dept. of Ophthalmology, RVEEH, Dublin
[2]Education & Research Centre, St Vincent's University Hospital, Dublin

Objectives: Pathogens, such as microbial components express pathogen associated molecular pathogens. These can interact with innate pattern recognition receptors via toll like receptors (TLRs) on antigen presenting cells (APCs). TLRs play a critical role linking innate and adaptive immunity promoting the maturation of APCs through the production of pro-inflammatory cytokines and the up-regulation of co-stimulatory molecules. This interaction also allows APCs to become efficient in the presentation of specific antigens to naïve T cells initiating adaptive immunity. It is evident that these processes can be altered by a class of small non-coding RNAs or microRNA (miR) which exert their biological function through suppression of their target genes, abnormal expression of which has been demonstrated in chronic inflammatory diseases.

Methods: Peripheral blood mononuclear cells were isolated from active AU patients and healthy controls (n=5). CD14+ monocytes (purity >97%) isolated by positive selection using magnetic bead separation were differentiated into imDCs by culturing for 7 days with IL-4 and GM-CSF and matured in media for 24 hours. The effects of TLR activation and pro-inflammatory stimuli were examined by culturing moDC with Pam3CSK4 (1µg/ml), Poly I:C (25µg/ml), LPS (1µg/ml), IL-1β (10ng/ml) and TNFα (10ng/ml). Cell surface expression of CD83 (maturity) and CD86 (activation) on DC were quantified by flow cytometry. Cytokine analysis was performed on supernatant by ELISA. Total RNA from the mature DC was isolated using the miRneasy isolation kit. Quantification of miR expression was analyzed by real-time PCR, using miRNA-let-7a as an endogenous control.

Results: CD83 and CD86 expression on AU DC was increased in response to all agonists compared to basal, most notably for TLR3 and IL1b. A significant increase in CD83 mean fluorescent intensity (MFI) in response to IL1b was demonstrated in AU moDC compared to HC (p=0.05). This was paralled by an increase in IL12 (p=0.05) and IL23 expression in cultured supernatants. Furthermore, expression of miR155 was also increased in response to Poly I:C, LPS and Il1b in AU DC.

Conclusions: These results support peripheral activation of DC by TLR3 and Il1b in AU patients suggesting a possible role in AU. Altered miR155 expression in DC from AU patients suggests that this miR may contribute to the pathogenesis of AU by mediating TLR3 activated pro-inflammatory pathways.

Initial experience with creating a national early onset severe inherited retainal degeneration database

Saad T, Green A, Farrar J, Burke M, McCourt J, Kenna P, Keegan D**
**Co-Principal Investigators.*
DCCR and Fighting Blindness Ophthalmology Group, Mater Misericordia Hospital Dublin, Royal Victoria Eye & Ear Hospital Dublin, Our Lady's Hospital for Sick Children Crumlin, University College Dublin, Trinity College Dublin and Royal College of Surgeons in Ireland

Objectives: 1.To form a Registry of patients in Ireland with Early-onset Severe Retinal Dystrophy (EOSRD) including Leber's Congenital Amaurosis.
2. To phenotype and genotype such patients.
3. Develop cohort of patients suitable for innovative treatments including gene therapy.

Methods: This paper represents a Case Series of patient referrals from Ophthalmologists, and clinics at MMUH and RVEEH with EOSRD.
Patients were provided with information about the study, taken through the consenting process and then clinically assessed by the Principal Investigator following which they were phenotyped and a clinical diagnosis made.
All patients were photographed and referred for visual field assessment and some for electrodiagnostics.
Bloods were sent for next generation sequencing (NGS) to an accredited Centre for Medical Genetics, Manchester.
Results: In all, 13 patients were assessed, including males and females.
Phenotypically this cohort of patients was representative of conditions like Leber's Congenital Amaurosis (LCA), Usher's Syndrome and Retinitis Pigmentosa (RP).

Conclusions:
1. Specific gene pick up rate is about 60%.
2. There is often a mismatch between phenotype and genotype.
3. It has demonstrated the efficacy of the system in place to recruit patients onto the National Register.
4. When coupled with the Fighting Blindness /Trinity College 'TARGET 3000' project, the recruitment and genotyping efficiency will improve.

Pediatric Keratoprosthesis; The Irish Experience

McAnena L, O'Keefe M.
Children's University Hospital, Temple Street

Objectives: To report the indications for and clinical outcomes of Boston Keratoprosthesis implantation in a pediatric population

Methods: Retrospective chart analysis

Results: 6 eyes of 5 patients aged from 1-204 months (mean 97.5) were transplanted with the Type 1 Boston KPro between 2008-2013. 4 eyes had a primary diagnosis of Peters anomaly and two had aniridia. There was a mean of 1 failed corneal graft preceding KPro implantation (range 0-2). 2 eyes had undergone previous Ahmed Valve surgery, and 2 eyes had previous trabeculectomies. The visual axis remained clear in 4 eyes. Of the other 2 eyes; one eye had a retro-prosthetic membrane, which was successfully treated, the other eye developed a retinal detachment, 2 months post-operatively. One eye sustained blunt trauma and rupture of graft sutures, but the graft was salvaged. Mean follow-up was 35 months (range 4-70). Visual acuity is count fingers or less in 4 eyes. 2 infants, aged 24 and 4 months respectively, are fixing and following with the operated eye. All cases have vision of hand movements or worse in the contralateral eye. All implants are retained to date.

Conclusions: Boston KPro is an option in children as young as 1 month old with corneal opacification for whom corneal graft is not an option. The device is retained in all cases, with visual axis maintained in the majority of cases. It may be particularly relevant in prevention of amblyopia in cases of dense corneal opacification in very young children.

Paediatric adjustable strabismus surgery

Loane E, Mc Creery K
Ophthalmology Department, Our Lady's Childrens Hospital Crumlin, Dublin

Objectives: To determine the outcomes of adjustable strabismus surgery in a paediatric patient cohort.

Methods: Retrospective chart review of four paediatric patients who had primary adjustable strabismus surgery by a single surgeon.

Results: Patients ranged in age from 13-16 years. All patients had primary monocular adjustable strabismus surgery. Specific pre-operative, operative and post-operative data on each case. All patients achieved orthotropia and stereopsis post-operatively.

Conclusions: Adjustable strabismus surgery is becoming increasingly utilized in paediatric patients. Patient selection in this group is of utmost importance to allow post-operative suture adjustment, if required. Patients with recent onset strabismus with fusion capacity are ideally suited for this procedure. Achievement of excellent cosmetic and visual results, especially in terms of stereopsis, is greatly facilitated through the use of an adjustable technique, which also reduces the potential for secondary surgery.

Undergraduate Ophthalmology Education in Ireland: A Comparison with International Guidelines and Evaluation of Doctor Confidence in the Management of Ophthalmic Conditions in the General Medical Setting

Mingyong L, James M, Fleming H.
University College Cork, Cork.

Objectives: To survey whether the ophthalmic curricula delivered in Irish medical schools are in accordance with the standards set out by the International Council of Ophthalmology (ICO) guidelines, and how this may impact on the confidence of non-consultant hospital doctors (NCHDs) in managing ophthalmic problems.

Methods: In a cross sectional educational study, questionnaires were sent to the six medical schools in Ireland to determine the structure of their respective ophthalmic curricula, while a separate questionnaire was distributed to (NCHDs) working in hospitals in Cork to determine their confidence in assessing and managing ophthalmic conditions. The lists of ophthalmic conditions and clinical skills featured in the questionnaire were based on recommendations from the ICO curriculum

Results: All six medical schools in Ireland returned completed questionnaires (100% response rate). The mean (standard deviation) number of teaching hours in ophthalmology was 53.3 hours (± 26.2). There was a wide variation in clinical attachment hours among the schools. Only two schools taught all the recommended topics and clinical skills from the International Council of Ophthalmology curriculum guidelines. Only one (16%) school required a pass grade in ophthalmology to pass the academic year. Eighty NCHDs (93%) who returned appropriately completed questionnaires were graduates from Irish medical schools. Their median confidence levels in addressing ophthalmic pathology was "not confident at all". They were most confident in dealing with neuro-ophthalmology related cases and performing a physical examination of the eye. They were least confident in managing paediatric ophthalmic cases and performing minor ophthalmic procedures set on in the ICO curriculum. No correlation was found (p=0.100) between clinical-based ophthalmology teaching hours received and confidence in ophthalmic assessment.

Conclusions: The ophthalmic curriculum in some Irish medical schools may not meet the standards set by the International Council of Ophthalmology guidelines. The majority of Irish medical school graduates are not confident in dealing with ophthalmic cases in general. There is also a wide variation in ophthalmology education across the schools. This study has therefore highlighted some inadequacies of the Irish undergraduate ophthalmic curriculum and made suggestions on how it can be improved

iStent trabecular micro-bypass stent for primary open-angle glaucoma: results of four year follow-up.

McNally O, Armstrong, D, Moore J, Willoughby CE.
Belfast HSC Trust and Cathedral Eye Clinic, Belfast.

Objectives: There is evidence that increased outflow resistance and thus reduced outflow facility in the trabecular meshwork occurs in primary open-angle glaucoma (POAG). The iStent trabecular micro-bypass stent (Glaukos Corporation, CA) was designed to create a patent bypass through the trabecular meshwork to facilitate physiologic outflow and thus lower IOP. The objective of this study was to report the results of iStent implantation in terms of safety and efficacy in a non-randomised observational case series in patients followed up to 4 years.

Methods: Implantation of the iStent trabecular micro-bypass stent was performed either as an isolated procedure in patients with POAG or in combination with phacoemulsification in patients with POAG and visually significant cataract. POAG was diagnosed on the basis of pre-treatment IOP > 21mmHg, optic disc cupping, visual field loss and open drainage angles on gonioscopy. The indications for iStent insertion were patients with uncontrolled intra-ocular pressures despite multiple topical medications and patients experiencing side effects from medication. Safety measures included best-corrected visual acuity (BCVA), biomicroscope slit-lamp observations, complications, and adverse events.

Results: 17 eyes of 12 patients underwent iStent insertion under peribulbar anaesthesia. 5 eyes underwent implantation in combination with phacoemulsification and 12 eyes as an isolated procedure. Mean age of sample was 72 years and duration of glaucoma was 13.2 years. The duration of follow-up post procedure ranged from 6 month to 48 months.

Mean baseline IOP was 26mmHg which reduced to 15.8mmHg at 6 months, 17.85 mmHg at 12 months, 17.2 mmHg at 24 months and 14.33 at 36 months. One patient had 48 months of follow-up and IOP was 16mmHg. 10 of 12 patients received a 30 % reduction in IOP from baseline. Mean number of topical agents reduced from 2.75 to 2 agents and 2 patients were able to discontinue oral acetazolamide. Two patients required trabeculectomy due to uncontrolled pressure and visual field progression.

This analysis of data shows all patients achieved a lowering in IOP and/or a reduction in IOP-lowering medication at some timepoint. To achieve effective IOP lowering two stents were inserted in 4 eyes. No complications or adverse events were detected.

Conclusions: Overall positive results in terms of IOP lowering following iStent insertion either in isolation or in combination with cataract surgery with no adverse effects. Insertion of iStent also resulted in reduction of topical and oral antiglaucoma medications. Further follow-up is required to evaluate the longterm efficacy of iStent trabecular micro-bypass surgery in controlling intraocular pressure.

Genetically directed targeted clinical surveillance in juvenile open angle glaucoma

Armstrong D, Sambare C, Lechner J, Knox A, McLoone E, Willoughby C.
Belfast HSC Trust, Queen's University Belfast & Royal Liverpool Hospital

Objectives: Molecular genetic testing is important for clinical care, enabling assignment of risk, genetic counselling and prognosis. Juvenile open angle glaucoma (JOAG) occurs during late childhood and early adulthood. Myocilin gene mutations account for 10 % of familial autosomal dominant JOAG. No other JOAG genes have been identified to date. The aim of this study was to identify to perform Sanger sequencing of the myocilin gene in a three generation Northern Irish family with JOAG.

Methods: All patients underwent ophthalmic evaluation and DNA was extracted from peripheral blood leucocytes. Primers were designed to amplify the three exons of myocilin gene with at least 100 bp flanking the coding region. DNA was PCR amplification and underwent bidirectional cycle sequencing at the Core Facility, QUB. DNA amplicons were analysed on ABI PRISM 3730DNA sequencer. Sequencing results were analyzed manually and using the sequence analysis software SeqScape.

Results: A previously identified myocilin mutation was identified in all affected family members Specifically, a heterozygous missense mutation resulting in a C-to-T transition at nucleotide 1109 of the MYOC gene (c.1109C>T), causing a non-conservative amino acid substitution of a proline to leucine at codon 370 (p.P370L). This mutation accounts for 3.9% of myocilin related JOAG and POAG.

Conclusions: We report the presence of variant in MYOC, p.P370L in a family with AD JOAG. The availability of an NHS genetic test for this particular mutation allows appropriate risk stratification to be applied. The affected patients reported here have four children, Clinical screening of this latest generation of children is now underway. This is required to detect the onset of glaucoma early, instigate timely and appropriate treatment and hopefully prevent blindness. Genetic 'cascade screening' of family members can direct targeted clinical surveillance.

Treatment response of refractory neovascular age related macular degeneration following switch to intravitreal alfibercept (Eylea) from ranibizumab (Lucentis).

Bafiq R, Mathew R, Fernandez N, Sivaprasad S.
Laser and retinal research Unit, King's College Hospital Foundation Trust, London, UK

Objectives: To evaluate the changes in macular morphology and visual acuity in eyes switched from intravitreal ranibizumab to intravitreal aflibercept injection for neovascular age related macular degeneration.

Methods: A single centre, prospective, observational study was carried out on eyes with neovascular AMD which were refractory to repeated treatment with intravitreal ranibizumab injections. Treatment switch to intravitreal aflibercept was indicated when recurrent or persistent disease activity was demonstrated by the presence of intra and sub retinal fluid and pigment epithelial detachment (PED). The changes in macular morphology were evaluated by serial Spectral Domain Optical Coherence Tomography (SDOCT) and visual acuity assessed at monthly follow up over a five month period.

Results: Fifty eyes of forty patients were included in the study.50% of eyes with intraretinal and/or sub retinal fluid at baseline showed complete resolution of fluid at 4 weeks after first injection of alfibercept. Central sub foveal thickness, macular volume and pigment epithelial detachment height were significantly lower during the monthly follow up (p value 0.0006 – 0.040).There was no significant change in visual acuity over the follow up period.

Conclusions: Intravitreal Aflibercept (Eylea) seems to be a better option for treatment for refractory neovascular AMD. However, follow up over a longer period may be indicated to assess the long term effect.

Hypertrophic pachymeningitis and bilateral optic neuropathy in ANCA negative granulomatosis with polyangiitis – always check the scans

Hendrick L , Collins N, Fahy G
University College Hospital, Galway

Objectives: We present a rare case of anti-neutrophil cytoplasmic autoantibody (ANCA) negative vasculitis presenting with hypertrophic cranial pachymeningitis and bilateral optic neuropathy.

Methods: Case report and literature review

Results: We report the case of a 61-year-old man who presented in early 2009 with sinus congestion, periorbital pain and decreased visual acuity bilaterally. On presentation Snellen visual acuity was 2/60 in the right eye and perception of light in the left eye. There was a superotemporal visual field defect in the right eye respecting the midline. Examination revealed bilateral optic neuropathy. All investigations including immunological testing were normal. T2-weighted magnetic resonance imaging (MRI) brain and orbits was reported as normal, however subsequent review of imaging demonstrated pachymeningial thickening in the inferior aspect of the right frontal lobe consistent with pachymeningitis. Brain biopsy was consistent with granulomatosis with polyangiitis. The patient was treated with steroids and immunosuppression and vision has remained stable. Only one previous case of bilateral optic neuropathy mediated by pachymeningitis as the presenting feature of ANCA-positive granulomatosis with polyangiitis has been reported in the literature.

Conclusions: This case demonstrates that bilateral optic neuropathy may be the presenting symptom of ANCA-negative granulomatosis with polyangiitis mediated by pachymeningitis, and the importance of careful interpretation of MRI imaging and biopsy in the diagnosis.

Ocriplasmin in the treatment of vitreomacular traction and macular holes

Hendrick L, Vartsakis G, Quill B, Kinsella F
University College Hospital 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 six patients (seven eyes) undergoing treatment with ocriplasmin.

Methods: Six patients were enrolled between November 2013 and March 2014. Five patients underwent unilateral 125µg ocriplasmin injection intravitreally, with one patient receiving bilateral injections. Examination consisted of pre- and post-treatment slit-lamp examination and OCT, in addition completion of the National Eye Institute
Visual Functioning Questionnaire - 25. Patients were followed up at one week and one month 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 best-corrected visual acuity, visual functioning and avoidance of vitrectomy.

Results: Three patients (three eyes) with symptomatic VMT and three patients (four 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, one experienced a 1-line deterioration in BCVA and a 6.5% increase in central macular thickness (CMT), whilst the other had a 2-line improvement in BCVA and a 22.5% decrease in CMT. Of the eyes with macular holes (n=4), two experienced a 2-line average decrease in BCVA and enlargement of the macular hole, and subsequently underwent vitrectomy and internal limiting membrane peel. Results from one patient are outstanding (to be reported within the month).

Conclusions: Previous clinical trials have demonstrated the usefulness of intravitreal ocriplasmin in the treatment of vitreomacular traction and macular holes. With the exception of one patient, this study has failed to reproduce these benefits. Further study including increased treatment group size is required to determine long-term results.

Initial experience of treatment with intravitreal aflibercept in a public hospital in Ireland

Obied L, Collins N, Kinsella F.
University College Hospital, Galway

Objectives: To report the logistics, experience and outcomes of the first use of newly available anti-VEGF agent aflibercept (Eylea, Regeneron) in two patients in a public hospital in Ireland.

Methods: Prospective case report of two patients receiving treatment for diabetic macular oedema with intravitreal aflibercept. Patients' baseline characteristics, treatment history and initial outcomes following aflibercept administration are presented. The logistics of performing the injection will also be discussed, including drug administration, procurement within the hospital public system, and cost.

Results: Two patients with insulin-dependent diabetes mellitus, aged 88 and 60 yrs old, received bilateral 2mg intravitreal aflibercept injections at UCHG since January 2014. The aflibercept agent was priced at 850€ per injection. Procurement was arranged by written request from the treating consultant to the hospital's Drugs and Therapeutics Committee. It was supplied in a pre-prepared vial from which the administering doctor drew up the injection dose into a sterile syringe. Both patients had bilateral recalcitrant macular oedema, which had persisted following 8 previous bilateral intravitreal bevacizumab injections. Prior to receiving intravitreal aflibercept, the first patient's visual acuity was 6/36 in the right eye and 6/12 in the left, with central foveal thickness of 405um and 323um respectively on OCT. He has received one bilateral intravitreal injection of aflibercept with a treatment on the 7/3/14 and will receive a further 3 injections at 4 week intervals. The second patient's visual acuity was 6/18 in the right and 6/24 in the left, with central foveal thickness of 455um and 726um respectively on OCT. He has received one bilateral intravitreal injection of Aflibercept on the 19/3/14 and will receive a further 3 injections at 4 week intervals. The safety and clinical outcomes following aflibercept injections will be presented.

Conclusions: In conclusion we present the first use of intravitreal aflibercept in a public hospital setting in Ireland.

A Rare Case of Spontaneous Enophthalmos

Moran S, Fulcher T
Mater Misericordiae

Objectives: To describe a rare cause of unilateral spontaneous enophthalmos

Methods: Patient notes and radiological images were reviewed. Literature review of the condition and associated presentations was performed.

Results: Pathognomic radiological findings were a key factor in diagnosis of this rare condition, which is likely underreported due to lack of recognition.

Conclusions: Spontaneous enophthalmos in the absence of trauma or surgery is rare. Radiological features can be key to diagnosis in cases where there is no contributory history.

Clinical presentation of Familial Exudative Vitreoretinopathy: a case series

Connolly S, Flitcroft I, Keegan D, Lannigan B, O'Keefe M
Children's University Hospital, Temple Street

Objectives: To describe the clinical characteristics and presentation of patients with familial exudative vitreoretinopathy presenting to our hospital.

Methods: Retrospective and interventional descriptive case series of 4 patients (8 eyes) with FEVR evaluated and treated in our hospital. The charts of all patients treated for FEVR were reviewed and the age, age of initial intervention, family history of FEVR, affected eye, dates and types of interventions, FFA findings, visual acuity, and follow-up period were recorded.

Results: A total of 8 eyes in 4 patients were evaluated. 2 patients were male, and 2 were female. 1 case had a positive family history. All 4 patients demonstrated bilateral disease at presentation. 2 eyes in 2 patients showed subtotal retinal detachment with macular involvement at presentation. 5 eyes of 4 patients showed an avascular periphery, with extraretinal vascularization and peripheral (temporal) exudates. 1 eye showed an avascular periphery, extraretinal vascularization, and extrafoveal macular exudation. 6 eyes of 4 patients underwent treatment with peripheral laser ablation. 1 eye received intravitreal bevicizumab.

Conclusions: Familial exudative vitreoretinopathy is a rare inherited retinal disease with autosomal dominant, x-linked and autosomal recessive modes of inheritance, as well as sporadic cases documented in the literature. While a positive family history may support the diagnosis of FEVR, a negative family history does not outrule it. As FEVR may mimic other paediatric vitreoretinal disorders, has a guarded to poor visual prognisi and demonstrates asymmetry in the clinical presentation of fellow eyes, careful history and examination are crucial in making a diagnosis.

A case of herpes zoster ophthalmicus with occulomotor nerve involvement

Connolly S, Fulcher T
Mater Misercordiae University Hospital, Dublin

Objectives: Motor loss caused by herpes zoster is infrequent, and only a few studies have focused on ocular motor paralysis in ophthalmic herpes zoster. We report our findings in a case of occulomotor nerve palsy secondary to herpes zoster ophthalmicus.

Methods: A review of the case file including clinical and orthoptic assessment, serological and radiological investigations. The available literature was reviewed using the pubmed database.

Results: A 73 year old immuncompetent woman presented with partial left sided ptosis, periocular pain and vertical diplopia, 5 weeks after the onset of left herpes zoster ophthalmicus. MRI demonstrated abnormal enhancement of the left orbital apex and left cavernous sinus. The patient was treated with parenteral steroid and acyclovir. At 2 months follow-up the diplopia had completely resolved, but there was residual ptosis.

Conclusions: Herpes zoster ophthalmicus is a relatively common diagnosis in clinical ophthalmology practice but can be rarely associated with neurological sequale including ophthalmoplegia. Among the reported cases of extraocular nerve palsies, the occulomotor nerve is most commonly involved. As the ophthalmoplegia responds well to steroid and antiviral therapy, it is important to be vigilant for potential neurological complications.

An Unusual Case of Bilateral Papilloedema

Ní Mhéalóid Á, Siah Wefong, Flitcroft I.
Mater Misericordiae University Hospital, Dublin

Objectives: To report a case of non-thrombotic superior sagittal sinus compression by a right posterior parietal extraaxial epidermoid/dermoid cyst causing bilateral papilloedema.

Methods: Case Report

Results: A 32-year-old male presented ten days after an alleged assault, complaining of transient visual obscurations since the incident. He had no other neurological symptoms. On examination, corrected visual acuity in both eyes was 6/6. He had an Ishihara score of 15/15 in both eyes. There were no other focal neurological signs. On fundoscopy, there was evidence of bilateral frank papilloedema with gliosis, left greater than right. Goldmann visual fields displayed enlarged blindspots, left greater than right. Lumbar puncture (LP) had an increased opening pressure of 40 cm H2O. Magnetic resonance imaging and venography showed a right posterior parietal extraaxial mass compressing on the superior sagittal sinus suggestive of an epidermoid or dermoid cyst. The patient was subsequently transferred to a neurosurgical centre for further management.

Conclusions: Epidermoid/dermoid tumours should be considered in the differential diagnosis of papilloedema.3 Anastamotic venous channels may develop resulting in adequate drainage of the SSS if, it has been slowly occluded by a tumour. Subsequent removal of a portion of the SSS may be carried out safely.2 The risk of cyst rupture either spontaneous or intra-operatively must also be taken into consideration.

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Risk of progression to sight threatening retinopathy in R1M1, R2M0, R2M1 cases retained within a screening programme in primary care

Smith J
Foresight Eye Care /HSE Dublin North East Diabetes Watch Program

Objectives: To undertake a retrospective analysis of the rate of progression to sight-threatening retinopathy in this at-risk cohort within a primary care based retinopathy screening program.

Methods: Our program has been providing retinopathy screening for 20 GP practices in the North East of Eire since 2006. It has used the image grading guidelines/ referral criteria of the English National Screening Program for Diabetic Retinopathy (ENSPDR) as no such guidelines existed in Eire until 2013.

In 2013 a retrospective analysis of graded cases from 2009 where the final photographic grade that year was R1M1/R2M0 or R2M1 had their grading progression over the subsequent 4 years 2010-2013 analysed with the aim of establishing if and when they developed sight threatening diabetic maculopathy which would necessitate laser photocoagulation or intravitreal injection.

The ENSPDR guidelines recommend that cases with the photographic grades R1M1/R2M0 or R2M1 be seen for slit-lamp biomicroscopy(SLB) and this was undertaken in the same calendar year as the photographic screening by a single medical retinal specialist. SLB grading outcome was recorded as R1M1 –SLB if there was maculopathy but not of degree to be characterised as clinically significant macular oedema (CSMO). If there was CSMO at SLB then they were recorded as R1M2-SLB and referred for OCT or straight to laser /injection clinic–OCT was performed on the day of the laser treatment as a means of confirming the necessity for treatment.
Results:

64 cases with a photographic grade in 2009 R1M1/R2M0 or R2M1 were identified from a total of 1458 screened.

Exclusions: Of these 64 cases, 22 had no result for screening in 2008 as they were new entrants to screening. There was no previous result for their grading. 24 had a higher grade of retinopathy than R0M0 or R1M0 in 2008 ie they had pre-existent sight threatening retinopathy grades R1M1/R2M0 or R2M1 and could not be used in our analysis.

Excluding these 46 cases left 18 cases who could be characterised as having undergone transformation to >R1M0 (R1M1/R2M0 or R2M1) in 2009 de novo from no or minimal retinopathy. These remaining 18 patients had 6 monthly follow-up to the point of needing laser/injection for sight-threatening maculopathy over the subsequent 4 year period.

Of these 5/18 (28%) required referral for OCT or treatment with either laser or Anti-VEGF injection in year 1-2, 3/18(17%) in year 2-3, 1/18 (6%) beyond year 3, 8/18 (45%) did not need referral for OCT /laser treatment or intravitreal injection based on slit lamp assessment seeking to identify CSMO up to 4 years after a photographic grade R1M1/R2M0 or R2M1 in 2009. 1/18 (6%) was lost to follow-up during course of study.

Conclusions: The interval between the development of what appears as high risk retinopathy on photographic grading and the point at which hospital based treatment is required demonstrates the rationale for retaining R1M1/R2M0 or R2M1 cases in community screening as long as the facility exists to carry out OCT guided macular surveillance. Until recently it would have been deemed more likely that SLB clinics would be the next step after photographic grading but with the increasing availability of OCT in the community this sequence may be reversed. This information may be of benefit in establishing the optimal method of introducing a retinopathy screening/management program in Eire.

Screening status of diabetic patients presenting to Eye Casualty with Vitreous Haemorrhage

Shirley K, Koo H, Hart P
Affiliation:

Objectives: All diabetic patients over the age of 12 presenting to RAES (regional acute eye service) with vitreous haemorrhage should have had retinopathy screening within the last year, unless they are currently already attending the Hospital Eye Service.
This study is to assess if patients presenting with vitreous haemorrhage secondary to diabetes have been attending regular retinopathy screening or are they an at risk group.

Methods: 47 eligible diabetic patients who attended RAES with Vitreous Haemorrhage between May and October 2011 were identified, retrospectively. Their screening history was then analysed using the Northern Ireland Diabetic retinopathy screening programme (NIDRSP) database and Hospital system.

Results: 78% of diabetic patients presenting to RAES with vitreous haemorrhage had attended a diabetic eye service (ie NIDRSP OR HES) within the last year
> > 100% of patients had been 'called for' a HES appointment or by the NIDRSP.
> > The majority of the 6 patients who had no history of eye management in the last year had evidence of DNA clinics when called.

Conclusions: The results suggest the main risk factor for diabetic patients presenting with end-stage diabetic retinopathy is poor attendance to follow up. Patient education with regard to importance of attending hospital appointments and review of DNA policies is important in this patient population. A Centralised database to track screening status of diabetic patients may aid in patient follow up.

The Hospital Paediatric referrals to a Tertiary Ophthalmic centre- A prospective study of both urgent and clinic referrals.

Shirley K, Chakrabarti M, George S
Affiliation:

Objectives: Paediatric ophthalmic queries are often referred for specialist opinion, yet little information exists on the nature and outcome of referrals from hospital physicians. The authors examined this with the aim of developing hospital referral guidelines for non ophthalmic practitioners to ultimately offer a patient centred service. To assess the type, frequency and outcomes of paediatric ophthalmic referrals and develop referral guidelines.

Methods: Paediatric ophthalmic referrals from hospital physicians to the tertiary centre were analysed for the period November 2011 until July 2012 inclusive. A total of 218 referrals were examined for parameters including source, type and outcome.

Results: 68% of referrals came from Emergency departments. 93% of patients were seen within 2 days by the on-call service. 63% of patients required treatment. The referral categories were: trauma 41%, screening 20%, lid swelling 19%, reduced vision 4%, eye pain 11%. 20% of patients had no acute pathology and there was a 75% concurrence between the query and findings.

Conclusions: This audit demonstrates the high volume of paediatric ophthalmic referrals and significant service demand from Emergency Departments. Trauma constitutes the majority of referrals and in most cases was classified as minor. Syndromic assessment and screening occupies 1/5 of referral queries, though in 55% of cases the ocular examination was normal. These findings will inform the development of referral guidelines to promote physician education of children's eye conditions and a streamlined service for patients.

Three-year visual outcomes following laser photocoagulation of diabetic macular oedema

Parker J, Armstrong D J, Brennan R.
Western health and Social Care Trust, Belfast

Objectives: To evaluate the 3-year visual outcomes following laser photocoagulation treatment of diabetic macular oedema (DMO) in standard clinical practice with those obtained in clinical trials. To obtain baseline results for macular laser treatment before embarking with anti-VEGF treatment of DMO.

Methods: The mean annual visual outcome of 38 consecutive subjects (58 eyes) with type 2 diabetes who underwent a first plus or minus subsequent sessions of focal/grid macular laser photo-coagulation (X nm) for clinically significant macular oedema between 2007 and 2010 were collected retrospectively. No subjects were excluded. Their visual acuity results were compared with the outcomes of the laser arm of the Diabetic Retinopathy Clinical Research Network (DRCRN trial) and the EDTRS trial. The primary outcome measure was the mean change in visual acuity (VA) at 3 years.

Results: The mean change in VA at 3 years was - 4.95 ETDRS letters in this sample from a population served by the Western Health and Social Care Trust, N. Ireland. The 3-year outcome was inferior to the clinical trial results with more people gaining vision in the DRCRN group and EDTRS group compared with this cohort (26, second % vs 17%). Furthermore, 2.5 times more patients lost vision (>15 letter loss) in this clinical setting compared with the clinical trial results of the DRCRN group and EDTRS group (20% add % vs 8%, respectively).

Conclusions: The visual outcomes of patients with DMO treated with laser in this cohort were inferior to those treated in clinical trials involving the DRCRN and EDTRS group. Analysis of visual outcomes following the local introduction of anti-VEGF treatment can now be compared in due course to laser treatment.

Oculofaciocardiodental syndrome: a description of novel ophthalmic phentotypic features

Napier M[1], Stewart F[2], McLoone E[1].
[1]Royal Victoria Hospital, Belfast
[2]Belfast City Hospital, Belfast

Objectives: Oculofaciocardiodental (OFCD) syndrome is a rare condition caused by mutations in the BCL-6 corepressor gene (BCOR) which results in ocular, facial, cardiac and dental abnormalities. We report three cases of OFCD syndrome and describe novel ophthalmic features.

Methods: Thorough ophthalmic examination including visual assessment, ocular measurements and retinal examination were performed on each patient, with 5 out of 6 eyes exhibiting features of the syndrome.

Results: Novel phenotypic features including pigmentary retinal lesions and absence of nasolacrimal ducts were noted. Additional ophthalmic features included congenital cataract, microcornea, secondary glaucoma and optic disc dysplasia which have been previously described.

Conclusions: Approximately 60 patients with OFCD syndrome are reported in the literature. Previous case reports have concentrated on the facial and dental aspects of this condition. To date the ophthalmic manifestations of this condition have been under-reported. Greater awareness of these features will facilitate diagnosis of this rare condition.

Past Presidents

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PAST HONORARY LECTURES AND MEDAL WINNERS

Montgomery Lectures and Lecturers

Royal College of Surgeons in Ireland
2001 “Pathogenesis of Glautomatous Damage”
J. Flammer, (Basle)
2002 “What’s new in Ocular Tumours and Pseudotumours?”
Dr. Jerry A. Shields (Philadelphia)
2003 “Advances in the Diagnosis & Management Carotid-Cavernous Sinus Fistulas”
Prof. Neil Miller (Baltimore)
2004 “Age – related maculopathy: New aspects of pathogenesis, prevention and treatment”
Prof. Peter Wiedemann (Leipzig)
2005 “Biological Treatments of AMD”
Prof. Alan Bird (London)

University of Dublin, Trinity College
2006 "Developmental Eyelid Abnormalities"
Mr Richard Collin (London)
2007 “Is there any Room for Surgery in AMD Treatment now?’
Prof Dr Bernd Kirchhof (Dusseldorf)
2008 'Normal tension Glaucoma-does it exist?
Prof Roger Hitchings (London)
2009 “Practical Thoughts on how we Doctors can Best Help our Patients, Ourselves and the World”
Dr Geroge Spaeth (Philadelphia)
2010 The Lecture was not held due to the untimely death of Mr John Lee

Royal College of Surgeons in Ireland
2011 “Novel Therapeutic Approaches for Diabetic Retinopathy”
Prof Loyd Paul Aiello (Boston)
2012 “Endothelial keratoplasty: DMEK or DMET - what if Fuchs endothelial dystrophy does not exist?”
Dr Gerrit Melles (Amsterdam)
2013 “Ophthalmoscopy in the 21st century”
Prof Nancy Newman (Atlanta)

Mooney Lecture and Lecturers

2002 “What is Neuro-Ophthalmology”
Professor Peter Eustace, (Dublin)
2003 “Worldwide Eye Disease – It’s Prevention and Treatment”
Professor Gordon Johnson
2004 “The Twist and Turn of Macular Surgery”
Mr. David Wong (Liverpool)
2005 “Challenging Cases and the Management of Complication during Cataract Surgery”
Mr. Robert Osher (Cincinnati)
2006 “Reconstruction of the Anterior Segment”
Mr Bruce Noble (Yorkshire)
2007 “Wavefront-Guided Refractive Surgery: Advances and Impediments”
Dr Dimitri Azar (Chicago)
2008 “An Update on Amblyopia”
Prof Gunther von Noorden (Houston)
2009 “Evolving Concepts in Pharmacologic Vitreolysis"
Dr Brooks W. McCuen (North Carolina)
2010 “The Link between Infection and Uveitis”
Prof John Forrester (Aberdeen, Scotland)
2011 “OCT Application in Developing Eyes”
Prof Cindy Toth (North Carolina)
2012 “Retinal Oximetry in Health & Disease”
Prof Einar Steffanson (Reykjavik, Iceland)
2013 “‘Trans-synaptic Degeneration in the Human Visual System”
Gordon Plant (London)

Barbara Knox Medal Winners

2002 “Incubation with Endogenous Retinal Antioxidants Inhibits Chemokine Release by PRE in an In-Vitro Model of Age-Related Macular Degeneration”
G.T. Higgins
2003 “Macular Pigment Optical Density and Dietary Intake of Lutein and Zeaxanthin in Healthy Subjects”
J. Nolan
2004 “Correlation of Central Corneal Thickness with vascular risk factors in Normal Tension Glaucoma”
A. Doyle
2005 “A Randomized Placebo Controlled Double-Masked Phase 3 Study of the Treatment of Subfoveal Predominantly Occult Choroidal Neovascularization (CNV) Secondary to Age - Related Macular Degeneration (AMD) using Transpupillary Thermotherapy (TTT)”
A. Hogan
2006 “Survivin Expression & Prognostic Significance in Chorodial Melanoma”
C. Cleary
2007 “MRI as a Novel Non-Invasive Method for *In Vivo* Tracking of Endothelial Progenitor Cells in a Model of Choroidal Neovascularisation”
D. Kent
2008 “A Retrospective Study of the Paediatric Practice of one Community Ophthalmologist Over Seventeen Years in Cavan”
A. Blake
2009 “The Effects Of Acute Cigarette Smoke Exposure on Retinal Pigment Epithelial Cells (Arpe-19)”
S. Ni Dhughbhaill
2010 “Epidemiology And Clinical Associations Of Primary Retinal Detachment In Scotland: 2 Years Of Prospective Recruitment”
D. Mitry
2011 “Prognostic Indicators and Outcome Measures for Surgical Removal of Symptomatic Non-Advanced Cataract”
S. Charlampidou
2012 “Proteomic Research in Uveal Melanoma”
P. Ramasamay
2013 The Dublin Uveitis Evaluation Tool (DUET) – an Algorithm for Earlier Diagnosis of Spondyloarthropathies by Ophthalmologists in Acute Anterior Uveitis”
M. O Rourke

Sir William Wilde Medal Winners

2000 “The Effects Of Topical Anti-Glaucoma Medications On The Ciliary And Optic Nerve Head Arterioles In The Rat Eye”
S. Byrne
2001 “Ocular Toxoplamosis-Pathogenesis Revisited”.
H. McLoone
2002 “Gene Expression in Diabetic Reinopathy”
R. Kane
2003 “Exposure of Photoreceptor Outer Segments to Blue Light Induces a Pro-Angiogentic Response from the Retinal Pigment Epithelium”
E. Cosgrave
2004 “Investigation and Management of Epidemic Intraocular Lens Opacifcation”
R Altaie
2005 “The Photopic and Scotopic Visual Thresholds in Eyes with Solar Retinopathy: a Comparison with the Anatomical Damage”
L O’Toole
2006 “The Role of Sonic Hedgehog Protein in Ethanol-Induced Ocular Teratogenesis”
K. Kennelly
2007 “Visual Outcomes and Graft Survival following Corneal Transplants: the need for an Irish National Corneal Transplant Registry”
M Guerin
2008 “Age Dependent Rat Retinal Ganglion Cell (Rgc) Susceptibility To Apoptotic Stimuli: Implications For Glaucoma Research
M Guerin
2009 “A Cellular Model of Fuchs’ Endothelial Dystophy”
C Kelliher
2010 “Prediction of Effective Lens Position Using A Method Independent Of Preoperative Keratometry Readings”
I. Dooley
2011 “Genomic Medicine and Stargardt Disease “
D. Armstrong
2012 “Childhood Craniopharyngiomas; the Irish Experience”
L. McAnena
2013 “To Evaluate Endothelial Cell Count Loss after Five Years Following Phakic Intraocular Lens Insertion”
C. Baily

IRISH COLLEGE OF OPHTHALMOLOGISTS

The Irish College of Ophthalmologists (ICO) is the professional body for eye doctors in Ireland. The College is responsible for setting and maintaining the highest standards in ophthalmic training for doctors specialising in the field and for continuing medical education and professional development for those in practice. The ICO is recognised by the Medical Council as the only post graduate training body for Ophthalmology. The provision of best in class specialist education and training in ophthalmology is key to the enhancement of the College's role as the professional body for eye doctors in Ireland.

The central goal of the ICO is to maintain standards of excellence for the maintenance and restoration of vision and the preservation of sight through the education of its members, trainees and the public. This is achieved by setting and maintaining the highest standards in ophthalmic training for doctors specialising in the field and for continuing medical education and professional development for those in practice. The mission of the ICO is to reduce the number of annual cases of preventable blindness and vision impairment, to maintain vision and to extend and prolong, to the greatest extent possible, the length of time those who have vision impairment can continue to live independently.

The ICO is focused on its strong leadership role, providing accurate medical information to the public and policy guidance to the government. The ICO is dedicated to working with all relevant parties on the most appropriate model of care for Ireland based on excellence in medical care and patient safety. The College has long standing relationships and strong interaction with a broad range of both government and non- government institutions across healthcare planning, regulation and delivery through which it both promotes and supports the specialist training and education agenda.

The College aims to guarantee the highest standards of patient safety by ensuring that there is an agreed patient pathway in eye care. Through the Forum of Postgraduate Medical Training Bodies the College has supported the development of the clinical directorates and programme model which are a joint initiative between the HSE and the postgraduate training bodies. To demonstrate that commitment the College is funding the research under pinning the national programme for eye care as it evaluates present services in Ireland. The programme aims to deliver changes that will improve the current system in hospital and community care services, ensuring prompt detection, diagnosis and treatment.

As the expert body on eye care in Ireland the ICO takes a broad view on the delivery of care including treatment, diagnosis, prevention, patient safety, quality and cost of care. College policy is fully aligned with the transformation programme for the health services, in particular the concept of patients receiving treatment from the appropriate personnel, in the appropriate location, in a timely manner.

Formed in 1991, the College celebrated its 21st Anniversary in 2012.
"Eye Doctors of Ireland, protecting your vision"

For further information, visit www.eyedoctors.ie

Irish College of
Ophthalmologists
Eye Doctors of Ireland
Protecting your Vision

Irish College of Ophthalmologists
121 St Stephen's Green, Dublin 2
Telephone 01 402 2777
Web: www.eyedoctors.ie · Email: info@eyedoctors.ie