



**IRISH COLLEGE
OF
OPHTHALMOLOGISTS
YEARBOOK
2008-2009**

Incorporating the Scientific Programme for the
Annual Meeting in the Lyrath Estate, Kilkenny
Wednesday 6th May - Friday 8th May 2009

TABLE OF CONTENTS

Irish College of Ophthalmologists 2008-2009

Editorial	4
Annual Report of Council 2008-2009	5
Committee Reports:	
Finance, Policy and Professional Standards	6
Manpower, Research and Education	7
Scientific and Yearbook	8
Past Presidents	10
Acknowledgements	11
Scientific Programme for 2009 Annual Meeting	12
Book of Abstracts	21
Montgomery Lectures	72
Mooney Lectures	77
Barbara Knox Prizes	78
Sir William Wilde Prize	79

IRISH COLLEGE OF OPHTHALMOLOGISTS

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COUNCIL 2008/2009

President:

Peter Tormey

Vice President:

Robert Acheson

President Elect:

Paul Moriarty

Secretary:

Ian Flitcroft

Treasurer:

Marie Hickey - Dwyer

Members of Council

Alison Blake, Tim Fulcher, Fatima Hamroush, David Keegan, Loretta Nolan, Joanne Kearney, Gerard O Connor, Mark Cahill, William Power

STANDING COMMITTEES:

Medical Eye Specialists Committee

Chairman: Vacant

Members: J. Smith, C. McCrann, A. Foley-Nolan, G Comer, F. Hamroush, J. Traynor, J. Kearney and Honorary Officers.

Finance, Policy and Professional Standards Committee

Chairman: M. Hickey-Dwyer

Members: Honorary Officers

Manpower, Education and Research Committee

Chairman: W. Power

Members: D. McAuliffe-Curtin, P. Tormey, T. Horgan, M. Hickey-Dwyer, F. Kinsella, S. Quinn, Y. Delaney, P. McGettrick, D. Keegan, T. Fulcher, S. Fenton, J. Smith and Honorary Officers

Scientific and Yearbook Committee

Chairman: M. Cahill

Members: C O'Brien, D. Kent, A. Doyle, D. Curtin and Honorary Officers

Yearbook Editor: M. Cahill

EDITORIAL

The Irish College of Ophthalmologists continues to push forward in these harsh times. Our training role has been enhanced with a much more pro-active role being taken in the provision and monitoring of training at BST level. The SpR programme in Medical Ophthalmology has unfortunately been temporarily held back by the funding constraints of the HSE but the curriculum and structure is in place to roll this out when the situation allows. For ophthalmologists no longer in training the coming year will see a growing role for the college in monitoring CME with the new Medical Practitioners Act now in force.

Strengthening our international links, I am proud to report that Dr Mike Brennan, the President of the American Academy of Ophthalmology, and Mr John Lee, the newly elected president of the Royal College of Ophthalmologists in the UK, are being awarded Honorary Life Membership of the Irish College of Ophthalmologists.

Dr Brennan will also be speaking at this year's annual meeting which once again is being held at the Lyrath Estate Hotel in Kilkenny. This year's meeting has an excellent program with an expanded program of workshops. We have an outstanding selection of overseas speakers spearheaded by this year's Mooney Lecturer Dr Brooks McCuen from the Duke Eye Centre. I look forward to seeing you all in Kilkenny.

Ian Flitcroft
Hon. Secretary

REPORT OF COUNCIL 2008-2009

Ian Flitcroft, *Honorary Secretary*

There have been four Council meetings:
May 16th 2008, September 27th 2008,
January 10th 2009 and March 28th 2009,

Attendance has been as follows:

Peter Tormey	3
Rob Acheson	3
Marie Hickey-Dwyer	4
Ian Flitcroft	3
Paul Moriarty	2
Mark Cahill	4
Joanne Kearney	4
Gerard O Connor	4
David Keegan	3
Tim Fulcher	2
Billy Power	3
Fatma Hamroush	3
Loretta Nolan	1
Alison Blake	3

Appointment of Standing Committees:

Finance and Professional Standards Committee:

Chairman: Marie Hickey-Dwyer

Members: Hon. Officers

Medical Eye Specialists Committee:

Chairman: Vacant

Members: J. Smith, C. McCrann, A. Foley-Nolan, G Comer, F. Hamroush, J. Traynor, J. Kearney and Honorary Officers

Scientific and Yearbook Committee:

Chairman: Mark Cahill

Members: A Doyle, D. Curtin, C O'Brien, D Kent and Hon. Officers

Manpower Education and Research Committee:

Chairman: William Power

Members: T Fulcher, D McAuliffe-Curtin, T Horgan, P Tormey, M Hickey-Dwyer, F Kinsella, S Quinn, Y. Delaney, P. McGettrick, J Smith and Hon. Officers

Changes in Council Membership

The following terms on Council are coming to a close; Mr Billy Power and Mr Tim Fulcher Many thanks to all for their hardwork during their time on Council and as Chairs of Committees.

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

College Membership

The college membership remains very strong and we currently have 198 members.

FINANCE, POLICY AND PROFESSIONAL STANDARDS COMMITTEE REPORT

Marie Hickey-Dwyer, *Chairman*

At the close of 2008, the membership for the Irish College of Ophthalmologists stood at 198, subdivided into the following four categories of membership:

Ordinary Members	119
Affiliate Members	25
Overseas Members	14
Senior Members	10
Life Members	28
Hon Life Members	2
Total	198

Membership Fees

The membership fee for the Irish College of Ophthalmologists for 2009 was:

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

Current Financial Status as at 31.12.2008

Bank of Ireland:

Total cash at bank € 435,769

Anglo Irish Bank Corporation plc:

Mooney Lecture Fund € 62,242

Canada Life Policy:

Investment Portfolio € 23,803

MANPOWER, EDUCATION & RESEARCH COMMITTEE REPORT

Chairman: *Mr William Power*

Denise McAuliffe-Curtin,
Peter Tormey
Tim. Horgan,
Marie Hickey-Dwyer,
Frank. Kinsella,
Shauna Quinn,
Yvonne Delaney,
Tim. Fulcher,
Sinead. Fenton,
John Smith
Pat McGettrick
David Keegan
Hon. Officers

The committee met on three occasions in 2008-09; September 6th, November 22nd, February 28th and will meet again at this year's conference.

National Basic Specialist Training Programme

The National Basic Specialist Training Programme will commence on July 1st 2009. Three rotations have been agreed; 1. RVEEH/Sligo 2. Mater/Waterford/Galway and 3. Cork/Limerick. The programme is for three years and trainees must sign on for the School for Surgeons and attend for annual assessments at the College to have their training recognised. A central interview will be held in the College for the National Programme in 2011.

Thanks to Ms Yvonne Delaney and Ms Pat McGettrick, tutors of the School for Surgeons for their continued hard work.

SpR Ophthalmology

Work is continuing on the establishment of the SpR in Ophthalmology. Due to the current budgetary constraints in the HSE it is unlikely that funding for this programme will be forthcoming this year. A Ophthalmology Training Programme at Registrar level will be put in place in the interim. The Curriculum for Ophthalmology is under review and thanks to Dr Curtin, Dean, for her continued efforts in this regard

Membership Exam

The Committee welcomes the appointment of Mr Conor Murphy as Professor of Ophthalmology at the RCSI and looks forward to working closely with Prof Murphy to increase the participation of the College in the Membership exam. Mr Fintan Foy, Director of Academic Affairs, RCSI has agreed that the College review the MRCSI syllabus and validate the questions.

Courses

The College has held two training courses in recent months; a Phaco Course for BST trainees in Alcon Laboratories in Hemel Hemsted and a Refractive Surgery Study Day in the HSE on Adelaide Road. A Strabismus Course will be held in Waterford Regional Hospital on October 23rd and 24th.

New Chair of Committee

Mr David Keegan will take over as Chairman of the Manpower Committee following the College AGM and I wish him every success in this role.

SCIENTIFIC AND YEARBOOK COMMITTEE REPORT

Mark Cahill, *Chairman*

Committee Members

Denise Curtin
Aoife Doyle
David Kent
Colm O'Brien

Last year's annual conference was held in the Radisson Hotel, Farnham Estate, Cavan from Wednesday 14th May to Friday 16th May. The meeting was a great success and the venue enjoyed by all attendees.

Pfizer/ICO fellowship

Congratulations to Catherine Cleary the winner of the 2008-2009 Pfizer/ICO Research Fellowship for her proposed research on OCT guided femtosecond laser keratoplasty. Last year's recipient Kevin Kennelly will also give an update on his work to date at this year's annual meeting. The College wishes to thank Professor Jochen Prehn, Royal College of Surgeons in Ireland, Professor Desmond Archer, Royal Victoria Hospital, Belfast, Ms Aoife Doyle, Royal Vistoria Eye & Ear Hospital and Dr John Farrell, Medical Director, Pfizer for their time spent reviewing the research proposals and partaking in the interview process. In addition the College would like to thank those who assisted in the reviewing of and short-listing the applications. The College would also like to particularly thank Pfizer for their continued sponsorship for 2009.

ICO Medals

Alison Blake was the winner of the Barbara Knox medal at the 2008 Conference for her paper "A Retrospective Study of the Paediatric Practice of one Community Ophthalmologist over Seventeen Years in Cavan"

The winner of the William Wilde Medal was Marc Guerin for his poster "Age Dependent Rat Retinal Ganglion Cell (Rgc) Susceptibility to Apoptotic Stimuli: Implications For Glaucoma Research"

Montgomery Lecture

The Montgomery lecture was held in Trinity College on Friday 21st of November. The lecture entitled 'Normal tension Glaucoma-does it exist' was delivered by Prof Roger Hitchings, from London. This year's Montgomery lecture will take place in November in Trinity College and will be given by Dr George Spaeth.

Mooney Lecture

The 2008 Mooney lecture was delivered by Prof Gunther von Noorden from Baylor College of Medicine, Houston. The lecture was entitled "Update on Amblyopia".

Past Presidents

2007 – 2009

Mr Peter Tormey

2005 – 2007

Mr. Robert Acheson

2003 -2005

Prof. Philip Cleary

2001-2003

Mr. Brendan Young

1999-2001

Professor Louis Collum

1997-1999

Mr. Roger Bowell

1995-1997

Mr. John Nolan

1993-1995

Professor Peter Eustace

1991-1993

Mr. Stewart Johnston

The Council and Members of the Irish College of Ophthalmologists are grateful to the following companies for their support of the College activities:

Alcon

Allergan

AMO

John Bannon & Co.

Clarendon Medical

Coherent SLT

Eurosurgical

Fannin Healthcare

Haag-Streit

Hospital Services

Ipsen Pharmaceuticals

Eye 2 Eye Direct

Merck Sharp & Dohme

Novartis

Ocuco

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West-Midland Optical

IRISH COLLEGE OF OPHTHALMOLOGISTS

Annual Conference Scientific Programme

Wednesday 6th to Friday 8th May, 2009

Lyrath Estate Kilkenny

Wednesday, Day 1;

- 8.30am **Opening Address**
Mr Peter Tormey
President, Irish College of Ophthalmologists
- 8.45am Free Papers
Chair Mr David Kent & Mr John Smith
- 8.45am **“A Comparison of Bevacizumab and Ranibizumab for the Treatment of Wet Age Related Macular Degeneration.”**
T Burke
- 8.51am **“Retrospective Review of Systemic and Ocular Adverse Events Following Intravitreal Bevacizumab Injection”**
C Cleary
- 8.57am **“An Epidemic of Ocular Syphilis”**
A Hogan
- 9.04am **“Indications for Pars Plana Vitrectomy in Children”**
S Jungkim
- 9.10am **“Coat’s Disease- Results of British Ophthalmic Surveillance Unit (Bosu) Study”**
B Morris
- 9.16am Q&A
- 9.30am **“A Review of Visual Function in Patients Attending the National Rehabilitation Centre Following a Variety of Severe Brain Injuries”**
M O Doherty
- 9.36am **“Limbal Stem Cell Failure in Ectrodactyly-Ectodermal Dysplasia-Clefting (Eec) Syndrome Caused By P63 Mutations. “**
C Willoughby
- 9.42am **“The Effects of 5-Fluorouracil And Agaricus Bisporus Lectin On Regulating Retinal Pigment Epithelial Cell Wound Healing Activities”**
D Kent
- 9.48am Q&A
- 10.15am Coffee

- 10.45am **Symposium “Diabetic Retinopathy
- how *the treatment of diabetic retinopathy has changed since the DRS, DRVS and ETDRS*”**
Chair – Mr Mark Cahill
*Consultant Ophthalmic Surgeon,
Royal Victoria Eye & Ear Hospital, Dublin*
- “Review of the DRS and ETDRS”**
Mr Mark Cahill
- “DRVS And How Surgical Treatments Have Changed”**
Dr Brooks McCuen,
*Robert Machemer Professor of Ophthalmology
Duke Eye Center
Durham, North Carolina, U.S.A.*
- “Physiology of Diabetic Retinopathy”**
Dr Einar Steffanson
*Professor and Chairman of Ophthalmology,
University of Iceland, National University Hospital*
- 12.30pm Keynote Address
“Leadership in Medicine”
Dr Mike Brennan,
President American Academy of Ophthalmology
- 1.00pm Lunch
- Afternoon Leisure Activities
Golf – Mount Juliet Golf Course
- 2.00pm **Workshop: Basics of Field Analysis**
Miss Yvonne Delaney,
*Consultant Ophthalmic Surgeon
Mater Misericordiae Hospital, Dublin*
- Miss Aoife Doyle,
*Consultant Ophthalmic Surgeon
Royal Victoria Eye & Ear Hospital, Dublin*
- 3.00pm **Workshop
Basics of Field Analysis**
Miss Shauna Quinn
*Consultant Ophthalmic Surgeon
Sligo General Hospital*
- Miss Angela Knox
*Consultant Ophthalmic Surgeon
Royal Victoria Hospital, Belfast*

Thursday Day 2;

- 8.00am Free Papers
Chair Mr Tim Fulcher, Dr. Katherina Tobin
- 8.00am **“European Registry of Quality Outcomes in Cataract and Refractive Surgery (EUREQUO)”**
P Barry
- 8.06am **“The Value of Dual Biometry in the Detection and Investigation of Error in The Preoperative Prediction of Refractive Status Following Cataract Surgery”**
S Charalampidou
- 8.12am **“Calculation of Surgically Induced Astigmatism in the Era of Toric Intraocular Lenses”**
I Dooley
- 8.18am Q&A
- 8.25am **“Ultraviolet-Riboflavin Collagen Crosslinking in Keratoconus”**
J Brady
- 8.31am **“Informed Consent in Refractive Eye Laser Surgery: Perspectives of Patients And The Courts”**
M Guerin
- 8.37am Q&A
- 8.45am **“Antigen Microarray Profiling of Serum Autoantibodies in Pseudoexfoliation Glaucoma”**
E Dervan
- 8.51am **“Ahmed Valve Drainage Implant in Paediatric Refractory Glaucoma – Efficacy and Complications”**
M Galea
- 8.57am **“A Comprehensive Analysis of Eye Bank-Prepared Posterior Lamellar Corneal Tissue for use in Endothelial Keratoplasty”**
C Kelliher
- 9.03am **“The Effects Of Acute Cigarette Smoke Exposure on Retinal Pigment Epithelial Cells (Arpe-19)”**
S Ni Dhubhghaill
- 9.09am **“Comparison of Circulating Growth Factors with Severity of Diabetic Retinopathy”**
W Siah

- 9.15am **“Effect Of Allergic Conjunctivitis on Early Post-Keratoplasty Corneal Inflammation and Lymphangiogenesis”**
T Flynn
- 9.21am Q&A
- 9.30am **“The Children We See – Paediatric Referrals to a Community Ophthalmic Clinic”**
A Blake
- 9.36am **“Sweeten, Soother and Swaddle for Retinopathy of Prematurity Screening”**
A O Sullivan
- 10.00am Coffee
- 10.30am **Symposium “Controversies in Paediatric Ophthalmology”**
- Chair – Mr Richard Comer
Consultant Ophthalmologist
The Bon Secours Hospital, Galway
- “Challenges of Paediatric Ophthalmology in the Community”**
Dr Alison Blake
Community Ophthalmologist
Cavan General Hospital
- “Refractive Surgery in Paediatric Patients”**
Prof Michael O Keefe
Prof of Ophthalmology
Children’s University Hospital, Temple Street, Dublin
- “Challenge of Pediatric Ophthalmology: the Cataract in Infancy”**
Prof Chris Lyons
Professor of Ophthalmology
The Children’s Hospital University of British Columbia Vancouver Canada
- 12.00pm Annual General Meeting of the Irish College of Ophthalmologists
- 1.00pm Lunch
- 2.00pm **Workshops**
Workshop 1; OCT
Mr David Kent,
Consultant Ophthalmic Surgeon
Aut Even, Kilkenny
- Mr Dara Kilmartin
Consultant Ophthalmic Surgeon
Royal Victoria Eye & Ear Hospital, Dublin

Workshop 2; “Ascans, Biometry and IOC calculations”

Mr Tim Fulcher,
Consultant Ophthalmic Surgeon
Mater Misericordiae Hospital, Dublin

Mr Ian Flitcroft
Consultant Ophthalmic Surgeon
Univesity Children’s Hospital Temple Street, Dublin

Workshop 3; “Investigation of Diplopia”

Mr Tony McAleer
Orthoptist
Royal Victoria eye & Ear Hospital, Dublin

Ms Celeste Guinane,
Orthoptist
Adelaide and Meath Hospital, Dublin

4.00pm Coffee

4.30pm Mooney Lecture
“Evolving Concepts in Pharmacologic Vitreolysis”
Dr Brooks W. McCuen, II, M.D.
Robert Machemer Professor of Ophthalmology
Duke Eye Center
Durham, North Carolina, U.S.A.

7.00pm Pre-Dinner Drinks Reception

8.00pm Conference Gala Dinner

Friday Day 3;

8.00am Council Meeting

9.00am Posters
Chair Ms Marie Hickey-Dwyer & Dr Tim Horgan

9.00am **“Amelanotic Choroidal Melanoma Presenting as Strabismus in a 7 Year Old Girl”**
F D’Arcy

9.04am **“Progression Of Diabetic Retinopathy In Pregnancy”**
S Gilmore

9.08am **“Paraneoplastic Retinopathy Associated With Gastric Cancer: A Rare Case”**
Z Idrees

- 9.12am **“Phenotype And Molecular Genetics Of Prpf8 Retinitis Pigmentosa”**
V Long
- 9.16am **“Distribution Of Hif-1 Alpha And Hif-2alpha Expression In The Human Posterior Segment”**
D Kent
- 9.20am **“An Audit of Clinical Presentation, Investigation, and Management of Temporal Arteritis over a 10 year period”**
M Lagan
- 9.24am **“Clostridium Perfringens Endophthalmitis following Perforating Eye Injury”**
H Lee
- 9.28am **“Incontinentia Pigmenti- is it all in the Genes?”**
M O Doherty
- 9.32am **“Central Serous Chorioretinopathy in Pregnancy: A Case Series”**
A Orakzai
- 9.36am **“Case Series of Rapid Progression in Diabetic Retinopathy”**
M Lagan
- 9.40am **“Prevalence of Ophthalmic Findings In The Dublin Paediatric Cochlear Implant Group”**
K Falzon
- 9.44am **“Traumatic Iridoschisis”**
M Hirae
- 9.48am **“Comparison of Limbal vs Fornix Conjunctival Incision in Paediatric Strabismus Surgery- A Randomised Pilot Study”**
V Long
- 10.00am **“Five Triage Decisions in Neuro-ophthalmology that could Save you and your Patient”**
Mr Andy Lee
*Professor of Ophthalmology, Weill Medical College of Cornell University
Adjunct Professor of Ophthalmology, The University of Iowa Hospitals and Clinics*
- 10.30am Coffee
- 11.00am **Symposium “Auditing Surgical Competence during Training”**
Chair Ms Patricia McGettrick
*Cataract Surgery Tutor,
RCSI & ICO, Dublin*
- “Recognized Methods of Assessing Surgical Skills”**
Dr Andy Lee
*Professor of Ophthalmology, Weill Medical College of Cornell University
Adjunct Professor of Ophthalmology, The University of Iowa Hospitals and Clinics*

**“Construct Validity of EYESi Simulator
- Experts Vs Trainees”**

Dr Princeton Lee

Research Fellow

Royal College of Surgeons in Ireland & ICO

- 12.00pm **Pfizer/ICO Research Fellowship Presentation**
2008/09 Recipient Dr Catherine Cleary
- Update on Research by 2007/08 Recipient
Dr Kevin Kennelly
Research Fellow
Catherine McAuley Institute, Mater Hospital, Dublin
- 12.15pm Posters
Chair Ms Marie Hickey-Dwyer & Dr Tim Horgan
- 12.15pm **“Boston Keratoprosthesis – The Eye and Ear Experience”**
J Brady
- 12.19pm **“Mutational Analysis of Col8a2 in Keratonconus and Posterior”**
J Church
- 12.23pm **Dsaek – Contraindicated in Ched?**
G Cunniffe
- 12.27pm **“Phaco Modulation with Bausch & Lomb’s Millenium Custom Control Software (ccs): Ease of Use and Efficiency”**
V Dhillon
- 12.31pm **“A Novel Ratio to Predict Postoperative Intraocular Pressure Following Phacoemulsification”**
I Dooley
- 12.35pm **“Mechanical Endonasal Dacryocystorhinostomy”**
J Brady
- 12.41pm **“Sixten Year Follow up of Photorefractive Keratectomy for Low to Moderate Myopia”**
M Guerin
- 12.45pm **“Comparison of Clinical Outcomes and Higher-Order Aberrations Induced Following Wavefront-Guided Laser in Situ Keratomileusis for Myopia and Hyperopia”**
M James
- 12.49pm **“Sjogren`s Reticular Dystrophy - A Case Series of 4 patients with Literature Review”**
V Jothi

- 12.53pm **“A Cellular Model of Fuchs’ Endothelial Dystrophy”**
C Kelliher
- 12.57pm **“Ocular Phenotype and Therapeutic Interventions in The Ectodermal Dysplasia Keratitis-Ichthyosis-Deafness (Kid) Syndrome”**
M Lagan
- 1.01pm **“Post Decompression Optic Neuropathy”**
H Lee
- 1.05pm **“European Cataract Outcome Study: a 10 Year Review at St. Vincent’s University Hospital”**
Q Nasser
- 1.09pm **“Do Multifocal Lens Implants Allow Spectacle Independence? A Seven Year Study”**
M O Gallagher
- 1.13pm **“Changing Indications of Corneal Graft in Ireland From 2001 – 2008”**
P Lee

Abstracts

A COMPARISON OF BEVACIZUMAB AND RANIBIZUMAB FOR THE TREATMENT OF WET AGE RELATED MACULAR DEGENERATION.

Burke T, Acheson R, Keegan D

Mater Misericordiae Hospital, Dublin

Objectives: Debate rages on using either Bevacizumab or Ranibizumab for treating wet Age Related Macular Degeneration (ARMD). We sought to compare visual outcomes in patients treated with either agent.

Methods: We performed a retrospective review of charts of patients treated for ARMD at the Mater Hospitals. Patients treated with 3 intravitreal injections of either Avastin or Lucentis, given over a four month period between June 2007 and October 2008 were included. Outcomes were determined as changes on Snellen visual acuity chart. Period of follow-up was the number of months from the last injection.

Results: In the Lucentis Group 30 eyes of 29 patients were included for study, while 16 eyes of 14 patients were included in the Avastin group. 12 patients required supplemental injections. Mean follow-up was 4.2 and 2.9 months respectively. Comparing Lucentis to Avastin respectively, 37% vs 63% showed improvement, 33% vs 19 % remained unchanged and 30% vs 19% had a reduction in their visual acuity.

Conclusions: Benefit is demonstrated using Avastin for treating wet ARMD, which is, in our patients, superior to Lucentis.

RETROSPECTIVE REVIEW OF SYSTEMIC AND OCULAR ADVERSE EVENTS FOLLOWING INTRAVITREAL BEVACIZUMAB INJECTION.

Cleary C, Hickey Dwyer M.

Department of Ophthalmology, Midwestern Regional Hospital Limerick

Objectives: Intravitreal bevacizumab is in widespread use off- label for the treatment of wet age related macular degeneration and other neovascular eye disorders, however its systemic side effects are not known. In particular there are concerns that its use may be associated with an increased risk of thrombotic events. This risk is difficult to quantify in elderly patients who are already at higher risk of cardiovascular events and stroke. The reported stroke risk in patients aged 65 to 72 is approximately 1% per year. The primary purpose of our study is to identify any systemic thrombotic events which may be related to intravitreal bevacizumab use. As a secondary endpoint we will also investigate any associated ocular adverse events.

Methods: A retrospective chart review of all patients who underwent intravitreal bevacizumab injection at the Department of Ophthalmology, Midwestern Regional Hospital Limerick, between December 2005 and January 2009. Data collection includes: patient age, diagnosis, number of intravitreal injections, any ophthalmic complications, and any systemic adverse events occurring within 6 weeks of bevacizumab injection.

Results: Two hundred charts were reviewed. There were 2 cases of transient ischaemic attack, 1 case of stroke, 2 RPE tears and 1 case of endophthalmitis.

Conclusions: In our group of patients receiving intravitreal bevacizumab injections, the incidence of thrombotic events does not appear to be significantly higher than the reported incidence of stroke in patients over 65 years of age.

AN EPIDEMIC OF OCULAR SYPHILIS

*Hogan A, Jungkim S, Kilmartin D
Royal Victoria Eye and Ear Hospital, Dublin*

Objectives: To discuss the increasing prevalence of ocular syphilis as a cause of infectious posterior uveitis in Ireland in high risk individuals

Methods: Retrospective case series of white males presenting with syphilitic posterior uveitis within a 6-month period in 2008 to the uveitis clinic at the RVEEH.

Results: Four male patients (7 eyes), mean age 48 years (43-52 years), had mostly bilateral posterior uveitis with subtle multifocal choroiditis. All were HIV negative and had a history of male sex with men (MSM) although 2 of 4 subjects initially denied this risk factor. Diagnosis by positive serology was delayed more than 3 months in 3 of 4 patients, and 2 patients were inappropriately treated with steroid monotherapy before diagnosis. At presentation, best corrected visual acuity (BCVA) was better than 6/12 in 3 of 7 eyes but deteriorated to worse than 6/60 in 4 eyes. Although all had mild non-specific choroiditis, fluorescein angiography showed widespread retinal vascular leakage and 4 eyes had optic nerve leakage. All patients had MRI and lumbar puncture which outruled neurosyphilis and were treated with high dose parenteral penicillin. Visual recovery to 6/12 or better occurred in 5 eyes.

Conclusions: Ocular syphilis is still rare but should always be considered in a differential diagnosis for posterior uveitis. Simple screening (VDRL/RPR/TPHA) can detect a treatable disease with a good potential outcome

INDICATIONS FOR PARS PLANA VITRECTOMY IN CHILDREN

*Jungkim S, Gardiner C, Saddik T, Brosnahan D, O'Keeffe M, Kilmartin D
Royal Victoria Eye and Ear Hospital, Dublin*

Objectives: To describe the clinical features and indications for vitrectomy along with surgical outcomes post 25gauge vitrectomy in children

Methods: Retrospective, non comparative consecutive case series of 22 eyes of 22 children that underwent pars-plana vitrectomy over a 7 year period. (2002 to 2008)

Results: There were 22 eyes of 22 children included in this study. 68% (n=15) were male. Mean age at time of surgery was 6.9 years (± 1.6). Indications for vitrectomy included retinal detachment (n=9), posterior uveitis (n=5), endophthalmitis (n=2), persistent hyperplastic primary vitreous (n=1), pseudophakic capsular fibrosis (n=1), X-linked retinoschisis (n=1), traumatic vitreous base avulsion (n=1) and vitreous haemorrhage (n=2). 17 vitrectomies were performed using the standard 20gauge trans pars plana approach and 5 were performed using 25gauge trans conjunctival sutureless vitrectomy (TSV25). Standard Snellen visual acuity was not recorded in 5 patients who were less than 2 years of age, however all had central, steady and maintained fixation. Best corrected visual acuity (BCVA) was 6/60 or worse in 13 of 17 eyes. Mean follow up period was 42.7 months (± 19.2). 15 eyes had an uneventful surgical outcome. 2 eyes had persistent inferior retinal detachment despite primary vitrectomy with silicone oil. 1 patient with traumatic retinal detachment was deemed inoperable during exploratory vitrectomy and a further 4 patients required a second vitreoretinal procedure (vitrectomy with silicone oil) due to re-detachment. Of the 5 eyes that underwent TSV25, none required further surgical intervention. BCVA of 6/12 or better was achieved in 2 eyes with intensive amblyopic therapy.

Conclusions: Paediatric vitreoretinal surgery constitutes a small but significant subset of patients. These complex patients can be successfully managed via the less invasive TSV25 approach. Postoperative amblyopic therapy in dedicated paediatric ophthalmic unit is vital in order to maximise final visual outcome.

COAT'S DISEASE- RESULTS OF BRITISH OPHTHALMIC SURVEILLANCE UNIT (BOSU) STUDY

Morris B, Mulvihill A.

Princess Alexandra Eye Pavilion, Edinburgh.

Objectives: Coat's Disease is a rare disease which often presents late and results in poor visual outcome. Most of our knowledge comes from the U.S. and to date little is known about the disease in Britain and Europe. This study aims to increase our understanding of the epidemiology, treatment and prognosis of Coat's disease in our population.

Methods: This is a prospective observational study of new cases of Coat's disease from January 2008 for one year. Case identification is through the British Ophthalmic Surveillance Unit (BOSU). Reporting Ophthalmologists are sent a baseline questionnaire to determine the presenting features and initial management with a later follow-up questionnaire to determine outcome.

Results: 70 reports were received. Mean presentation was 11 years (range 1-68 years). 82% of patients were male and all were unilateral. Presenting symptoms were decreased vision (38%), strabismus (21%), leucocoria (18%), detected on screening (12%) and heterochromia (3%). Visual acuity was CFs or less in 25% and remaining patients had a mean acuity of 6/18. 86% received treatment.

Conclusions: Coat's Disease can result in poor vision and a painful blind eye. This study increases our knowledge of the epidemiology, treatment and prognosis of this disease in our population.

A REVIEW OF VISUAL FUNCTION IN PATIENTS ATTENDING THE NATIONAL REHABILITATION CENTRE FOLLOWING A VARIETY OF SEVERE BRAIN INJURIES

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Objectives: To assess the final visual outcome in patients post brain trauma

Methods: A retrospective review of orthoptic records for the past year was performed. The orthoptic service was initiated in December 2007. The assessment included visual acuity, ocular movements and visual field examination. The type of brain injury, severity and history of previous ocular examination was recorded.

Results: Overall 93 patients were reviewed in the National rehabilitation centre. Of these 78 were inpatients and 36 were outpatients. The average age profile was 46 years. 72% of patients had never seen an ophthalmologist. Stroke accounted for 39% of patients, brain injury accounted for 34% and head injury accounted for 22%. There was a broad spectrum of visual complaints including visual acuity deficits, field deficits and ocular movement abnormalities

Conclusions: Visual function post brain injury is often compromised and under-diagnosed. Visual rehabilitation is an important element of neurological rehabilitation

LIMBAL STEM CELL FAILURE IN ECTRODACTYLY-ECTODERMAL DYSPLASIA-CLEFTING (EEC) SYNDROME CAUSED BY *P63* MUTATIONS.

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Objectives: The aim of this study was to report the ocular phenotype associated with Ectrodactyly-Ectodermal Dysplasia-Clefting (EEC) syndrome (MIM#604292) and determine the mutational spectrum of *p63*.

Methods: Patients with EEC syndrome from across the UK and Ireland were recruited for a general and ocular examination and *p63* mutational analysis. Mutational analysis of *p63* was performed by bidirectional sequencing.

Results: 12 families with EEC syndrome were recruited and screened for mutations in the DNA binding domain of *p63*. Sequence changes were detected in all families tested and consisted of 8 heterozygous missense mutations in *p63* causing EEC syndrome. 4 mutations were previously reported in *p63* and 4 were novel, previously unreported mutations (H208R, H208Y, R279S and R311G). All patients had ocular involvement and the major cause of visual morbidity was limbal stem cell failure which resulted in recurrent corneal ulceration, neovascularisation and /or scarring. Standard therapeutic interventions had limited success.

Conclusions: Limbal stem cell failure is the major cause of morbidity in EEC syndrome. Defective stem cell regulation results from *p63* mutations in EEC syndrome. Effective treatment requires the development of genetically modified cultured limbal epithelial stem cells.

THE EFFECTS OF 5-FLUOROURACIL AND AGARICUS BISPORUS LECTIN ON REGULATING RETINAL PIGMENT EPITHELIAL CELL WOUND HEALING ACTIVITIES

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Objectives: Following successful surgical repair, proliferative vitreoretinopathy (PVR), may result in re-detachment of the retina. Dedifferentiated and anomalous retinal pigment epithelial (RPE) cells have been implicated to play a major role in PVR. *Agaricus bisporus* lectin (ABL), a protein extracted from edible mushroom, is shown to bind dedifferentiated RPE cells. This study examines the effects of 5-FU and ABL on RPE cell wound healing processes.

Methods: ARPE-19 cells were treated with 5-FU (0.25-25 mg/ml) for 10 min or incubated with ABL (20-90 µg/ml). Cellular proliferation rate was measured by the CellTiter 96 AQueous Non-Radioactive Cell Proliferation Assay (MTS). Adhesion assay was conducted to evaluate the effects of 5-FU on cell adhesion towards collagen type I and fibronectin. Migration assay was performed with either 5-FU or ABL. The cytotoxicity of 5-FU was determined by the live/dead assay.

Results: Both ABL and 5-FU were found to inhibit cellular proliferation, adhesion and contraction in a dose-dependent manner. ABL also showed a significant inhibitory effect on cell migration at 90 µg/ml, whilst 5-FU did not. A 10-min pulse of 5-FU exposure on ARPE-19 cells did not cause significant cell death.

Conclusions: 5-FU and ABL regulate a number of the wound healing activities mediated by RPE cells.

EUROPEAN REGISTRY OF QUALITY OUTCOMES IN CATARACT AND REFRACTIVE SURGERY (EUREQUO) – WHAT IS YOUR BENEFIT?

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Objectives: The purpose of this registry is to improve treatment and standards of care for cataract and refractive surgery and to develop evidence-based guidelines for cataract and refractive surgery across Europe.

Methods: Interested surgeon or clinic can be connected to and report data to this registry by web-based forms. Once the data is recorded, it will be processed and disseminated in the entire database. The surgeon can follow his/her results over time or anonymously compare the results with other clinics. The output of data will be as frequency tables and standard graphs suitable for comparison and audit purpose.

Results: The EUREQUO will facilitate to document and collect patient examination data in daily clinical practice in a structured way. This will increase the surgeon's knowledge about the real outcomes in cataract patients with different preoperative conditions or in difficult surgery. It will also show the impact of changing technology in refractive procedures. To participate in an international database aiming at better quality of care will also benefit the surgeon when communicating with health care authorities.

Conclusions: A European Registry of Quality Outcomes in Cataract and Refractive Surgery is going to be instituted. This registry will facilitate for surgeons to monitor outcomes of cataract and refractive surgery.

THE VALUE OF DUAL BIOMETRY IN THE DETECTION AND INVESTIGATION OF ERROR IN THE PREOPERATIVE PREDICTION OF REFRACTIVE STATUS FOLLOWING CATARACT SURGERY

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Objectives; To describe the challenges inherent in the introduction of change to a high volume cataract practice, and to report the value of dual biometry in the detection and investigation of errors in ocular biometry.

Methods; *Study 1:* This was a retrospective study of 224 consecutive cataract operations performed in one centre by a single surgeon, where the intraocular lens power calculation was based on immersion biometry.

Study 2: Immersion biometry was compared to ocular coherence biometry (OCB) in terms of axial length (AL), anterior chamber depth (ACD), keratometry readings (Ks) and the recommended intraocular lens (IOL) power to achieve the closest minus result to postoperative emmetropia.

Study 3: This was a prospective study of 61 consecutive cataract operations performed in the same centre by the same surgeon, where both immersion biometry and OCB were performed, but where IOL power calculation was based on the latter.

Results; *Study 1:* This study comprised 134 eyes that met the inclusion criteria, and the mean prediction error (PE) was $+0.74 \text{ D} \pm 0.72 \text{ D}$ (range: -1.59 to $+2.89 \text{ D}$), with 115 (86%), 101 (75.4%), 90 (67.2%) and 50 (37.3%) of postoperative SEs being within $\pm 1.5 \text{ D}$, $\pm 1.25 \text{ D}$, $\pm 1 \text{ D}$ and $\pm 0.5 \text{ D}$ of the target postoperative refraction, respectively. *Study 2:* Eighty two eyes were included in Study 2, and excellent agreement between axial length readings, anterior chamber depth readings and keratometry readings by immersion biometry and OCB was observed, reflected in mean bias values of -0.065 mm , -0.048 mm and -0.3276 D , respectively. Agreement between the intraocular lens (IOL) power recommended by each technique to achieve the closest minus value to postoperative emmetropia was poor (mean bias with OCB = $+1.16 \text{ D}$), but improved greatly following appropriate modification of lens constants in the Accutome A-scan software (mean bias with OCB = -0.4 D).

Study 3: This study comprised 40 eyes that met the inclusion criteria, and the mean prediction error (PE) was $-0.0475 \text{ D} \pm 0.58 \text{ D}$ (range: -1.15 to $+1.12 \text{ D}$), with 37 (92.5 %) and 23 (57.5%) of operated eyes achieving a postoperative refraction within $\pm 1 \text{ D}$ and $\pm 0.5 \text{ D}$ of target postoperative refraction, respectively.

Conclusions; Systematic errors in biometry can exist, even in the presence of acceptable postoperative refractive results. Dual biometry allows the surgeon to scrutinise each biometric parameter in isolation, and thereby identify sources of error that may otherwise go undetected.

CALCULATION OF SURGICALLY INDUCED ASTIGMATISM IN THE ERA OF TORIC INTRAOCULAR LENSES

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Objectives: Appropriate toric intraocular lens (IOL) selection is dependent on a surgeon's individual surgically induced astigmatism (SIA). However, the meridian of the incision site may be affected by the patient's position (supine or upright). We report the impact of precise preoperative corneal markings on SIA, and its variability.

Methods: This prospective, randomised, controlled study included 100 eyes, which underwent uneventful phacoemulsification cataract surgery. In the treatment group (n=50), the clear corneal incision (CCI) was placed precisely at the 120° meridian, with instruments specifically designed for this purpose. In the control group (n=50), the surgeon endeavoured to place the incision at the 120° meridian, but without markings. The SIA for both groups was calculated using the arithmetic and polar analysis methods, and the variability between both groups was also compared.

Results: The mean absolute SIA in the exact CCI group was 0.36D and the variance of SIA was 0.25. The mean absolute SIA in the estimated CCI group was 0.52D, with variance of SIA of 0.36. The difference in variance of SIA between the two groups was statistically significant (p<0.05).

Conclusions: This study has demonstrated that precise CCI location impacts upon SIA calculation and thus potentially upon toric IOL power selection.

ULTRAVIOLET-RIBOFLAVIN COLLAGEN CROSSLINKING IN KERATOCONUS

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Objectives: To describe the technique of ultraviolet-Riboflavin collagen crosslinking and to evaluate the outcome in patients with keratoconus treated with it in our unit.

Methods: Retrospective Review of 15 patients treated over the past year. Preoperative assessment and postoperative follow-up were documented as follows. Uncorrected and corrected visual acuity keratometry refraction corneal thickness and corneal topography were documented at each visit.

Results: Mean followup 6 months (range 2 to 11). BCVA and keratometry remained stable in all patients with no further progression of the disease on pentacam corneal topography.

Conclusions: Ultraviolet-Riboflavin collagen cross-linking is a promising new method to treat keratoconus. Further follow-up of our patient cohort will be required to assess its long-term effects.

1. Wittig-Silva C et al. Collagen crosslinking with riboflavin and ultraviolet-A light in keratoconus: long-term results. *J Refract Surg* 2008Sep;24(7):S720-5
2. Raiskup-Wolf F et al. Collagen crosslinking with riboflavin and ultraviolet-A light in keratoconus:

INFORMED CONSENT in REFRACTIVE EYE LASER SURGERY: PERSPECTIVES of PATIENTS and THE COURTS

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Introduction; Refractive laser surgery is one of the most commonly performed procedures worldwide. In an increasingly litigious society, patients are frequently turning to the courts to seek redress for adverse outcomes. With the doctrine of informed consent often central to such lawsuits, we examine the attitudes, recall and understanding of patients to informed consent for LASIK and LASEK and outline relevant caselaw.

Methods; Prospective randomised study involving 102 patients undergoing first time LASIK or LASEK surgery. Patients answered anonymous questionnaires pertaining to their preoperative consenting process. Answers were then analysed to examine recall and understanding of the consenting process.

Results; 2% of patients remembered all risks outlined to them preoperatively, while 4% remembered no risks at all. Patients felt that diagrams and ocular models aided the consent process considerably, and most overwhelmingly favoured bringing the consent form home and signing it there. The average time spent reading it was 9 minutes. Patients regularly confuse LASEK and LASIK due to the similar sounding names.

Conclusion; Evidence suggests Irish courts favour a patient centred approach and impose a strict 'reasonable patient' approach in consenting for elective procedures. The surgeon must disclose all known risks of grave consequence or severe pain, no matter how remote, thus ensuring that a patient can make a real choice. A signed consent form is, of itself, no defence to allegations of uninformed consent, and the consent process must comprehensively encompass verbal, written and diagrammatic guidance.

ANTIGEN MICROARRAY PROFILING OF SERUM AUTOANTIBODIES IN PSEUDOEXFOLIATION GLAUCOMA

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Objectives: To screen serum for circulating autoantibodies (IgGs) from patients with pseudoexfoliation glaucoma and age and sex matched controls. This is to identify possible disease associated antigens and markers for the disease.

Methods: We profiled sera from 21 patients with PEX and 19 age and sex matched controls using high-density protein arrays of the expression libraries of fetal brain cDNA (hEX1), which expresses 10,000 different His-tagged recombinant proteins from 37,000 bacterial clones

Results: We have identified 5 statistically significant (Fisher exact test - $p < 0.05$) disease associated antigen markers. These antigens include three novel transmembrane proteins of unknown function and two antigens, fibroblast growth factor receptor 3 and complement component 3, which are linked to neural development and degeneration.

Protein Name	Gene ID	Glaucoma (n=21)	Control (n=19)	P-value
Transmembrane and coiled domain-containing protein	C6orf129	10	2	0.016
Complement component 3	C3	6	0	0.021
Transmembrane protein 9 domain family, member B	TMEM9B	9	2	0.034
Fibroblast growth factor receptor 3	FGFR3	7	1	0.046
Cleft lip and palate transmembrane protein 1	CLPTM1	5	0	0.049

Conclusions: We have identified proteins for further investigation into the pathogenesis of pseudoexfoliation and glaucoma and for the development of novel biomarkers.

AHMED VALVE DRAINAGE IMPLANT IN PAEDIATRIC REFRACTORY GLAUCOMA – EFFICACY AND COMPLICATIONS

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Objectives: Paediatric glaucoma is potentially sight threatening and often refractory to treatment. Results of surgery are poor and many children require multiple procedures in an attempt at controlling the intra-ocular pressure (IOP). The objective of this study is to analyse the efficacy of IOP control and complications related to Ahmed Valve implantation.

Methods: In this retrospective study, 45 children (some with involvement of both eyes) who underwent Ahmed Valve (Model S-2) implantation were analysed. The operation method, outcome of surgery, efficacy of the valve, adjunctive procedures carried out, and short and long term complications were documented, and discussed.

Results: Good IOP control was achieved in the majority of cases. In some children, valve implantation had to be combined with medical therapy, cycloablative procedures or both. Complications ranged from repeated enhancements of the valve to complete removal.

Conclusions: Ahmed Valve Implantation in paediatric glaucoma is safe and offers a higher rate of success than the conventional trabeculectomy. Ahmed Valves alone can achieve good IOP control, however combination with medical therapy and/or other procedures are usually required. Complications, some of which serious and sight threatening are not uncommon, and hence children with Ahmed Valves have to be followed up closely with regular examinations under anaesthesia.

A COMPREHENSIVE ANALYSIS OF EYE BANK-PREPARED POSTERIOR LAMELLAR CORNEAL TISSUE FOR USE IN ENDOTHELIAL KERATOPLASTY.

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Objectives: To assess eye bank-prepared corneal tissue with regards to the accuracy of post-cut tissue thickness, endothelial cell loss, and rate of successful processing.

Methods: Details of all 913 corneal tissues processed with an automated microkeratome for use in posterior lamellar transplantation, over a one-year period, were obtained from a large eye bank. The number and success rate of all attempted cutting procedures was analyzed. The thickness of the corneal button obtained following cutting was compared with the graft thickness requested by the operating surgeon. Changes in endothelial cell density during tissue processing were evaluated.

Results: The rate of successful tissue preparation increased over the time period examined, from 95% in the first quarter to 99.5% in the fourth quarter. Graft material was frequently slightly thicker than requested by the operating surgeon, with 28.3% of tissues cut thicker than requested. Post-cut endothelial cell density (ECD) over the entire period increased by an average of 4.7%, and was closely related to the starting ECD.

Conclusions: There was a very high rate of successful tissue preparation (98.5%) and early failed attempts at tissue cutting were likely due to the initial learning curve of the involved technicians. Practical considerations result in tissue being cut marginally thicker than requested; this is an issue about which the operating surgeon should be aware, as it may possibly influence tissue handling. The quality of the obtained material, as measured by ECD, was excellent, although the calculated ECD may be prone to measurement artifact.

THE EFFECTS OF ACUTE CIGARETTE SMOKE EXPOSURE ON RETINAL PIGMENT EPITHELIAL CELLS (ARPE-19).

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Objectives: Age-related macular degeneration (AMD) is the leading cause of visual impairment in people over 65 in the Western world. Cigarette smoking is the most significant environmental risk factor in the development of the disease. We hypothesise that cigarette smoke exerts its pathological effects in AMD by altering the balance of vasoactive growth factors expressed by the retinal pigment epithelium. We have investigated the effects of smoke on vascular endothelial growth factor (VEGF), basic fibroblast Growth Factor (FGF-2) and pigment epithelium-derived factor (PEDF) in a cell line.

Methods: The commercially available RPE cell line (ARPE-19) was cultured and maintained post confluence prior to experimentation. Cells were exposed to smoke concentrations equivalent to light, moderate and heavy cigarette consumption. Post exposure cell responses were analysed by MTS assay, Immunohistochemistry, Western blot, ELISA and real time PCR techniques.

Results: Acute smoke exposure does not alter the morphology of confluent RPE cell layers nor does it decrease cell viability. However, VEGF secretion is significantly suppressed by smoke at 24, 48 and 72hour exposure protocols (Statistical analysis ANOVA $P < 0.05$). Conversely, FGF-2 secretion is significantly increased by smoke exposure. Cellular secretion of PEDF did not show a significant change.

Conclusions: Cigarette smoke exposure has a significant effect on protein expression from retinal pigment epithelial cells. This loss of balance between angiogenic factors may facilitate the growth of new vessels in AMD.

COMPARISON OF CIRCULATING GROWTH FACTORS WITH SEVERITY OF DIABETIC RETINOPATHY.

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Objectives: To determine the circulating levels of angiogenic factors in diabetic patients with varying severity of diabetic retinopathy.

Methods: Blood samples from diabetics with no retinopathy, patients with non-proliferative diabetic retinopathy, patients with proliferative diabetic retinopathy and non-diabetic controls were taken for the study. Previously we have carried out a pilot study and identified higher levels of multiple growth factors that may be associated with progression of diabetic retinopathy using an antibody array platform (RayBio® Human Angiogenesis Antibody Array C Series 1000). We found raised chemokines Growth Regulated Oncogene (GRO)-alpha/CXCL1 and Epithelial Neutrophil Activator (ENA)-78/CXCL5 which are novel in the context of proliferative diabetic retinopathy. In this study, we recruited a large sample of patients and performed Enzyme-linked immunosorbant assays (ELISAs) to validate changes in the levels of these chemokines.

Results: We found higher levels of ENA-78 and GRO-alpha with progression of severity of diabetic retinopathy.

Conclusions: The present study indicates that chemokines ENA-78 and GRO-alpha may play pivotal roles in the pathogenesis of diabetic retinopathy. Targeting these chemokines may be beneficial in the management of proliferative diabetic retinopathy in the future.

EFFECT OF ALLERGIC CONJUNCTIVITIS ON EARLY POST-KERATOPLASTY CORNEAL INFLAMMATION AND LYMPHANGIOGENESIS

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Objectives: Perioperative allergic inflammation accelerates the tempo of corneal allograft rejection. This study examines the effect of allergic conjunctivitis on the early inflammatory response and lymphangiogenesis in host cornea following corneal transplantation.

Methods: Corneal allografts were performed in naïve mice and in mice with allergic conjunctivitis. Allergic recipients were treated with twice daily saline or dexamethasone 0.1% drops. Mice were killed at days 2 and 6; corneal sections were examined by fluorescence immunohistochemistry using anti-CD11b, anti-F4/80, anti-Gr-1 antibodies or by wholemount staining with anti- LYVE-1. Cells were counted and cumulative lengths of lymphatic ingrowth were measured using image analysis software.

Results: In allergic recipients of allografts there were significantly higher numbers of CD11b+ cells and LYVE-1 vessels in the host cornea at day 2 compared with naïve recipients. There were no differences between naïve and allergic recipients in CD11b and LYVE-1 staining in host cornea at day 6. In allergic eyes, twice daily treatment with topical dexamethasone significantly inhibited lymphatic ingrowth at days 2 and 6. Early post-operative treatment with topical dexamethasone extended graft survival significantly in eyes with allergic conjunctivitis.

Conclusions: The innate immune response to allogeneic corneal tissue is more vigorous in the presence of allergic conjunctivitis than in naïve eyes. This is associated with accelerated lymphatic ingrowth to host cornea. Topical dexamethasone inhibits lymphatic ingrowth and this may be one of the mechanisms by which dexamethasone enhances graft survival.

THE CHILDREN WE SEE – PAEDIATRIC REFERRALS TO A COMMUNITY OPHTHALMIC CLINIC

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Aim: To establish the referral pattern of children presenting to the Community Ophthalmology clinic in Cavan

Methods: A retrospective study was carried out of all the children from birth to end of primary school seen by the two Ophthalmologists in Cavan for the first time in the six months between January and June 2008. 225 children were included in the study.

Results: “Best Health For Children” lays out the referral criteria to be used in Paediatric Ophthalmology screening in Ireland. We will demonstrate the correlation between referral reason and initial findings at clinic, and will show the significance of accurate questioning re parental concern and family history. Family history taking must be accurate and considered in conjunction with parental concern about the patient. A large percentage of preschool children were found to be normal, this is of concern in a situation of long waiting lists and suggests screening procedures need to be improved.

SWEETEN, SOOTHER AND SWADDLE FOR RETINOPATHY OF PREMATURITY SCREENING

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Objectives: To assess the efficacy of oral sucrose combined with non nutritive suck and swaddling for retinopathy of prematurity screening.

Methods: A prospective double blind randomised controlled trial. Infants were randomised to either sucrose or placebo (sterile water). The study was carried out on the first screening examination for each infant. Eye examinations were carried out by one of two experienced ophthalmologists using indirect ophthalmoscopy utilising speculum and scleral indentation. Both solutions were clear and colourless. The ophthalmologist, nurse recording data and personnel scoring the N-PASS (Neonatal Pain Agitation and Sedation Scale) were unaware of group assignment. Examinations were video recorded and physiological data obtained using Bedmaster system. Local institutional review board approval was obtained and informed parental consent was obtained. Data analysis was performed using Stats Direct.

Results: There were 34 patients enrolled. Complete data was available on 31 infants, 12 in sucrose group and 19 in placebo group. Following speculum insertion the mean NPASS score was lower in the sucrose group (4.3 vs. 5.8, p value 0.05). During the eye examination, the mean NPASS score was lower in the sucrose group (6.6 vs. 8.0, p value 0.06). Three babies in the placebo group had a bradycardia (heart rate less than 100) compared to one in the sucrose group.

Conclusions: Retinopathy of prematurity screening is associated with an increase in pain scores using a validated pain scoring system. The administration of sucrose in conjunction with swaddling and nonnutritive suck is associated with a reduction in pain score and improves overall physiological stability during the procedure.

Posters

AMELANOTIC CHOROIDAL MELANOMA PRESENTING AS STRABISMUS IN A 7 YEAR OLD GIRL

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Objectives: A seven year old girl presented with a history of recent onset left esotropia. She was a low hypermetrope and attended her ophthalmologist for refraction 18 months previously with a normal eye exam. She had no previous medical history. Her mother had neurofibromatosis type 1 and previous excision of a cutaneous melanoma. Visual acuity was 6/6 OD and 6/60 OS. Dilated fundoscopy revealed a large white well circumscribed superotemporal fundal mass in the left eye. This was associated with an extensive exudative retinal detachment involving the macula. There was no extrascleral extension. There was significant hyperfluorescence on fluorescein angiography and the possibility of a variant of Coats' was considered. There was no response to argon laser treatment. A trans-scleral local resection was performed and histological analysis revealed a low grade amelanotic melanoma. Adjuvant plaque brachytherapy was administered.

Choroidal melanomas are exceedingly rare in the paediatric population. They are generally sporadic but in very occasional circumstances may be associated with a number of conditions such as neurofibromatosis, ocular melanocytosis and cutaneous dysplastic naevus syndrome. It is logical to postulate a link between melanomas and neurofibromatosis as both involve tumors of tissues derived from the embryological neural crest. There is limited data on the long term follow up of choroidal tumors presenting in childhood but the reported 5 year follow up data of 96 – 100% is encouraging.

PROGRESSION OF DIABETIC RETINOPATHY IN PREGNANCY

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Objectives: To evaluate the progression of diabetic retinopathy in pregnancy in Type 1 and Type 2 diabetics and associated factors.

Methods: Multicentre retrospective study reviewing computerised and paper records from 2006 until present of type 1 and type 2 pregnant diabetics. Retinopathy classified into 5 stages and progression defined as worsening of one step or more. Parameters investigated include : 1) Retinopathy pre pregnancy, at each trimester, post partum; 2) HbA1C; 3) B.P. control; 4) Duration of diabetes; 5) Body Mass Index (BMI); 6) Foetal outcomes; 7) Planned/Unplanned pregnancy and 8) Prior miscarriages.

Results: No diabetic retinopathy was found in 63% of Type 1 diabetics pre pregnancy. 18% did not develop any. 50% developed Background Diabetic Retinopathy (BDR). 27% developed proliferations requiring laser during pregnancy. Predictive factors were history of hypertension (HTN) or development of pre-eclampsia, diabetes of greater than 20 years, raised BMI's and most importantly dramatic decrease in HbA1C in early stages of pregnancy. Type 2 diabetics had no retinopathy and showed very minimal progression in pregnancy. Interestingly planned or unplanned pregnancies did not appear to affect retinopathy but directly affected foetal outcomes. Greater than 50% of Type 1 and Type 2 had miscarriages.

Conclusion: Development of progression of diabetic retinopathy is a risk in all diabetics, particularly Type 1's. As expected those with diabetes of long duration, associated HTN, and with high HbA1C pre or early pregnancy are at greater risk. It is noteworthy that BMI >25 is associated with increased risk of proliferation during pregnancy in our study. Therefore it should be included with other known risk factors.

PARANEOPLASTIC RETINOPATHY ASSOCIATED WITH GASTRIC CANCER: A RARE CASE.

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Objectives: To report gastric carcinoma as a rare cause of cancer associated retinopathy

Methods: Case Report

Results: A 46 year old lady presented with blurred vision in left eye of one week duration. Ocular examination revealed vision of 6/6 in the right and 6/24 unaided in the left eye, impaired colour vision, no RAPD, normal optic discs and sub retinal fluid at macular area left eye.

Laboratory investigations showed low haemoglobin (6.1). She was investigated and an upper GI endoscopic biopsy showed adenocarcinoma of stomach on histopathology. Staging CT revealed possible liver metastases and nodal disease. Lymph node biopsy performed at laparotomy demonstrated metastatic adenocarcinoma.

Her vision deteriorated in both eyes, and she developed subretinal fluid in macular area and mid periphery with mottling of retinal pigment epithelium. Fluorescein angiography showed patchy staining of mid peripheral fundus and hyperfluorescent spots at the posterior pole with sub retinal fluid bilaterally.

Conclusions: Cancer associated retinopathy is a manifestation of paraneoplastic syndrome. It is believed to be caused by auto antibodies directed at various retinal components resulting in progressive loss of vision, night blindness, impaired colour vision, visual field constriction, and attenuation of electroretinogram. It is associated with small cell lung cancer, some gynaecologic and breast cancers, and less commonly prostate, bladder and colonic cancers. Visual impairment occurs before malignancy is detected in most cases. It is extremely rare secondary to gastric carcinoma.

PHENOTYPE AND MOLECULAR GENETICS OF PRPF8 RETINITIS PIGMENTOSA

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Objectives: PRPF8 is a splicing factor that is expected to be involved in the basic DNA replication of all cells. It is unknown why these mutations only seem to cause an isolated retinal dystrophy. We describe the clinical and genetic findings in a patient with Retinitis Pigmentosa caused by a mutation in this gene.

Methods: The clinical findings of a child with a mixed photoreceptor dystrophy are described in detail. Also, the laboratory findings are described along with a yeast laboratory model for this condition. Reference is made to a larger study that we are involved in that describes the differences in phenotype severity with different mutations.

Results: This paper describes a mutation in the highly conserved PRPF8 gene. Correlation in phenotype severity is demonstrated using a yeast model.

Conclusions: This paper helps us to understand further the cause and effect of mutations in this gene

DISTRIBUTION OF HIF-1 ALPHA AND HIF-2ALPHA EXPRESSION IN THE HUMAN POSTERIOR SEGMENT

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Objectives: It is known that up regulation of pro-angiogenic cytokine expression occurring secondary to chronic hypoxia in physiological and pathophysiological conditions is mediated by the transcription regulators known as hypoxic inducible factors (HIF). The present study was undertaken to investigate the presence of HIF-1 alpha and HIF-2 alpha in normal human retina.

Methods: Six human globes were fixed in formalin, embedded in wax and serially sectioned for histochemical and immunohistochemical evaluation. Immunohistochemical analysis with secondary antibody amplification used monoclonal antibodies against markers for HIF, VEGF, CD34, RPE cytokeratins and CD68.

Results: Cellular immunoreactivity for members of HIF-1 alpha was found in none of the 6 specimens studied while HIF-2 alpha was found in all samples. Histochemical analysis revealed the immunoreactivity to be co-localized with RPE cells and not the vascular or neural retina. Areas of the central retina were found to have increased immunoreactivity for HIF-2 alpha in the RPE monolayer compared to cells at the periphery.

Conclusion: Hypoxia may play a role in the development of angiogenesis and localization of HIF-2 alpha expression in RPE cells in the central region of the retina suggests that HIF-2 alpha may be involved in this angiogenic mechanism.

AN AUDIT OF CLINICAL PRESENTATION, INVESTIGATION, AND MANAGEMENT OF TEMPORAL ARTERITIS OVER A 10 YEAR PERIOD.

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Objectives: To compare clinical presentation, method of diagnosis, treatment and outcome of temporal arteritis with current literature. Adherence to published osteoporosis prevention guidelines in long term steroid use in this patient group was also audited and recommendations made.

Methods: A retrospective case review identified 50 patients, diagnosed with temporal arteritis, between 1998 and 2008 within the Department of Ophthalmology, RVH, Belfast. Each case was reviewed and the following documented and audited: signs, symptoms, management, biopsy status, treatment and glucocorticoid – induced osteoporosis prophylaxis.

Results: The percentage of our patients biopsied was comparable with published data. The positive biopsy rate was also comparable with published rates. Initial intravenous treatment was commenced in 25%. Despite clear glucocorticoid induced osteoporosis guidelines only 22% of patients were prescribed osteoporotic prophylaxis on discharge.

Conclusions: Current management, biopsy rate and biopsy result compared with published data. However increased knowledge and adherence to glucocorticoid induced osteoporosis guidelines would reduce risk of morbidity from treatment of temporal arteritis.

CLOSTRIDIUM PERFRINGENS ENDOPHTHALMITIS FOLLOWING PERFORATING EYE INJURY

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Objectives: To Report Clostridium Perfringens as a rare causative organism of endophthalmitis.

Methods: Case Report

Results: A 59 year old male presented with endophthalmitis, following a perforating eye injury from pulling out a wire that was embedded in the ground. On presentation, his vision was PL. Tetanus toxoid was given, and he was commenced on ciprofloxacin.

A primary repair was performed. Conjunctival swabs, discharge from wound site and anterior chamber aspirate were sent for culture. The eye was tense and the anterior chamber was full of a gelatinous brown substance which precluded performance of vitrectomy. Intravitreal vancomycin and ceftazidime was given. Hourly topical fortified vancomycin and ceftazidime was given.

Post operatively, the patients vision remained PL with no evidence of improvement. On day 2, clostridium perfringens was cultured. The patient was commenced on intravenous benzylpenicillin and clindamycin. Intravitreal clindamycin and vancomycin was administered. The patient was NPL on day 3. There was no evidence of response to treatment and an evisceration was performed on day 6.

Conclusions: There are 6 signs of clostridium perfringens endophthalmitis. Infection is rapid in onset with severe pain, brawny swelling of eyelid, early rise in ocular tension, coffee coloured discharge and gas bubbles in the anterior chamber and rapid development of total amaurosis.. Aggressive treatment with vitrectomy, intravitreal and systemic antibiotics may result in preservation of the globe. In cases where vitrectomy is not possible, outcomes remain poor.

INCONTENTIA PIGMENTI- IS IT ALL IN THE GENES?

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Objectives: In this study we present the ocular findings in a series of patients that presented to Our Lady's Hospital Crumlin over the past thirty years. We investigate the relationship between their genotype ie the presence or absence of the common Nemo gene deletion and their ophthalmological findings. We also propose a rational for timing of ocular examination to detect retinal changes which may result in retinal detachment based on our findings and literature review.

Methods: All patients who attended the dermatology and genetic clinic in our Lady's Hospital Crumlin for Incontinentia Pigmenti were contacted and invited to attend the eye clinic for ocular assessment. Ocular assessment involved 1. Visual acuity assessment 2. Orthoptic assessment. 3. Anterior segment examination 4. Dilated fundal examination 5. Retinoscopy

Results: Nine patients have been reviewed in the study. Genetic testing has been performed on six patients three of which are positive for the Nemo gene. Two patients developed unioocular retinal detachments within the first year of life (Both nemo +). The fellow eye has remained asymptomatic with mild retinal changes. One other patient had poor vision secondary to corticovisual impairment. 44% of patients developed strabismus. The visual acuity in all the other patients has remained normal. Flourescein angiography has been performed in one patient showing the characteristic abnormal vascular pattern.

Conclusions: Incontinentia Pigmenti can be a devastating condition with serious neurological and visual impairment. Retinal detachment occurs early and babies with the condition need intensive monitoring in the first year of life. Retinal photoablation in selected cases may prevent retinal detachment. The incidence of strabismus exceeds the incidence in the general population and therefore these children need follow up.

CENTRAL SEROUS CHORIORETINOPATHY IN PREGNANCY: A CASE SERIES

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Objectives: To report a series of three patients who presented to the Eye department with Central Serous Chorioretinopathy (CSR) in the third trimester of pregnancy. Pregnancy is usually associated with ocular changes, most often transient in nature, though occasionally permanent. The ocular effects of pregnancy may be divided into physiologic changes, pathologic conditions or modifications of pre-existing conditions. Pathologic conditions include entities such as pre-eclampsia and eclampsia, along with conditions that are seen with increased frequency during pregnancy such as central serous retinopathy. The most significant modified pre-existing condition is diabetes mellitus.

Methods: A case series

Results: CSR resolved spontaneously in all three patients following uneventful delivery.

Conclusions: CSR in pregnancy can be quite alarming condition due to visual disturbances. However, patients can be reassured of the usual benign course of CSR. Optical Coherence Tomography (OCT) is a useful tool in making the diagnosis of CSR. Its efficacy is further emphasized by its safety in pregnancy.

CASE SERIES OF RAPID PROGRESSION IN DIABETIC RETINOPATHY

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Objectives: This poster describes the clinical presentation of rapidly progressive diabetic retinopathy and the effects on visual acuity, visual fields and fundal appearance in three patients who had concomitant tightening of the glycaemic control.

Methods: Retrospective case review of visual acuity assessment, visual fields and fundal appearance and correlating the clinical progression with the rate of reduction of HBA1C; reflecting the associated rapid tightening of glycaemic control.

Results: All three patients presented with VF defects, bilateral papillitis and reduced visual acuity. The patient's initial HBA1C was 7.5% / 13.4% / 15.5%. The rate of HBA1C reduction per month was 0.4% / 1.45% / 1.2%.

Conclusions: Reduction in HBA1C can be associated with rapid progression of diabetic retinopathy causing deterioration in visual acuity and visual defects. This clinical problem should be recognised by ophthalmologists and physicians involved in managing diabetic patients.

PREVALENCE OF OPHTHALMIC FINDINGS IN THE DUBLIN PAEDIATRIC COCHLEAR IMPLANT GROUP

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Objectives: To determine the nature and prevalence of ophthalmologic abnormalities in children with congenital or prelinguistic sensorineural deafness who had cochlear implants.

Methods: Retrospective analysis of case notes of 62 children aged 2 to 12 years from the Dublin Cochlear Implant Program who were referred for assessment to our ophthalmology department.

Results: Of 62 children, 41% had some form of ophthalmologic abnormality, with the majority being refractive errors. Of 62 patients, two had strabismus and one had nystagmus. One child had cataracts, one child had iris heterochromia (Waardenburg's syndrome) whilst another child had external adnexal anomalies.

Conclusions: All children referred for cochlear implantation should be seen by the ophthalmology service as soon as possible.

TRAUMATIC IRIDOSCHISIS

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Purpose: To report a case of iridoschisis secondary to concussive eye trauma. The angle recession glaucoma which followed was duly treated first conservatively and later surgically.

Methods: A serial and detailed twenty seven year examination, treatment, visual field assessment and follow up of the traumatic iridoschisis and its consequences were carried out.

Results: A 28 year old man presented following blunt trauma to his right eye. The visual acuity of the affected eye was 6/6. The pupil was distorted with some loose anterior iris fibres found lying in the anterior chamber angle. Traumatic iridoschisis with angle recession was diagnosed and despite regular follow-up uncontrolled IOP with glaucomatous disc change was noted 5 years following the injury. This was initially treated medically, but a trabeculectomy was necessary 12 years after presentation and the IOP was subsequently well controlled. Serial follow up examinations were performed every 3-6 months with annual visual fields, gonioscopy and IOP examination. Presently, the BCVA (RE) remains 6/18; Visual fields remain significantly constricted but the affected eye remains quiet with well controlled IOP.

Conclusion: An uncommon condition, iridoschisis is found mainly in the senile population where a degenerative split in the mid iris stroma results in separation between anterior fragmented iris fibres and the posterior iris fibres adherent to the dilator muscle. Traumatic iridoschisis is rarely seen, but typically occurs in young adults with concussive eye trauma. Very few similar cases have been reported.

COMPARISON OF LIMBAL VS FORNIX CONJUNCTIVAL INCISION IN PAEDIATRIC STRABISMUS SURGERY- A RANDOMISED PILOT STUDY

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Objectives: To see whether Fornix (cul-de-sac) incision provide better post-operative comfort and cosmesis than Limbal incision in paediatric strabismus surgery?

Methods: Twenty children who underwent bilateral symmetric horizontal muscle surgery were randomised to receive either a fornix or limbal incision. Surgeon was made aware of the type of incision to be used only at the start of the surgical procedure. The outcome measures were post-operative pain and 'redness/cosmesis'. Parents/carers reported the outcomes at day 1, 3 and 7 of post-operative period using a validated pain score and 'redness/cosmesis' chart.

Results: There was no statistically significant difference in the pain scores between the two groups. Redness/cosmesis scores were better with fornix incisions and difference is statistically significant($p=0.016$).

Conclusions: This pilot study has shown better 'redness/cosmesis' scores with a fornix incision for paediatric strabismus surgery and warrants a larger trial to clarify the issue better.

BOSTON KERATOPROSTHESIS – THE EYE AND EAR EXPERIENCE

Brady J, Power W

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Objectives: To evaluate the use of the Boston Keratoprosthesis in the Eye and Ear Hospital over a ten year period

Methods: A Retrospective review was carried out on 16 patients who received keratoprosthesis over the last 10 years. The preoperative operative and postoperative findings were recorded. Prosthesis retention, BCVA and postoperative complications were noted.

Results: Mean age was 67 (range 43–85). Preoperative visual acuity was less than or equal to HM in all cases. A range of preoperative diagnoses were recorded including previous herpetic keratitis, ocular cicatricial pemphigoid, interstitial keratitis and lime burns. Mean follow-up was 14 months. Post operative vision at one year ranged from 6/9 to NPL. Poor post operative vision was accounted for by preoperative comorbidity including amblyopia and glaucoma as well as postoperative complications. These included two cases of endophthalmitis and one case of post op inflammation with retroprosthetic membrane. One patient represented with iris prolapse and graft rupture post assault.

Conclusions: Keratoprosthesis is a viable option in patients with previously multiple failed grafts but is not without complication.

MUTATIONAL ANALYSIS OF COL8A2 IN KERATOCONUS AND POSTERIOR POLYMORPHOUS CORNEAL DYSTROPHY.

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Objectives: Mutations in collagen, type VIII, alpha-2 (COL8A2; MIM#120252) have been reported in posterior polymorphous corneal dystrophy (PPCD) and Fuch's endothelial corneal dystrophy (FECD). The role of COL8A2 in PPCD and FECD remains controversial. While PPCD and keratoconus (KC) involve different layers of the eye, PPCD has been associated with KC in several reports. The purpose of this study was to comprehensively screen COL8A2 in PPCD and KC patients.

Methods: All patients had a full ophthalmic examination and the diagnosis of keratoconus and PPCD was made on the basis of clinical examination, a history of keratoplasty for KC/PPCD and corneal topography. Mutational analysis of COL8A2 was performed by direct cycle sequencing, in a multinational PPCD and KC patient cohort.

Results: Three sequence variants were detected in COL8A2. A novel change, Ile171Val (c.514A>G) was detected in posterior polymorphous corneal dystrophy. A previous reported pathogenic mutation in Fuch's endothelial dystrophy, Arg155Gln (c.464G>A) was detected in a patient with keratoconus from Canada. A previous reported pathogenic mutation in PPCD Thr502Met (c.1505C>T) was detected in a Canadian patient of Filipino ethnicity affected with PPCD. None of these variants were detected in Caucasian controls. Arg155Gln and Thr502Met are seen in unaffected Japanese patients and may represent racial polymorphisms. Filipino controls for Thr502Met are under assessment.

Conclusions: Mutations in COL8A2 play a minor role in the pathogenesis of posterior polymorphous corneal dystrophy and keratoconus, and are racially polymorphic.

DSAEK – CONTRAINDICATED IN CHED?

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Objectives: Congenital Hereditary Endothelial Dystrophy (CHED) was first described by Maumenee in 1960 as a congenital anomaly of the corneal endothelial cells resulting in severe corneal opacification, impaired vision and nystagmus. Penetrating keratoplasty, for many years, has been the surgical treatment of choice for visual rehabilitation of such patients. In recent times, tremendous progress has been made to improve the technology of deep lamellar keratoplasty. Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK), has now become the preferred treatment for corneal endothelial dystrophy with quicker visual rehabilitation and an improved safety profile.

Methods: We describe the history and surgical intervention to replace this defective endothelial layer in two such patients with CHED who underwent DSAEK in 2008 at the Royal Victoria Eye and Ear Hospital in Dublin.

Results: All patients sustained early graft dislocation within the first post-operative week in spite of having straightforward, uncomplicated surgery and receiving good quality graft material. Penetrating keratoplasty was subsequently performed on both patients.

Conclusions: We propose that a mechanical aetiology in the form of nystagmus, associated predominantly with the autosomal recessive form of CHED, impairs the ability of the graft to remain centered from the moment the patient has recovered from anaesthesia. We would recommend that DSAEK, in its current format, is unsuitable in CHED patients with nystagmus.

PHACO MODULATION WITH BAUSCH & LOMB'S MILLENNIUM CUSTOM CONTROL SOFTWARE (CCS): EASE OF USE AND EFFICIENCY.

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Objectives: Endothelial damage due to thermal and mechanical side effects of phacoemulsification (phaco) is a well known complication. Is phaco modulation with Custom Control Software (CCS) easy to use and does it improve safety of surgery?

Methods: 161 cataract surgeries performed by 10 surgeons (8 skilled, 2 new) were analysed. Of the 8 surgeons using traditional continuous phaco, 2 (1 skilled, 1 new) subsequently switched to CCS without changing surgical techniques or decreasing maximum phaco power. Phaco parameters including average power, total duration and effective phaco (total energy) of continuous phaco vs CCS for all cases and specifically for the 2 surgeons who switched to CCS were compared (Student t-test).

Results: Although new surgeons used >40% extra phaco energy than skilled surgeons, CCS reduced phaco energy usage of both surgeons who switched to CCS by >40% (n=70, p<0.03). Switching to CCS did not slow the surgery. Better fluidics associated with CCS allows for lower phaco power during segment removal. Lower phaco power and chop techniques lead to even further improvement in the abovementioned phaco efficiency.

Conclusion: CCS improves safety of phaco. This is especially important during surgical training and when the lens is dense. CCS is easy to use, does not slow surgery and does not require any change in technique.

A NOVEL RATIO TO PREDICT POSTOPERATIVE INTRAOCULAR PRESSURE FOLLOWING PHACOEMULSIFICATION

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Objectives: It has been shown that the reduction in intraocular pressure (IOP) following cataract surgery is positively related to preoperative IOP, and inversely related to preoperative anterior chamber depth (ACD). This has been described as the Pressure to Depth Ratio (PD ratio). We prospectively investigated changes in ACD, central corneal thickness (CCT) and IOP following uneventful phacoemulsification cataract surgery, and also investigated whether there were demonstrable relationships between any observed changes in these parameters.

Methods: One hundred eyes undergoing uneventful phacoemulsification cataract surgery were included in this study. As well as IOP, the following anterior segment anatomic parameters were measured pre- and post-operatively: ACD; CCT.

Results: The ACD increased by a mean of 1.13mm. Uncorrected IOP dropped by a mean of 2.75mmHg following cataract surgery. Our results confirmed the PD ratio ($p < 0.05$). We have also shown a new ratio, where $(\text{preoperative IOP})/(\text{preoperative CCT})/(\text{Preoperative ACD})$ is significantly correlated with changes in postoperative IOP ($p < 0.05$), this is termed the PCD ratio.

Conclusions: Our findings confirm the PD ratio. By incorporating the CCT, we have further refined this relationship. This new PCD ratio will help to predict the post-operative change in IOP following cataract surgery.

MECHANICAL ENDONASAL DACRYOCYSTORHINOSTOMY

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Objectives: To evaluate the efficacy of an enhanced endonasal DCR technique involving the fashioning of a large bony ostium and preservation of the lacrimal and nasal mucosa (described initially by Tsirbas et al¹).

Methods: A retrospective review was carried out of all endoscopic DCRs carried out using this technique from April 2008. These were carried out by one surgeon (RK). We excluded patients who had undergone previous lacrimal surgery. Post operative follow-up included assessment of symptomatic control and endonasal exam.

Results: 22 cases were included. Mean age at time of surgery 61 (range 47-79). Four needed concomitant septoplasty. Average followup was 4.3 months. 19 (ie 95%) had complete resolution of epiphora with an open functioning ostium on endoscopic examination (positive fluorescein dye test).

Conclusions: The success rate of Mechanical endonasal DCR compares favourably with external DCR while retaining the advantage of no scar.

¹ Tsirbas A, Davis G, Wormald PJ. Mechanical endonasal dacryocystorhinostomy versus external dacryocystorhinostomy. *Ophthalm Plast Reconstr Surg.* 2004 Jan;20(1):50-6.

SIXTEEN YEAR FOLLOW UP of PHOTEREFRACTIVE KERATECTOMY FOR LOW to MODERATE MYOPIA

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PURPOSE: To evaluate long term safety and stability in a group of myopic patients who underwent PRK 16 or more years ago.

METHODS: Myopic PRK was performed on 120 eyes of 80 patients using Summit UV 200 Excimer Laser 5mm ablation zone. Of the original group, most of whom were followed for up to 2 years or more, 24 patients (40 eyes) returned at 16 years and had refractive stability, refractive predictability, best corrected acuity, corneal haze and subjective patient symptoms such as glare / haloes recorded.

RESULTS: Pre-operative mean spherical equivalent (MSE) ranged from -1.75 to -7.25 and astigmatism from 0 to 1.5. All eyes underwent a change in manifest refraction over 16 years. At 2 years MSE was -0.25 and at 16 years was -0.68. 77.7% of eyes maintained or improved upon the level of pre operative BCVA, while 34.5% of eyes gained one line and 12.1% lost one line of BCVA. 61% of eyes had UCVA 20/20 or better, while 58.1% were within ± 0.5 D of emmetropia. 14.2% had a trace of haze at 16 years. One patient had a rhegmatogenous retinal detachment, but this was unlikely to be due to the PRK procedure. Of particular note with respect to the small optical zone, 7 patients had night visual problems, particularly haloes, which were severe in 2.7%. All patients questioned stated that they would have the procedure done again.

CONCLUSION: PRK was safe and effective in the treatment of myopia up to 7 diopters.

COMPARISON OF CLINICAL OUTCOMES AND HIGHER-ORDER ABERRATIONS INDUCED FOLLOWING WAVEFRONT-GUIDED LASER IN SITU KERATOMILEUSIS FOR MYOPIA AND HYPEROPIA.

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Objectives: To compare visual and refractive outcomes, and changes in higher-order aberrations (HOAs) between myopes and hyperopes following wavefront-guided LASIK.

Methods: In a retrospective study, the clinical outcomes of 229 eyes of 124 patients undergoing wavefront-guided LASIK using femtosecond laser and the CustomVue procedure are reported. Six month postoperative visual acuities, refractive errors, and changes in HOAs were compared between low myopes (176), high myopes (28), and hyperopes (25), using Stata 8 to determine significance.

Results: The proportion of eyes with postoperative uncorrected visual acuities of 6/6 or better was 84.7% in low myopes, 53.6% in high myopes, and 28% in hyperopes. A postoperative spherical equivalent refraction within 0.5 diopters of emmetropia was achieved in 89.8% of low myopes, 57.1% of high myopes, and 64% of hyperopes. The mean (\pm SD) increase in total HOAs was significantly lower in hyperopes (0.029 ± 0.163) compared to low myopes (0.116 ± 0.199) and high myopes (0.274 ± 0.299), largely because of reductions in spherical aberrations ($P<0.05$).

Conclusions: Although customized LASIK is a safe and effective procedure for a wide range of refractive errors, the visual and refractive outcomes are more predictable in eyes with low myopia. However, lower total HOAs induced in hyperopes compared to myopes may result in higher than expected patient satisfaction following hyperopic LASIK.

SJOGREN'S RETICULAR DYSTROPHY - A CASE SERIES OF 4 PATIENTS WITH LITERATURE REVIEW

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Objectives: We are presenting 4 cases of SRD of which 3 were bilateral and 1 was unilateral. The salient clinical features and electrophysiology are discussed.

Methods: SRD is a rare disease of retinal pigment epithelium. Fundus picture typically shows retinal morphology of network of pigmented lines surrounding the macula resembling fishnet with knots at the intersection. We had 4 patients age ranged from 5 years to 11 years referred by optometrist for unusual fundus findings. All of them had reticular pattern pigmentation resembling fishnet with knots. 3 of them were bilateral and one patient had unilateral presentation. One of them is a syndromic child with learning disability and facial dysmorphism. One child suffered with juvenile rheumatoid arthritis. Two of them are siblings. The other 2 children were clinically healthy. Visual acuity and color vision are grossly normal in all cases. Electro physiological tests including Electroretinogram, Electrooculogram and Pattern Electroretinogram are either normal or slightly sub normal in all patients.

Results: On long term follow-up, all patients had normal vision and electrophysiological results. Salient clinical and investigation findings with fundus photographs are discussed.

Conclusions: SRD are mostly asymptomatic & incidental finding in routine examination. High index of suspicion helps in diagnosis.

A CELLULAR MODEL OF FUCHS' ENDOTHELIAL DYSTOPHY

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Objectives: Fuchs' endothelial dystrophy (FED) is the most common primary disorder of the corneal endothelium. Although hereditary forms of the disease have been associated with Collagen VIII mutations, the pathogenesis of this condition is poorly understood, and its study is limited by the lack of suitable cellular and animal disease models. The objective of our study was to create a cellular model of FED and explore the disease mechanisms underlying this condition.

Methods: Wild-type and mutant Collagen VIII constructs were transfected into a CHO cell line. Aberrant Collagen VIII may not fold correctly, causing activation of the cells Unfolded Protein Response (UPR). The presence of UPR markers and the rate of cellular apoptosis were assessed in transfected cells, both in the presence and absence of external stressors.

Results: Cells producing aberrant Collagen VIII displayed activation of the UPR following ultra-violet light and tunicamycin exposure. The rate of apoptosis was higher in cells producing aberrant protein.

Conclusions: We have successfully created a cellular model of FED and demonstrated that the production of aberrant Collagen VIII protein activates the UPR within the cell and culminates in increased cell death.

OCULAR PHENOTYPE AND THERAPEUTIC INTERVENTIONS IN THE ECTODERMAL DYSPLASIA KERATITIS-ICHTHYOSIS-DEAFNESS (KID) SYNDROME

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Objectives: The purpose of the study was to report the ocular manifestations and management of four patients with KID syndrome who had a molecular diagnosis.

Methods: Four patients from the UK with KID syndrome underwent medical and ophthalmic assessment. The coding region of GJB2 (Cx26) was PCR amplified from genomic DNA for direct DNA sequence analysis. Specific therapeutic interventions using oral ketaconazole were performed in 2 patients.

Results: The main ophthalmic features were vascularising keratopathy, ocular surface disease, hyperkeratotic lid lesions, recurrent epithelial defects and corneal stromal scarring. Each patient was found to have missense mutation in KID syndrome. In one patient, multiple surgical procedures, failed to prevent severe visual loss. In contrast, oral therapy with ketaconazole stabilised the corneal and skin disease in two other patients with KID syndrome.

Conclusions: KID syndrome is a rare ectodermal dysplasia caused by heterozygous mutations in GJB2 (Cx26) with a severe, progressive vascularising keratopathy. Oral ketaconazole therapy offers benefit in stabilising the corneal and skin disease.

POST DECOMPRESSION OPTIC NEUROPATHY

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Objectives: To Report a rare case of Post Decompression Optic Neuropathy

Methods: Case Report

Results: CS was a 7 year old female, who presented with a 6 week history of headache, vomiting and unsteady gait. On examination she had papilloedema, nystagmus, past pointing, and unsteady gait. MRI revealed a posterior fossa mass arising from the vermis with hydrocephalus.

A craniotomy and tumor excision was performed. Intra operatively, the tumour was haemorrhagic. Post operatively the patient complained of decreased vision. Her VA was HM in the right eye, and 4/60 in the left eye. She had a right RAPD, mild residual disc swelling with early atrophic changes in both eyes and constricted visual fields. She was diagnosed with post decompression optic neuropathy. IV methylprednisolone in accordance with the Second National Acute Spinal Cord Injury Study was commenced. 2 months later her VA was 4/36 in the right eye, and 6/9+2 in the left eye. Visual fields remained constricted. She had bilateral optic atrophy.

Conclusions: Visual loss following craniotomy is uncommon and remains poorly understood. Risk factors include well established papilloedema preoperatively, and intraoperative hypotension. Effective treatment has yet to be found. Perhaps at risk patients would benefit from a gradual lowering of ICP, and lowering of IOP preoperatively. In our case a course of methylprednisolone was given with subsequent improvement, however it is not known if this would have occurred without steroid administration.

EUROPEAN CATARACT OUTCOME STUDY: A 10 YEAR REVIEW AT ST. VINCENT'S UNIVERSITY HOSPITAL.

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St. Vincent's University Hospital.

Objectives: To collect clinical data on cataract surgery to allow participating surgeons to compare their performance with that of their colleagues in an anonymous manner.

Methods: Surgical data from 64 surgical units across 17 European countries was collected in a standardized database form. Every patient at each participating unit having surgery during 1 study month was evaluated. Data were reported to the coordinating centre at the time of surgery and at the final examination. When the study was closed 6 months after surgery, all participants were provided with the outcomes from their own patients so they could compare them with outcomes from other centres.

Results: The study included preoperative and intraoperative data. Complete follow-up data was also collected. The surgical audit included surgically induced astigmatism, proximity of target refraction, and the frequency of major complications. For each variable, a large variation in outcome between participating centres was found. Most centres had results both above and below average for different variables.

Conclusions: Cataract surgery data collected from 64 units in 17 European countries allowed participants to compare their performance with that of their colleagues in an anonymous manner. Significant variation was found in the outcomes among the units, with many units reporting results above and below the averages.

DO MULTIFOCAL LENS IMPLANTS ALLOW SPECTACLE INDEPENDENCE? A SEVEN YEAR STUDY.

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Objectives: To evaluate the success of multifocal intraocular lens (IOL) implants used in cataract surgery and clear lens extractions in achieving spectacle independence.

Methods: Case records were examined retrospectively for 107 eyes of 54 patients who underwent multifocal intraocular lens implantation by a single surgeon. Data extracted included: demographics, pre-operative best corrected visual acuity, post-operative unaided visual acuity, spectacle independence, and complications encountered.

Results: 23 males and 31 females, with a mean age of 55.8 years (range 46-70 years), underwent surgery. Mean pre-operative corrected Snellen acuity for distance was 6/6 (range 6/5 – 6/24). Mean post-operative Snellen acuity for distance was 6/6 (range 6/5 – 6/12) and 91.5% of eyes had near acuity of N6 or better. 50 patients (93%) achieved spectacle independence for both near and distance. 45% of eyes required YAG capsulotomy for posterior capsule opacification, 6% had simultaneous corneal relaxing incisions for corneal astigmatism, 2% had wound revisions. 6 patients (11%) experienced glare or haloes post-operatively, one requiring IOL explant.

Conclusions: With carefully selected patients, multifocal IOL implants can allow patients to achieve spectacle independence. Results of this study compare favourably with published data.

CHANGING INDICATIONS OF CORNEAL GRAFT IN IRELAND FROM 2001 - 2008

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Objectives: To identify the leading indications and the changing trends for corneal graft in Ireland.

Methods: This is a retrospective study. The records of the indications for corneal transplant in the tissue bank of the Irish Blood Transfusion Service were tabulated from year 2001 to 2008. The types of corneal graft (penetrating keratoplasty, DSAEK, and anterior or posterior lamellar graft) were also analysed.

Results: A total of 626 cases were included for analysis. The main indications for corneal grafts are keratoconus (22.9%), bullous keratopathy (14.7%), corneal dystrophy (12.8), re-graft (7.6%), keratitis (5.7%), trauma (4.3%), scarring (4.4%), HSK (4.3%), de-compensation (2.7%) and others. 92% of tissue was used for penetrating keratoplasty before 2006, but decreased to 77% in 2007 and 57% in 2008 while tissue used for DSAEK was 2% in 2006, increased to 13% in 2007 and reached 30% in 2008.

Conclusions: The two most common causes for corneal transplant in Ireland are keratoconus and endothelial cell decompensation. Treatment of choice for endothelial cell decompensation is changing from penetrating keratoplasty to DSAEK in the recent years

Montgomery Lectures and Lecturers

University of Dublin, Trinity College

- 1916 "Diagnosis in Uveitis"
Euphan M. Maxwell (Dublin)
- 1917 "Observations on Eye Conditions met with in Malta in 1916-1917"
Euphan M. Maxwell (Dublin)
- 1918 "A Survey of Cases of Concomitant Squint in the Practice of the late Mr. P. W. Maxwell"
Euphan M. Maxwell (Dublin)
- 1919 "The Cortical Localization of Vision"
Gordon M. Holmes (London)
- 1920 "Disturbance of Visual Space Perception"
Gordon M. Holmes (London)

Royal College of Surgeons in Ireland

- 1921 (i) "The Influence of Vision in the Development of Man's Intellectual Powers"
Grafton Elliott Smith (London)
- 1922 (ii) "The Influence of Vision in the Development of Man's Intellectual Powers"
Grafton Elliott Smith (London)
- 1923 "The Movements of the Eyes"
Grafton Elliott Smith (London)
- 1924 "The Evolution of Pupillary Reactions"
E. Treacher Collins (London)
- 1925 "Accommodation"
Charles B. Goulden (London)

University of Dublin, Trinity College

- 1926 "Observations on the use of the Slit- Lamp"
Thomas Harrison Butler (Birmingham)
- 1927 "The Retinitis of Arterio-Sclerosis and Its Relation to the Retinitis of Renal Disease and Cerebral Vascular Disease"
Robert Foster Moore (London)
- 1928 "Some Medico- Legal Aspects of Ophthalmology"
Robert J. Coulter (Newport, Mon.)
- 1929 "The Contribution of the Slit-Lamp to Ophthalmology"
Louis E. J. Werner (Dublin)
- 1930 "The Trachoma Problem"
Francis J. Lavery (Dublin)

Royal College of Surgeons in Ireland

- 1931 "The Modern Treatment of Traumatic and Spontaneous Detachment of the Retina"
Charles B. Goulden (London)
- 1932 "Modern Developments in Cataract Extraction"
Maurice H. Whiting (London)
- 1933 "Some Impressions derived from my Experience of Cataract Work"
Robert E. Wright (London)
- 1934 "The Bearing of Embryology on Clinical Diagnosis"
Ida Mann (London)
- 1935 "Some Aspects of Glaucoma"
R. Affleck Greeves (London)

University of Dublin, Trinity College

- 1936 "Transplantation of the Cornea"
J. W. Tudor Thomas (Cardiff)
- 1937 "The Aetiology and Treatment of Convergent Concomitant Strabismus"
S. B. Alabaster (Birmingham)
- 1938 "Lesions Affecting the Visual Pathway and their Relation to Neurosurgery"
Alan J. Mooney (Dublin)
- 1939 "The Causes, Prevention and Treatment of Spontaneous Retinal Detachment"
Karl Lindner (Vienna)
- 1940 "Pituitary Tumours: Ocular and Surgical Aspects"
Adams A. McConnell (Dublin)

Royal College of Surgeons in Ireland

- 1941 "The Clinical Pathology of Fundus Lesions"
Arnold Sorsby (London)
- 1942 "Studies in Night Vision and Night Visual Judgement as It Concerns the Ophthalmology of Flying"
P. C. Livingston (London)
- 1943 "The Sources, Distribution and Disposal of the Blood in Ocular Haemorrhage"
A. J. Ballantyne (Glasgow)
- 1944 "The Social and Medical Problems of Phlyctenular Disease in Dublin"
J. B. McArevey (Dublin)
- 1945 "Retinal Vascular Sclerosis"
W. Dermot O'Donoghue (Dublin)

University of Dublin, Trinity College

- 1946 "Ophthalmological Aspects of Malnutrition"
Stewart Duke-Elder (London)
- 1947 "The Problems of Sympathetic Ophthalmia"
Bernard R. Samuels (New York)
- 1948 No Lecture
- 1949
- 1949 "The Preparation of the Whole Patient for Cataract Surgery"
Daniel B. Kirby (New York)
- 1950 No Lecture

Royal College of Surgeons in Ireland

- 1951 "The Surgical Treatment of Detachment of the Retina, with Special Reference to the Treatment of Recurrence"
H. J. M. Weve (Utrecht)
- 1952 "Diffuse Collagenous Diseases with Ocular Complications"
Derrick Vail (Chicago)
- 1953 "The Early Symptoms of Macular Disease"
Marc Amsler (Zurich)
- 1954 "Some New Contributions to the Diagnostic Problems of Glaucoma"
G. B. Bietti (Parma)
- 1955 "The Problem of Orbital Implants after Enucleation"
H. Arruga (Barcelona)

University of Dublin, Trinity College

- 1956 "Etiology and Pathogeny of Uveitis"
Moacyr E. Alvero (San Paulo)
- 1957 "Third Nerve Regeneration - Clinical Evaluation"
Frank B. Walsh (Baltimore)
- 1958 "Gross and Minute Defects of the Germ Cells and Clinical Ophthalmology"
A. Hagedoorn (Amsterdam)
- 1959 "The History of Ophthalmology in Ireland"
L. B. Somerville-Large (Dublin)
- 1960 "The Diagnostic Value of the Biomicroscopy of the Posterior Parts of the Eye"
H. Goldmann (Berne)

Royal College of Surgeons in Ireland

- 1961 "Malignant Uveal Melanomata"
J. Francois (Ghent)
- 1962 "Modern Trends In Cataract Surgery"
Algernon Reese (New York)
- 1963 "Ocular Manifestations of Diabetic Angiopathy"
Knud Lundbaech (Aarhus)
- 1964 "Ophthalmic Manifestations of Bilateral, Non-Occipital Lesions of the Cerebrum"
David Cogan (Boston)
- 1965 "Change versus Progress in Ophthalmological Surgical Techniques of the Last Ten Years"
John Foster (Leeds)

University of Dublin, Trinity College

- 1966 "Some Aspects of Corneal Wound Healing"
Frank Newell (Chicago)
- 1967 "Cataract in General Disease"
Gunnar Von Bahr (Uppsala)
- 1968 "Uveitis - Immunopathy or Infection"
David Geraint James (London)
- 1969 "Herpes Zoster Ophthalmicus"
Harold G. Schere (Philadelphia)
- 1970 "Plastic Surgery and the Eye"
J. B. Prendiville (Dublin)

Royal College of Surgeons in Ireland

- 1971 "Modern Problems in Glaucoma"
Philip Jameson-Evans (Birmingham)
- 1972 "Orbital Fractures"
G. M. Bleeker (Amsterdam)
- 1973 "Vascular Basement Membrane Changes in Diabetic Retinopathy"
Norman Ashton (London)
- 1974 "The Lower Visual Field and Its Importance to Man"
Stephen Miller (London)
- 1975 "Changing Concepts as to Prognosis and Management of Small Malignant Melanomas of the Choroid"
Lorenz Zimmerman (Washington)

University of Dublin, Trinity College

- 1976 “New Methods in the Operative Treatment of Glaucoma”
Heinrich Harms (Tubingen)
- 1977 “Curious Colobomata”
Joan Mullaney (Dublin)
- 1978 “Modern Trends in Retinal Detachment Surgery”
G. Meyer Schwickerath (Essen)
- 1979 “Metallosis Oculi”
Helmut Neubauer (Cologne)
- 1980 “Endocrine Ophthalmopathy”
Andreas Bouzas (Athens)

Royal College of Surgeons in Ireland

- 1981 “Communication in Ophthalmology”
Geraoid P. Crookes (Dublin)
- 1982 “Early Vitrectomy in the Management of Vasoproliferative Diabetic Retinopathy”
Michael O’Shea (Toronto)
- 1983 “Goniotomy in the Treatment of Isolated Trabeculodysgenesis”
Robert Shaffer (San Francisco)
- 1984 “Sub-Retinal Neovascularization in Senile Macular Degeneration”
Gabriel Coscas (Paris)
- 1985 “The Lens Capsule: Structure, Anterior Capsulectomy and Lens Implantation”
Robert Drews (Clayton)

University of Dublin, Trinity College

- 1986 “Radiation Retinopathy”
Desmond Archer (Belfast)
- 1987 “Refractive Surgery”
Herbert Kaufman (New Orleans)
- 1988 “The Management of Diabetic Retinopathy”
Matthew D. Davis (Madison, Wisconsin)
- 1989 “Uveal Effusion”
Jean Jacques de Laey (Ghent)
- 1990 “Some Factors Affecting the Visual Outcome of Corneal Transplantations”
Douglas John Coster (Adelaide)

Royal College of Surgeons in Ireland

- 1991 “Understanding Amblyopia”
Colin Blakemore (Oxford)
- 1992 “Modern Lens Surgery”
Thomas Neuhann, (Munich)
- 1993 “From the Eyelids to Cranio-Facial Surgery”
Paul Tessier (Paris)
- 1994 “Complications of Diabetic Vitrectomy”
David McLeod (Manchester)
- 1995 “Degenerative Retinal Disease: Towards Gene Therapy”
Peter Humphries (Dublin)

University of Dublin, Trinity College

- 1996 “Graves Eye Disease”
Patricia Kendall-Taylor (Newcastle-upon-Tyne)
- 1997 “Meningiomas of the Anterior Visual System”
Michael Sanders, (London)
- 1998 “Refractive Surgery – A replacement for Spectacles!”
Patrick I. Condon (Waterford)
- 1999 “Unnatural Injuries “
D. Taylor (London)
- 2000 “Blindness Prevention: From Science to Policy”
A. Sommer (Boston)

Royal College of Surgeons in Ireland

- 2001 “Pathogenesis of Glaucomatous 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)

Mooney Lectures and Lecturers

- 1995 “A History of Neuro-Ophthalmology: An American Perspective”
T. R. Hedges (Philadelphia)
- 1996 “Combined Cataract and Glaucoma Surgery”
Bo Phillipson (Stockholm)
- 1997 “The Case for Corneal Transplantation”
Louis Collum (Dublin)
- 1998 “Glaucoma Therapy in the 21 st Century”
Harry Quigley (Baltimore)
- 1999 “High Risk Corneal Grafting – Is There an Answer?”
David. Easty, (Bristol)
- 2000 “A Millenium Shift for Retinoblastoma”
Brenda L. Gallie,
- 2001 No Lecture
- 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)

Barbara Knox Prize Award Winners

- 1993 “Ophthalmologic Screening in a Centre for the Mentally Handicapped”
A. Foley-Nolan and M. Brennan
- 1994 “Expression of Collagen Types I, II, IV and V in Rat Cornea Following
Excimer Laser Keratectomy”
W. Power
- 1995 “Gene Delivery to the Corneal Endothelium”
F. Larkin
- 1996 “Congenital Hereditary Endothelial Dystrophy – Recessive Pedigree and Genetic Studies”
J.S. FitzSimon
- 1997 “Echographic Orbital Optic Nerve Measurements in Normal and Glaucomatous Eyes”
S. Beatty
- 1998 “Community Ophthalmology – a Five Year Review”
R.O’Regan
- 1999 “Might Gene -Based Pre-Treatment of Donor Cornea Prevent Graft Rejection?”
R. Comer
- 2000 “Immunogenetics and Peptide Immunodominance in Sympathetic
Ophthalmia in the UK and Ireland”
D. Kilmartin
- 2001 “The Role of Tissue Inhibitor of Matrix Metalloprpteinase-1 in
Pseudoexfoliation Syndrome”
S. L Ho
- 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 Choroidal 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

Sir William Wilde Medal Winner

- 1999 “Prospective Surveillance of Sympathetic Ophthalmia in the United Kingdom”
D. Kilmartin
- 2000 “The Effects Of Topical Anti-Glaucoma Medications On The Ciliary And Optic Nerve
Head Arterioles In The Rat Eye”
S. Byrne
- 2001 “Ocular Toxoplasmosis-Pathogenesis Revisited”.
H. McLoone
- 2002 “Gene Expression in Diabetic Reinopathy”
R. Kane
- 2003 “Exposure of Photoreceptor outer segments to blue light induces a pro-angiogenic response
from the retinal pigment epithelium”
E. Cosgrave
- 2004 “Investigation and management of Epidemic intraocular lens opacification”
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

