Irish College of Ophthalmologists

Eye Doctors of Ireland

Protecting your Vision

Irish College of Ophthalmologists

Yearbook 2016-2017

Annual Conference

The Slieve Russell Hotel, Cavan
May 17th – 19th 2017

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Letter from the President

Dear Fellow College Members

I'd like to extend a very warm welcome to you all to the 2017 ICO Annual Conference at The Slieve Russell Hotel.

This year's programme of talks and symposia promises to stimulate crucial discussion and decisions in relation to the future delivery of eye care in Ireland, at this time of critical change and evolution of the patient care pathway.

We are honoured to welcome our many esteemed international colleagues who will share their expertise and knowledge of the most up-to-date developments in their chosen sub specialties at our meeting. I would like to particularly thank Professor Crowston, Ringland Professor of Ophthalmology at the University of Melbourne, for making the long journey to be with us this year to present the Annual Mooney Lecture and to participate in the glaucoma symposium. His wealth of experience will be a wonderful contribution to this year's conference.

We look forward to working with the HSE on the implementation of the recommendations of the Primary Care Review Group. We are eager to see the changes result in significant progress and improvements to patient access to care and treatment by way of reduced waiting times for inpatient procedures and outpatient appointments. The ICO is focused on ensuring the opportunity to advance the role of medical ophthalmologist in the community setting remains a priority as a direct result of the proposed evolution of eye care service delivery as outlined in the report and that a continuation on the focus at training level also remains a priority. A commitment from Government that the necessary funding and resourcing will follow to allow for effective implementation of services will be the next critical stage in this process.

A special thanks to Alison Blake, Loretta Nolan, Kathryn McCreery and Paul Moriarty and to our dear colleague, the late Mr Peter Barry, for their immense contribution to the Review Group and all those who supported their work.

Thank you to all the Council members, Committee Members and to the Honorary Officers at the College for your on-going time and commitment to the role in particular to our departing Council members Jeremy O Connor, Dara Kilmartin and John Stokes. We especially thank the Chairs of the ICO Committees; Patricia Quinlan, Mark Cahill, Yvonne Delaney, Fiona Kearns, Jeremy O'Connor, Richard Comer and Gerry Fahy. Thank you to our colleagues who attend national and international meetings to represent our specialty; Ian Flitcroft on the Rare Diseases Group and to his recent successor in the role, David Keegan, who is equally committed as Clinical Lead for the national diabetic retinopathy screening programme; Denise Curtin and Gerard O'Connor at the European Board of Ophthalmology (EBO) and to all examiners who travel annually to Paris for the oral EBO examination. A special acknowledgement to Marie Hickey Dwyer who has examined 19 times for the EBO, and to Louise O Toole for her role at the Royal College of Ophthalmologists, Pat Logan at the European Society of Ophthalmology (SOE), and to Denise Curtin and Alison Blake at the European Union of Medical Specialists (UEMS).

Congratulations to Alison, Denise and Gerard on hosting a highly successful UEMS ophthalmology meeting in Dublin last June, to which we were delighted to welcome Minister for Health, Mr Simon Harris as a guest of honour at the Gala Dinner in the Royal College of Surgeons in Ireland. A special word of thanks to Gerard who stands down from his role at as the Irish EBO representative and best wishes to Deirdre Townley as she takes the role on.

Our thanks to our colleagues who have committed their time and energy to annual eye health awareness campaigns, including Mark Cahill, Patricia Quinlan and Marie Hickey Dwyer for AMD Awareness Week, now in its

10th successive year and to Aoife Doyle for her contribution to a World Glaucoma Week public awareness initiative in collaboration with the Irish Pharmacy Union and Pfizer in March.

The publication of the ICO Patient Information Leaflets and ICO Guidelines on the Consent Process at our winter meeting last December was an important development in our continued commitment to addressing matters of improved patient experience, and in ensuring patients are given the appropriate information to facilitate informed decision making. Thank you to members for their feedback on the documents which have been updated and are available on the ICO website. They are evolving documents so we are happy to continue to receive comments from members. A special thanks to Patricia Quinlan and Pat McGettrick for their continued commitment to this project.

During our meeting my term as President will draw to a close. It has been a wonderful honour the past two years to represent the College and I thank everyone for the support they have given me in the role. I would like to take the opportunity to wish Alison Blake the very best as she takes over as President and to appeal to all members to offer your strong support in ensuring the opportunities that are presented at this time, lead to improvements for our patients and our specialty.

With Best Wishes,
PROF. BILLY POWER
President,
Irish College of Ophthalmologists
May 2017

Professor Peter Barry: An Appreciation

Professor Peter Barry FRCS, who died unexpectedly last May after a brief illness aged 67 years, was one of the foremost eye surgeons of his generation. As well as being an international ambassador for Irish ophthalmology, he was the National Clinical Lead for Ophthalmology, leading wide-reaching reforms in hospital and community delivery of eye healthcare. He pioneered major surgical advances in Irish and European ophthalmology: modern cataract surgery and primary vitrectomy for retinal detachment repair in the early 1980's. Having wide-ranging international impact, he was a co-founder, Board member for more than 25 years and recently President of the European Society for Cataract and Refractive Surgery (ESCRS). In addition to superb surgical outcomes in his own patients, thousands more had safer cataract surgery when he chaired the first international clinical trial proving the protective benefit of prophylactic antibiotics. This landmark study, initially resisted in the US, has now been accepted worldwide as setting the international clinical standard of care in dramatically reducing post-operative infection, the most devastating blinding complication of cataract surgery.

Peter James Barry was born into a Dublin business family where ultimately three of six siblings, Geraldine, Peter and Patricia became ophthalmologists and retinal specialists. He was educated at Gonzaga College and being academic, gregarious and quietly religious, he briefly started Jesuit studies but quickly switched to UCD Medical School. Clinical training in ophthalmology began at the Royal Victoria Eye & Ear Hospital, Dublin, with completion of the majority of his clinical residency at the Western Eye Hospital and Moorfields Eye Hospital, London. Fellowship training followed at Moorfields in vitreoretinal surgery, followed by a fellowship with Professor Matthew Davis at Madison, Wisconsin, US in diabetic retinopathy. Vitreoretinal surgery was then in its infancy but Moorfields quickly established itself as the leading international centre under Peter's mentors, David McLeod, Peter Leaver and Robert Cooling. Appointed as consultant ophthalmic surgeon in 1984 to his alma mater, the Royal Victoria Eye & Ear Hospital, Dublin, he initiated vitreoretinal surgery there and maintained a gruelling continuous separate retinal detachment rota. He had a joint appointment with his true base, St Vincent's University Hospital, where he quickly established a dedicated registrar cataract training module.

His ideas on developments in cataract and retinal surgery were often far ahead of prevailing thinking. I met Peter first in 1989 when he lectured us medical students with far-fetched ideas of microincision phacoemulsification cataract surgery with injectable accommodating intraocular lens implants, advances that are yet to be fully realised. At that stage he was already trialling techniques in phaco with Dr Geraldine Kelly, having visited Howard Gimbel in Calgary, Canada and Hans-Reinhard Koch in Bonn, Germany who were early adopters of phaco surgery. Both he and Geraldine painstakingly sat through many hours training neophyte phaco surgeons, some of whom later moved to the UK to complete their higher training and found their phaco skills to be way ahead of their British peers. Already he was talking about endophthalmitis prophylaxis and as a result many of us were using low dose gentamicin in the intracameral infusion fluid. Due to persistence, excellent networking skills among his ESCRS colleagues and the realisation that the Swedish had excellent initial results with cefuroxime, the ESCRS endophthalmitis trial was born. He was a strong and pioneering advocate of primary vitrectomy for retinal detachment repair with induction of a complete posterior vitreous detachment and clearance of the peripheral vitreous by scleral indentation. The advantages of these techniques were yet to be widely appreciated over 20 years ago and resulted in excellent anatomical and visual results. He carefully stewarded a cohort of Stickler's patients from early childhood through to adulthood over his 30 year career. I made the mistake of asking him as an overseas retinal fellow what particular skills would be needed for a future vitreoretinal consultant colleague to receive the daunting reply that something new would be ideal and that he would like to appoint a better retinal surgeon than himself.

On becoming President, ESCRS, he established 3 themes over 2012-2013: youth, education and research which reflected his lifetime clinical focus. He took an immense interest in fostering the careers of many future ophthalmologists. The ESCRS has therefore created the ESCRS Peter Barry Fellowship for a trainee in his honour. I was reminded of this just last week by his former ESCRS colleagues at the Netherlands Ophthalmological Society who reminisced over his ability to get to the core of an organisational or clinical problem and summarise key priorities at group discussion level.

He was closely involved in merger discussions between the Irish Ophthalmological Society and the Faculty of Ophthalmologists, resulting in him becoming a founder member of the Irish College of Ophthalmologists in 1991.

Combining the attributes of high clinical and surgical acumen, work ethic and attention to detail, his clinics and operating lists were both intense and occasionally dramatic. Mentoring by example, he expected the same absolute focus. A prepared operative plan, consult question and at all times current knowledge of the patients clinical status was required of all members of his clinical team of trainee doctors. Deciphering his operation notes sometimes revealed interesting acronyms such as T.E.J. (Total Eye Job) and sometimes, advanced conditions by either 'complex++' or 'devastating' underlined several times. Patient empathy was his main driving force and he used his immense abilities to achieve the best possible clinical outcomes which he regarded as both a privilege to deliver, and a duty to achieve.

Charismatic, debonair with trademark Hermes tie, he was both great company in social situations and an eloquent protagonist in formal meetings. He was just as happy delivering the Ridley Medal Lecture as sharing clinical woes with a colleague over a glass of wine. A devoted family man, he is survived by his wife Carmel and four adult children, David, Stephen, Simon and Lisa. Sunday routine began with a ward round at the Eye and Ear Hospital accompanied by Lisa, followed by ice cream and reading at Mass at St. Vincent's. His family, his patients, and the Irish and international ophthalmic community, mourn his loss keenly.

DJK

Report of Council 2016-2017

Patricia Quinlan, Honorary Secretary

There have been four Council meetings: May 20th 2016, September 17th 2016, December 3rd 2016 and 25th February 2016.

The Council Members are: Billy Power, Marie Hickey-Dwyer, Mark Cahill, Alison Blake, Marc Guerin, Gerry Fahy, Susan Kelly, Fiona Kearns, Patricia Quinlan, Richard Comer, Jeremy O Connor, Dara KIlmartin, John Stokes and Yvonne Delaney.
All Council members have attended the minimum required number of meetings.

Changes in Council Membership

The Council term of Dara Kilmartin, Jeremy O'Connor and John Stokes has concluded. On behalf of all the College members I would like to thank Dara, Jeremy and John for their contribution to Council and their commitment to the College Committees. Fiona Kearns and Richard Comer were appointed to Council in May 2016. The new appointments to Council will be announced at the AGM.

Billy Power was appointed Clinical Lead for Ophthalmology in 2016 following the untimely passing of our dear colleague and friend, Peter Barry.

At the close of 2016, the membership for the Irish College of Ophthalmologists stood at 178. The full audited accounts for the year ended 31st December 2016 have been circulated to all members and will be discussed during the AGM.

Dean's Report

Yvonne Delaney, Dean

May 2017 marks an important time in postgraduate training in Ophthalmology in Ireland. The new streamlined training program, introduced in July 2015, is now just past its mid-way point, which gives an opportunity to review the success of its implementation so far, and look forward to some new changes on the horizon for 2018.

National Training Program in Ophthalmology

While still in its early stages, the streamlined training program has had a promising start, redirecting the emphasis of training away from the gap years and back into the 3 years of common core training. Analysis of current data indicates that surgical training in Year 1 and 2 has intensified, compared to previous years, with a doubling of phacoemulsifcation procedures rates, an increase in lid and squint procedures and most importantly equity of BST training across each of the seven national training units. The later has permitted the introduction of a centralised National BST Rotation with trainees now allocated to a peripheral training unit and a Dublin Unit, both for a period of 18 months. Much work is still to be done in order to get the new trainees ready, without the benefit of the gap years, for higher surgical training (HST), and this will create a sense of urgency as trainees prepare to enter Year 3 in July 2017.

2017 will also see new timetabling for the MRCSI exam, in order to better align itself to the streamlined program. The Refraction Exam will be held in June of each year while the Part II MRCSI, to be held only once per year, will be timed for October (written) and for late January (clinical). The timing of the latter will allow adequate preparation time before the HST interviews whilst ensuring the maximum amount of time for trainees to be as clinically developed as possible with over 2 and a half years of training completed before taking the clinical component of the exam.

The new National Training Program in Medical Ophthalmology

Whilst one change embeds, more changes are coming in 2018. The College has, within the context of the increasing demand for medical ophthalmology services and the publishing of the Primary Eye Care Review, decided to move away from a common core stem and introduce basic medical ophthalmology training from Year 1 in July 2018. The aim is to more closely align the career aspirations of the trainee intake at Day 1 to the final practitioner of the medical ophthalmologist on graduating from the program. It has become clear, looking at the career choices taken after completing common core training, a decreasing number of trainees wish to opt for medical ophthalmology Year 4, with most wishing to pursue surgical career choices.

The new medical program will be structured around three years of basic medical ophthalmology training followed by competitive entry into two years of higher training. The higher program will be modular in format concentrating on the three core areas of paediatric ophthalmology, glaucoma and medical retina. An embedded assessment process of workplace based assessments as well as a viva voce assessment at the end of each module will underpin a new performance standard to future-proof medical ophthalmology as eye care delivery moves its focus away from the acute hospital setting and into the community, fundamentally changing the way in which medical ophthalmology will be organised and practiced.

The College will spend the next few months liaising with the National Training Eye Units as to their capacity to convert existing BST jobs or generate new ones suitable for medical training as well as discuss the potential challenges such as on-call rotas etc. The success of the new program and the progress that those it attracts make is very much dependent on ensuring both parity of opportunity for these new trainees and also respect and support for the career choice they will be making in selecting the medical pathway from Day 1.

International Medical Graduates

Managing the NCHD workforce to generate work streams for both surgical and medical ophthalmology is a priority for the college, as is structuring fair and transparent ratios for progression into higher training. In order to manage the progression ratios into HST during the years of dual entry from the new and the traditional programs (2018-2020), international medical graduates will be welcomed in higher numbers with four IMGs coming into the ophthalmology training program in July 2017. All IMGs are already experienced in ophthalmology and have on average trained for 3 years before entering BST jobs here. They each will take up an existing recognized BST post on the NTP and they will be trained in all respects as other trainees on the program. Participating in the IMG program allows us the opportunity to maintain a NCHD workforce, continue to train in our units and rebalance our BST: HST ratios as we enter dual intake in 2018.

Dual HST intake 2018-2020

Dual intake creates a lot of anxieties for both the streamlined and the traditional gap year trainees. Let me take this opportunity to reassure you that the College is doing everything in its power to ensure that the fairest of opportunities are offered to those trainees who are eligible to enter HST. Introducing IMGs and reducing our BST intake for 2017 are two strategies that we have pursued in this regard. Temporarily increasing HST posts may also be necessary to navigate the 3 years of dual entry.

May I take this opportunity to say an enormous thank you to the trainers and educational supervisors in each unit. Every unit has been charged with some new responsibilities with the new program with small but necessary alterations to timetables which can be particularly trying to implement in the continuing under-resourced environment in which we train. In that regard I would like to thank Mr. Ian Flitcroft, Mr. Donal Brosnahan, Ms. Marie Hickey Dwyer, Ms. Deirdre Townley, Mr. Eamonn O' Connell, Ms. Shauna Quinn, Mr. John Stokes, Prof. Conor Murphy and Mr. Gerry Fahy for all their assistance in the last year. I would also like to thank Mr. Gerard O'Connor for his time as the national representative on the European Board of Ophthalmology and congratulate Ms. Deirdre Townley on taking on this position in 2017.

Scientific & CME Committee

Jeremy O'Connor, Chairman

Committee Members: Denise Curtin, Billy Power, Alison Blake, Geraldine Comer, Eugene Ng.

The ICO Annual Conference 2016 was held in The Europe Hotel, in Killarney, Co Kerry, May 18th to 20th. Last year's meeting covered a range of topics including ocular trauma, ocular manifestations of systemic diseases, and evolving trends in corneal disease.

CME & Professional Competence

The ICO continues to administer a Professional Competence Scheme on behalf of the Medical Council and the Committee provides advice in this regard as required. The scheme year runs from May 1 to April 30. ICO members can record their professional competence activity using the web-based PCS ePortfolio which will be reflected in a Statement of Participation issued in May each year.

In addition to completing at least 50 hours of continuing professional development activity per year, each doctor is expected to complete one clinical audit per year.

The 8th Edition of the Medical Council Guide to Professional Conduct for Medical Practitioners, published in 2016, outlines that doctors must keep up to date with developments in their field of practice and with clinical guidelines on best practice. The Code states that a commitment to lifelong learning is essential to providing up-to-date and effective care and this is achieved by participating regularly in CPD and in other formal and informal education, training and development.

Under Performance Guidelines, the Code states that doctors should engage with quality improvement initiatives to help improve health services and care for all patients; recognise areas of practice which they should not undertake without further training or supervision; and refer patients to a colleague if patients need investigation or treatment that involves knowledge or skills which fall outside of the doctor's clinical competence.

The Code outlines the practice for Maintaining Competence and the obligation to keep a record of the activities completed, reflect on the issues and apply what is learnt to your practice. Section 94 of the Medical Practitioners Act 2007 outlines the obligations for medical practitioners to maintain professional competency.

The Medical Council has expressed a commitment to doing more work to establish the scale of participation in activities and identifying next steps to make requirements more responsive to the evolving needs of doctors and the most effective course of action to continue to raise standards of professionalism.

ICO/Novartis Research Bursary

Two research projects were awarded funding for the ICO/Novartis Eye Research Bursary 2016-17, announced at the 8th Annual Retina Meeting in Adare on the 29th September.

Dr. Sinead Connolly's study is focused on developing new therapies for dry eye disease in Sjögren's syndrome, an autoimmune condition characterised by severe dry eye. Current therapies, including artificial tears and anti-inflammatory agents, have been largely inadequate and there is an unmet need for new therapies.

Dr Reinold Goetz study is examining potential new areas for therapeutic targeting in the treatment of primary open angle glaucoma. The research goal is to determine what is happening on a molecular and biochemical level to cause these fibrotic changes at the trabecular meshwork and fibrotic changes at the lamina cribrosa.

Congratulations to both as they continue their work. Dr Goetz and Dr Connolly will present an update on their work at the meeting in Cavan.

ICO Medals

Winner of the Barbara Knox Medal for Best Paper was Dr Sinead Connolly for her presentation on the "Design of Nanoparticle-based MicroRNA Therapeutics in Sjögren's Syndrome". Winner of the Sir William Wilde Medal for Best Poster was Dr Patrick Murtagh for his presentation on the "Workings of the Royal Victoria Eye and Ear Hospital Application for Smart Phones".

Montgomery Lecture

The 2016 Montgomery Lecture was delivered by Mr Frank Larkin, Consultant Ophthalmic Surgeon at Moorfields Eye Hospital, London. The lecture took place at Trinity Biomedical Science Institute, Dublin on Thursday, December 1st, 2016, and was very well attended by our members following the ICO Annual Winter Meeting earlier that day.

Mr Larkin's lecture entitled '"Accepting the Unacceptable: Prevention and Treatment of Rejection of Donor Cornea" illustrated the varied appearances of corneal transplant rejection, immune privilege of donor cornea and its erosion, pathways to rejection, and the management of high rejection risk patients in 2016.

Mooney Lecture

The 2016 Mooney lecture was given by Professor Reza Dana on Regulation of Corneal Inflammation and Immunity.

Professor Reza Dana is the Claes H. Dohlman Professor of Ophthalmology, Harvard Medical School; Vice Chair for Harvard Department of Ophthalmology; Director of the Cornea Service, Massachusetts Eye and Ear Hospital; Senior Scientist, Mass. Eye and Ear/Schepens Eye Research Institute Committee on Immunology, Harvard Medical School.

This year we welcome Prof Jonathan Crowston, Ringland Anderson Professor of Ophthalmology, Head of Ophthalmology, University of Melbourne and Managing Director of the Centre For Eye Research Australia (CERA).

Medical Ophthalmologists Committee

Fiona Kearns, Chairman

Committee Members: Alison Blake, Catherine McCrann, Iain Harrison, Garry Treacy, Grace O'Malley, Margaret Morgan, Paddy Condon, John Traynor, John Smith, Susan Mullaney, Geraldine Comer, Sacha Hutchinson, Joanne Kearney and Loretta Nolan.

The committee met on three occasions during the year with strong attendance from committee membership; October 1st, December 2nd and January 27th.

Primary Eye Care Services Review

At the time of going to print, the College was awaiting the publication of the Primary Care Eye Services Review Report. The College has had regular interactions with the HSE throughout the year in an effort to see the report published as a matter of urgency, and in seeking a commitment that the necessary funding and resourcing supports will follow

In her presentation at the ICO Winter meeting in December, Aisling Heffernan, HSE Primary Care Division, outlined the likely key recommendations and implementation plan, and the proposed initial priorities for 2017, including an action plan to address the immediate primary care paediatric eye services issues in the Dublin area. She also put forward the likely challenges and outlined the estimate planning process for the PCESRG report.

The PCES Review team made their presentation to the National Director for Primary Care and Primary Care Senior Management team in December 2016 and liaised with key stakeholders throughout the process to ensure all are informed and no unnecessary delays ahead of Leadership approval (Siobhan, has leadership approval been secured?).

The ICO looks forward to working with the HSE in ensuring the key recommendations of the report are implemented. It is hoped that the recommendations will be reflective of the core objectives as outlined in the Clinical Programme model of care document. It is a priority for the College to continue to place a significant emphasis on the key role medical ophthalmologists play in the advancement of the provision of services at community level in a role of medical oversight and supervision, and to ensure a focus is placed on the attractiveness of community posts and the appropriate training structure is in place to reflect these developments.

Metrics

The development of metrics in Community Ophthalmology by the HSE commenced in 2015 and is an important aspect of population care as it aims to inform the decision making process with regard to manpower and resources needed to care for patients in the community.

The accumulation and interpretation of statistics in the community has been challenging for clinicians as IT and administrative support is inconsistent. In spite of these difficulties, metrics are a vital part of the evidence which supports our work.

The project is an opportunity to demonstrate the work done in community Ophthalmology clinics and to accurately inform decisions on the service

EU Directive

As of 2016, Medical Ophthalmology is included on the list of recognised specialities under the EU Directive on the Mutual Recognition of Qualifications for automatic reciprocity for those wishing to travel for work.

Medical Ophthalmology Sub-Specialty Training

The first in a series of subspecialty training days for medical ophthalmology took take place on January 27th in the Education and Conference Centre at the Royal Victoria Eye and Ear Hospital. The focus of the first training day was on the use of intravitreal injections in AMD, and included lectures on diagnosis and management and a practical session on injection technique.

The second Sub-specialty Day in Medical Ophthalmology will take place at the ICO Annual Conference in Cavan. The focus of the session will be 'OCT -Interpretation and Treatment of Macular Pathology'. Susan Kelly and Ian Dooley will facilitate the workshop, which will be interactive with a plan to go through clinical cases on Macular Pathology. A subspecialty day on AMD is planned for the coming months.

The Committee wish to acknowledge and thank Yvonne Delaney, Dean of Postgraduate Education for her work in developing the medical ophthalmology training programme and to all who have contributed to the development and implementation of the new curriculum.

Manpower, Education & Research Committee

Gerry Fahy, Chairman

Committee Members: Marie Hickey-Dwyer, Donal Brosnahan, Ian Flitcroft, Yvonne Delaney, Emily Hughes, Barry Quill, Eamon O'Connell, Billy Power, Deirdre Townley, Ian Harrison, Alison Blake, Kevin Kennelly, Conor Murphy, Maedbh Rhatigan, Max Tracey, John Stokes and Shauna Quinn.

Medical Council Accreditation

Significant work has been undertaken in the past year in preparation for the Medical Council accreditation process for the higher surgical training programme. The process is still underway at the time of writing and an update will be provided at the AGM

HST Assessments

There are 18 HST on the HST training programme. The programme remains five years at present. The final year (Year 5) can be taken as fellowship training. The committee has submitted an application to the Medical council to reduce the training time to four years. If approved, fellowship training will then occur post CCST. All HST will be required to complete 4 years at HST level or equivalent. Only one year of equivalence of training will be granted towards HST training.

The HST training programme is being modified, to improve the HST experience, with the goal that time spent in units outside Dublin will last at least one year at any one site.

Certificate of Completion of Surgical Training

Eligibility for the Certificate of Completion of Surgical Training has been clarified. The CCST is awarded on completion of five years of higher surgical training. Fellowship training can be embarked on after completing four years on the HST programme, with prior approval by the director of training, but is not a pre-requisite for award of CCST.

RCSI Charter Day

The training committee organised an Ophthalmology scientific session at this year's RCSI Annual Charter Day Meeting on Friday, 10th February exploring the use of modern technology in the delivery of eye care.

The session, entitled 'The use of modern technology to deliver better eye care', included presentations on a broad spectrum of technological developments from David Keegan and Colm O'Brien at the Mater Misericordiae University Hospital, Dublin, and Conor Murphy and Paul Kenna from the Royal Victoria Eye and Ear Hospital in Dublin.

Other models of delivery of ophthalmic services were presented, including from Northern Ireland by Prof Giuliana Silvestri, Royal Victoria Hospital, Belfast and from Scotland by Roshini Sanders, NHS Fife's Queen Margaret Hospital, Dunfermline.

Awards

Andrea Ryan and Elizabeth Mc Elnea were awarded the Inaugural Bayer/ICO Clinical Fellowship in Ophthalmology 2016/17.

Elizabeth Mc Elnea and Stephen Farrell were awarded the Richard Stephens travelling scholarship.

Ethics Committee

Patricia Quinlan, Chairman

Committee members: Patricia McGettrick, Marc Guerin, Louis Collum, Paddy Condon, Lisa McAnena.

The Ethics committee met on six occasions over the past year.

The ICO guidelines on the consent process and the first series of patient information leaflets on the most common elective surgical procedures were formally launched at the ICO Winter Meeting in Dublin on December 1, 2016. These included cataract, strabismus and trabeculectomy surgery, intravitreal injections of anti-VEGF drugs for the treatment of diabetic macular oedema, wet AMD and retinal vein occlusion and fluorescein angiography. A seminar on 'Good Practice Guidelines for Patient Consent in Ophthalmology' featured on the programme with contributions from Professor Freddie Wood, President of the Medical Council, Greg Price, Assisted National Director and Angela Hughes, Programme Manager, HSE Quality Improvement Division. We are grateful for their support and endorsement.

The ICO patient information leaflets are evolving documents and the College would like to thank and acknowledge the extensive work by members who were and continue to be involved in there development. The documents are available to download in PDF format on the ICO website for use in member's practices or patients can be directed to the ICO site. The documents have also been produced in audio and Clear Print format in collaboration with the NCBI.

The Committee wish to acknowledge the contribution made by Mr A Sheikh, Barrister-at-Law in developing the guidelines, and of our colleagues Kathryn McCreery and Jeremy O Connor for their expert work on the strabismus and glaucoma sections.

The Committee has been focussed on continuing to provide guidance on improving the consent process, thereby better protecting both the patient and the doctor and reducing risk of litigation. The work of the College in this area has included the development of the ICO code of ethical conduct, guidelines on refractive surgery and on advertising regulation recommendations.

A workshop on informed consent, open disclosure and assisted decision making will take place at the ICO Annual Conference in Cavan this year, with presentations from Patricia Quinlan, Pat McGettrick and Angela Tysall, HSE Lead for Open Disclosure. The session aims to provide practical guidance on the correct process of obtaining informed consent, practising a policy of open disclosure, and on the Assisted Decision Making (Capacity) Act 2015. A national implementation programme has been developed by the HSE in response to the Act and will be discussed during the workshop in terms of how the Act will apply in every day practice to support clinicians and prepare them for its implementation.

Finally, I would like on behalf of the Committee to thank Siobhan and Ciara for their support in the development of these projects. They could not have happened without them.

Wednesday 17th May

9.00am **Welcome**
Prof William Power
President, Irish College of Ophthalmologists

9.05am **Paper Session**
Co-Chairs: Miss Marie Hickey Dwyer and Dr Patricia Quinlan

The Correlation of Clinical Features With Aqueous Humor Cytokine Levels In Patients With Neo-Vascular Age-Related Macular Degeneration And Controls
G Elfarouki

Patients' Informational Needs and Understanding about their Retinal Vein Occlusion
C Steenson

Defining the Current Role for Verteporfin Photo-Dynamic Therapy (PDT)
D Gallagher

The Value of Carotid Doppler Ultrasonography in Patients with Incidental Retinal Arterial Emboli Detected on Diabetic Retinopathy Screening and the Success of an Integrated Care Pathway – The Mater Experience
N Elseed

Questions

9.30am Rhegmatogenous Retinal Detachments; Primary Reattachment Rates in a Specialist Centre in Dublin over a Four Year Period
P Murtagh

Final Anatomic and Visual Outcomes are Independent of Duration of Silicone Oil Intraocular Tamponade in Complex Retinal Detachment Surgery
M Rhatigan

Pneumatic Vitreolysis with Reading Posture for the Treatment of Vitreomacular Traction
R McGrath

Endophthalmitis Vitrectomy Study: Is It Still Relevant in Current Practice?
P Ramasamy

A Phase 1 Device Trial for a Next Generation Injectable Miniature Telescope for End-Stage AMD
K Stephenson

Questions

10.00am National Diabetic Retina Screening Programme: Identifying Non-Diabetic Eye Disease
R Murphy

Changing Trends in Laser for Diabetic Retinopathy and Maculopathy: The Impact of the National Diabetic Screening Programme on a Regional Diabetic Retinopathy Service
AM Mongan

Expanded 2- Year Follow Up of Visual Outcome of Focal Laser Guided by FFA and Different Types of Intravitreal Injections of ANTIVEGF Drugs for Diabetic Macular Oedema
E Mahmoud

Aflibercept in Diabetic Macular Oedema Previously Refractory to Standard Intravitreal Therapy: An Irish Perspective to Compare Against International Trends
C McCloskey

Questions

10.30am **European Society of Ophthalmology (SOE) Lecture 2017**
Introduction by Miss Patricia Logan, SOE Board Member

Retinal Detachment - Past, Present and Future.
Mr Ian Dooley,
Consultant Ophthalmologist and Vitreoretinal Surgeon,
Mater Misericordiae University Hospital, Dublin

A Survey of the Treatment of Optic Neuritis Comparing the Practice Among Ophthalmologists, Ophthalmic trainees, Neurologists and Neurology Trainees in Ireland
L Kobayter

11.00am Coffee

11.30am **New Developments in Ocular Imaging**
Chair: Mr Pearse Keane

OCT Imaging in Glaucoma
Ms Yvonne Delaney
Dean of Post Graduate Education, Irish College of Ophthalmologists

Advances in Corneal Imaging
Mr Alex Shortt
Institute of Immunity and Transplantation, University College London, London

Reinventing the eye exam in the era of Big Data and Artificial Intelligence
Mr Pearse Keane,
Consultant Ophthalmologist, Moorfields Eye Hospital London

1.00pm Lunch

2.00pm **Poster Session**
Co-Chairs:
Miss Patricia McGettrick and Professor Pinar Aydin O'Dwyer

Effect of Conventional and Modified Focal Laser Guided by FFA on Visual Acuity and Retinal Thickening in Eyes with Chronic Vascular Macular Oedema Treated Previously by Many Different Intravitreal Injections of Anti-Vascular Endothelial Growth Factor Drugs
E Mahmoud

Wednesday 17th May

An Audit of Intravitreal Injection Outcomes in Diabetic Macular Oedema Patients Referred to Cork University Hospital from the National Diabetic Retinopathy Screening Programme
G Choo

A Randomised Controlled Trial to Determine the Impact of an SMS Reminder in Adherence to Diabetic Retinopathy Screening
B Tang

The Effect of Geodemographic Factors on the Attendance Rates at a Regional Treatment Centre for a Newly Established National Diabetic Retinopathy Screening Programme
E Greenan

Evaluation of a Joint Ophthalmic / Diabetes Nurse Specialist Clinic to Support Patients with Sight Threatening Retinopathy
M Morgan

Swept Source OCT and Angiography: The University Hospital Waterford Experience
P Ramasamy

Visual and Anatomical Outcomes Following Aflibercept Switch in Treatment Resistant Neovascular Age-Related Macular Degeneration
AM Mongan

Inherited Retinal Dystrophy: From Research to Reality
K Stephenson

Acute Exudative Polymorphous Vitelliform Maculopathy Syndrome; Workup, Differential Diagnosis and Natural History
P Murtagh

A Rare Complication Post Pneumatic Retinopexy
D Gallagher

Waldenstrom's Macroglobulinemia; Case Report and Literature Review
K Curtin

A Rare Case of Optic Nerve Aplasia
S Moran

Audit of an Acute Hospital Orthoptic Database: Are Identified "No Ophthalmic Defect" Always Normal?
G McBride

Audit of an 18 Month Orthoptic Secondary Screening Clinic in Galway City
G McBride

An Audit of the Service Provision and Outcome in an Ophthalmology Inpatient Consultation Service in a Tertiary Hospital
C Goodchild

An Audit of the Quality of Inpatient Referrals Received by the Ophthalmology Consultation Service in a Tertiary Hospital
C Goodchild

Tuberculosis and its Management; Challenges in Ophthalmology
R Shaffi

Comparison of Differences Between Final Refraction and Target Refraction in Lenstar and Contact Biometry Groups Post Phacoemulsification and IOL Insertion
K McElhinney

Looking at Prostaglandin Associated Periorbitopathy (PAP) in Prolonged Prostaglandin Analogue Usage
K McElhinney

Familial Foveal Aplasia
R Murphy

Outcomes and risk factors of trachoma trichiasis surgery in Elgadarif, Sudan
M Mohamed

3.00pm **Ophthalmology in Art**
Prof Pinar Aydin O'Dwyer
Professor of Ophthalmology and Neuro-ophthalmologist, Andara, Turkey, and Board Member International Council of Ophthalmology

3.20pm **Update on Retina Screen**
Mr David Keegan,
Clinical Lead, Retina Screen

3.30pm Coffee

4.00pm **Panel Discussion – Evolving eOphthalmology – How do we Keep the Focus on Patients as eHealthcare Solutions Emerge?**
Moderator – Prof William Power

Panellists
Miss Marie Hickey Dwyer
Consultant Ophthalmic Surgeon, University Hospital Limerick

Mr Mark Cahill
Consultant Ophthalmic Surgeon, Royal Victoria Eye and Ear Hospital, Dublin

Mr David Keegan
Consultant Ophthalmic Surgeon, Mater Misericordiae University Hospital, Dublin

Mr Pearse Keane
Consultant Ophthalmologist, Moorfields Eye Hospital London

Thursday 18th May

7.45am Breakfast Symposium Supported by Abbvie

Managing Inflammatory Disease with Biologics – Relevance for Ophthalmology
Prof Doug Veale,
Consultant Rheumatologist, St Vincent's University Hospital, Dublin

Identifying and Managing Gut Inflammation in Ophthalmology Patients
Prof Richard Farrell
Consultant Gastroenterologist, Connolly Hospital, Dublin

9.00am **Paper Session**
Co-Chairs: Mr Jeremy O'Connor and Dr Maureen Hillery

Cyclodiode Laser Ablation Outcomes: a Single Centre Review
T Butler

The Efficacy of Baerveldt Glaucoma Tube Implants in Irish Paediatric Patients with Primary or Secondary Glaucoma
C Hartnett

Comparing the Effectiveness and Tolerability of Preservative-Fee Tafluprost Versus Preserved Latanoprost in the Management of Glaucoma and Ocular Hypertension – A Clinical Trial
D Brinkman

Investigation of the Role of Methylation in the Regulation of Lysyl Oxidase Like 1 Expression in Pseudoexfoliation Glaucoma
D Wallace

Questions

9.30am **Evolving Concepts in Glaucoma Management**
Chair: Prof Colm O'Brien

Does Lifestyle Impact Glaucoma?
Prof Jonathan Crowston
Ringland Anderson Professor of Ophthalmology,
Head of Ophthalmology, University of Melbourne

Management of Angle Closure Glaucoma
Prof Augusto Azuara-Blanco
Professor of Ophthalmology, Queens University Belfast

What's New and What's Good in Glaucoma Surgery?
Mr Leon Au
Consultant Ophthalmologist, Manchester Royal Eye Hospital

11.00am Coffee

11.30am Global Accessibility Awareness Day
Mr Chris White
CEO, National Council for the Blind of Ireland

Ireland's First NCBI Eye Clinic Liaison Officer
K Stephenson

11.45am Paper Session
Chair: Dr Alison Blake and Mr John Stokes

Subgroup Analysis of Quality of Life Scores after Adult Strabismus
B Power

The Integration of Community and Acute Ophthalmic Children's Eye Services in Galway 2016
G McBride

Orbital Complications of Frontal Sinusitis
T Murphy

Eight Year Data of Graves' Ophthalmopathy Patients Managed with Endoscopic Orbital Decompression
Q Pilson

Questions

12.15pm: **Annual Mooney Lecture 2017**
Climbing the Glaucoma Mountain- Future Challenges and Opportunities
Prof Jonathan Crowston
Ringland Anderson Professor of Ophthalmology
Head of Ophthalmology, University of Melbourne
Managing Director, Centre For Eye Research Australia

1.00pm Lunch

2.00pm **Workshops** (running concurrently)
1. Introduction to Macula OCT and its Clinical Application
Chair: Dr Fiona Kearns,
Chair, Medical Ophthalmologists Committee, ICO

Mr Ian Dooley
Consultant Ophthalmologist and Vitreoretinal Surgeon,
Mater Misericordiae University Hospital, Dublin

Dr Susan Kelly
Consultant Medical Ophthalmologist, St Vincent's Private Hospital, Dublin

2. Saying the Right Thing, at the Right Time, to the Right Person: Open Disclosure, Informed Consent and Assisted Decision Making in your Professional Life.

ICO Guidelines on the Consent Process
Dr Patricia Quinlan
Medical Ophthalmologist, Blackrock Clinic, Dublin

Open Disclosure
Ms Angela Tysall,
Lead in Open Disclosure, Quality Improvement Division, HSE

Assisted Decision Making
Miss Patricia McGettrick
Consultant Ophthalmic Surgeon, HSE Midlands

Friday 19th May

8.00am **Surgical Affairs Committee Open Meeting**
Chair: Mr Richard Comer

9.00am **Irish College of Ophthalmologists Annual General Meeting**
Chair: Prof William Power, President, ICO

10.00am **Paper Session**
Chair: Mr Tim Fulcher and Dr Fiona Kearns

Trends in Corneal Transplant Surgery in Ireland: Indications and Outcomes of Corneal Transplant Surgery and Intraocular Lens Opacification following Descemet's Stripping Automated Endothelial Keratoplasty
C Quigley

Nurse-Led Corneal Collagen Cross-Linking (CXL) Service at The Royal Victoria Eye and Ear Hospital, Dublin
D Malata

Corneal Ectasia after Refractive Surgery
Y Arfat

Treatment of Vernal Keratoconjunctivitis with Supratarsal Injection of Corticosteroid
T McSwiney

Bean-Shaped Ring Segments ('Beans') in "Bag-in-the-Lens" Cataract Surgery as Augmentation Tool in Complex Capsule Cases
A Altenburg

Surgery Simulation after EyeSi: Cataract Surgery, Anterior Vitrectomy and Corneal Suturing with Practice Eyes
C Quigley

Questions

11.00am Coffee

11.30am **Update from ICO / Novartis Bursary Recipients 2016/2017**
Introduced by
Mr Jeremey O Connor, Chair Scientific & CME Committee

microRNA Nanomedicines in Sjögren's Syndrome Dry Eye Disease
Dr Sinead Connolly
Department of Molecular and Cellular Therapeutics, RCSI

Reactive Oxygen Species (ROS), fibrosis and NOXs in Glaucoma
Dr Reinold Goetz
Catherine McAuley Research Laboratory, UCD, Biosciences Laboratory UCC

11.45am **Announcement of ICO Medal Winners**

11.50pm **Adapting and Leading for Change**
Chair: Prof William Power

Making Change Happen
Ms Hadas Levy
Psychologist, Royal College of Physicians of Ireland

The importance of communication, 'team-ness' and valuing reciprocity in changing cultures
Mr Stephen McIvor
Sports Psychologist and Former Ireland & Munster Rugby Player

1.00pm Conference concludes

Professor Jonathan Crowston

Ringland Anderson Professor of Ophthalmology
Head of Ophthalmology, University of Melbourne
Managing Director, Centre For Eye Research Australia

Jonathan Crowston is the Ringland Anderson Professor of Ophthalmology, University of Melbourne and Managing Director of the Centre for Eye Research Australia (CERA). He is a practising glaucoma specialist clinician at the Royal Victorian Eye and Ear Hospital.

He gained his ophthalmology training at Moorfields Eye Hospital, London and was awarded a PhD for work on ocular fibrosis at the Institute of Ophthalmology, University College London (2000). He subsequently completed Glaucoma Fellowships at the University of Sydney and UC San Diego where he then joined the glaucoma faculty, prior to moving to Australia in 2006.

Jonathan serves as a director on a number of boards including the Centre for Eye Research Australia (CERA), ORIA (2008+), World Glaucoma Association, CERA Technologies Pty Ltd (2015+), Et al Research Pty Ltd (2015+), Oculo and Sight for All (2016).

Jonathan's research is focussed on understanding why ageing predisposes to optic nerve disease and in particular focussing on neuroplasticity and the potential for retinal ganglion cell recovery.

He has published over 160 peer-reviewed manuscripts and co-authored three books. Jonathan has received a number of awards for his research and training. He is the recipient of the 2016 Peter Watson Medal from Cambridge Ophthalmology Society and the inaugural recipient of 2016 ARVO David L Epstein Award recognising outstanding research in Glaucoma and for mentoring young clinical investigators.

Professor Augusto Azuara-Blanco

Professor of Ophthalmology, Queens University Belfast
Honorary Consultant Ophthalmologist, Belfast Health and Social Care Trust (BHSCT)

Augusto Azuara-Blanco completed his Ophthalmology training and PhD in Spain and did a clinical fellowship in glaucoma at Wills Eye Hospital, Philadelphia, with George Spaeth and cornea fellowship with Harminder S. Dua in Nottingham, England. He worked for over 10 years as a NHS consultant in Scotland (Edinburgh and Aberdeen) and moved to academia in 2010. Since April 2013 he is Professor of Ophthalmology at Queen's University Belfast and Honorary Consultant Ophthalmologist at the BHSCT.

Although his clinical work is focused on glaucoma academically his research interests are wider, trying to improve health outcomes of people with chronic eye diseases by evaluating the effectiveness of new treatments, diagnostic tests, and models of eye care. Prof Azuara-Blanco has expertise in primary and secondary research and also leads methodological research to improve the design of trials. He is chief investigator of the EAGLE and GATE trials and leads the glaucoma studies of the NICOLA project, a large population-based study in Northern Ireland with over 8000 participants. Prof Azuara-Blanco has published over 160 papers and has raised over £10 million for ophthalmic research from NIHR, MRC and EU Horizon 2020. He is member of the editorial board of several journals including the Cochrane Eyes and Vision Group, member of the Executive Committee of the European Glaucoma Society, and former Chair of the UK & Eire Glaucoma Society (2012).

Mr Leon Au

Consultant Ophthalmologist, Manchester Royal Eye Hospital

Leon Au graduated from the University of Nottingham in 1998 with an ophthalmology prize of the year. He completed 8 years of general ophthalmology training in Nottingham and Manchester before undertaking separate subspecialty training fellowships in cornea, glaucoma and refractive surgery. He has been a dual-specialty consultant in the Manchester Royal Eye Hospital since February 2009. His major areas of expertise are cornea related problems, external eye disease, cataract and glaucoma. He has strong interest in innovative minimally invasive glaucoma surgery and conducts clinical trials in many of these new technologies. He publishes his research regularly in peer-reviewed medical journals and he lectures in the field of cornea and glaucoma both regionally and nationally.

Mr Pearse Keane

Consultant Ophthalmologist, Moorfields Eye Hospital London

Pearse A. Keane is a consultant ophthalmologist at Moorfields Eye Hospital, London and an NIHR Clinician Scientist, based at the Institute of Ophthalmology, University College London (UCL). Dr Keane specialises in applied ophthalmic research, with a particular interest in retinal imaging and new technologies.

In April 2015, he was ranked no. 4 on a worldwide ranking of ophthalmologists under 40, published in "the Ophthalmologist" journal (https://theophthalmologist.com/the-power-list-2015/). In 2016, he initiated a formal collaboration between Moorfields Eye Hospital and Google DeepMind, with the aim of applying machine learning to automated diagnosis of optical coherence tomography (OCT) images.

Mr Alex Shortt

Wellcome Trust Intermediate Fellow and Clinician-Scientist,
UCL Institute of Immunity and Transplantation.
Honorary Consultant Ophthalmologist, Cornea and External Disease,
Moorfields Eye Hospital, London.

Alex Shortt is a clinician scientist who has undertaken joint academic and clinical training in ophthalmology. He studied medicine at University College Dublin, Ireland and immediately after graduation began to pursue his interest in scientific research, undertaking a master's degree in physiology (MSc) at University College Dublin. He then moved to London to undertake residency training in Ophthalmology at Moorfields Eye Hospital. Mid-way through residency he took a 4 year break to study for a PhD at University College London. His PhD thesis "The limbal epithelial stem cell niche and its relevance to ex-vivo culture and transplantation of corneal limbal epithelial stem cells" made a significant contribution to the field of ocular surface reconstruction through the publication of several highly cited journal publications.

Having been awarded his PhD in 2009 Alex then completed an Clinical Lectureship at the NIHR Biomedical Research Centre at Moorfields and the UCL Institute of Ophthalmology followed by two cornea and external disease fellowships at Moorfields Eye Hospital. In 2014 Alex joined the staff of Moorfields Eye Hospital as a consultant ophthalmologist in cornea and external disease, specializing in ocular surface disease and reconstruction.

Over the past 10 years, Alex's research has focused on the development of cell therapies for corneal and conjunctival disease. He is currently funded by a prestigious 4-year Wellcome Trust Clinician Scientist Award investigating the response of the recipient's immune system to engrafted stem cells. Alex's goal is to improve the lives of patients with chronic, severe ocular surface disease through the delivery of novel cellular therapies using different therapeutic cell types.

Mr Ian Dooley

Consultant Ophthalmologist and Vitreoretinal Surgeon,
Mater Misericordiae Hospital Dublin

Mr Ian Dooley. MB BCh BAO, MSc, MRCophth, FRCSI (Ophth), Consultant Ophthalmologist at the Mater Misericordiae University Hospital and Mater Private Hospital, Dublin. His subspecialty interests are Vitreoretinal surgery, cataract surgery and medical retinal disorders.

Mr Dooley has completed two years of international surgical fellowships in Vitreoretinal Surgery, firstly at Barts Health in London in 2014 then at the prestigious Royal Victorian Eye and Ear Hospital in Melbourne, Australia. Thus gaining extensive experience in the management of retinal detachment, diabetic retinopathy, macular hole, epiretinal membrane (ERM), age related macular degeneration (AMD) and cataract.

He is the author of over thirty international research publications including preoperative predictive markers of visual and anatomical outcomes before retinal detachment surgery and diabetic delamination surgery. He also acts a reviewer for more than ten international journals and is a member of the council of the Irish College of Ophthalmologists.

Ms Yvonne Delaney

Dean of Postgraduate Education, Irish College of Ophthalmologists

A graduate of University College Dublin. Ms Delaney is currently in position as Senior Clinical Lecturer in Ophthalmology in the Mater University Hospital and Consultant Ophthalmic Surgeon in the Bons Secours Hospital, Dublin. Her sub-specialty interest is in glaucoma particularly in the normal tension variant. Following completion of a Masters in Higher Medical Education at the RCSI she has been Dean of Postgraduate Education at the Irish College of Ophthalmologists since 2014.

Miss Patricia McGettrick

Consultant Ophthalmologist, HSE Midlands

Patricia McGettrick is in clinical practice as a Consultant Ophthalmologist at HSE Midlands and as one of the Programme Ophthalmologists for National Diabetic Retinopathy Screening.

A graduate of UCD and a Fellow of the Royal College of Surgeons in Ireland(FRCSI), Royal College of Surgeons in Edinburgh (FRCSEd) and Royal College of Ophthalmologists in London (FRCOphth). She convened the first of the ICO seminars on legal aspects of healthcare held during the Annual Conference of ICO in 2015, and thereafter at the College's Winter Meeting in December 2016.

Patricia is a member of the Ethics and Professional Standards Committee of ICO and has a special interest in the clinical and legal aspects of Informed Consent and Open Disclosure, following on from her studies of Healthcare Ethics and Law at RCSI.

Dr Patricia Quinlan

Consultant Ophthalmologist, Blackrock Clinic, Dublin

Patricia Quinlan is Honorary Secretary of the Irish College of Ophthalmologists and Chairperson of the ICO Ethics and Professional Standards Committee. Patricia is a Medical Ophthalmologist practicing in Blackrock Clinic Dublin, with a special interest in Retinal Vascular Disease.

She trained in Ophthalmology in the Royal Victoria Eye and Ear Hospital and completed a 2 year fellowship at the Wilmer Retinal Vascular Centre, Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore, Maryland. She held the position of attending ophthalmologist at Wilmer Retinal Vascular Centre before returning to Ireland 1990.

Dr Susan Kelly

Consultant Ophthalmologist

Susan Kelly is a graduate of RCSI and commenced training as an Ophthalmologist in the Royal Victoria Eye & Ear Hospital in 2002. She completed her Fellowship training in Bristol Eye Hospital and now practices with a special interest in medical retina.

Ms Angela Tysall

HSE Lead for Open Disclosure

Angela Tysall is a Project Manager in the HSE Quality Improvement Division. Her main role is that of National Lead in Open Disclosure for the HSE. She also has a lead role in Education and Training for the Assisted Decision Making Act 2015.

Angela worked as a complaints review officer for the HSE for 5 years and undertook investigations including serious incident investigations; trust in care and dignity at work investigations. She is a qualified Clinical Nurse Specialist in Ear Care and Minor Illness and has 13 years' experience as a midwife; 2 years as a practice nurse; and 5 years as a senior sister, team leader and acting manager of a nurse lead NHS walk-in-centre. She also has 6 years management experience in a GP Out Of Hours service in the North West of Ireland and achieving quality assurance accreditation for this service.

Angela is committed to the area of patient safety and improving the experience of people accessing our health and social care services. She takes part in and contributes to many national workgroups which have a patient safety agenda.

Professor Douglas Veale

Consultant Rheumatologist, St Vincent's University Hospital, Dublin
Centre for Arthritis and Rheumatic Disease, University College Dublin

Douglas J. Veale is a Professor of Medicine, Director of Translational Research and The Centre for Arthritis and Rheumatic Diseases (CARD). He is a Consultant Rheumatologist at St Vincent's University Hospital and Fellow/Principal Investigator at The Conway Institute for Biomedical and Biomolecular Research, University College Dublin (UCD).

Professor Veale is a Fellow of The Royal College of Physicians in Ireland (1997) and The Royal College of Physicians, London (1999). He graduated from the Royal College of Surgeons in Ireland in 1984 and obtained his MD by thesis from UCD in 1992.

Professor Veale has established an international reputation in clinical trials and translational research in the areas of Rheumatic Musculoskeletal Disease, biopharmaceutical therapies and biomarkers. He established CARD in Dublin receiving a EULAR Centre of Excellence Award in 2014. CARD has received funding from The American Federation for Ageing Research, USA, The European Union FP6 programme and FP7 Innovative Medicines Initiative (IMI), The Health Research Board of Ireland, Science Foundation Ireland, the Programme for Research in Third Level Institutions, Ireland and several of academia-industry partnership programmes.

Professor Richard Farrell

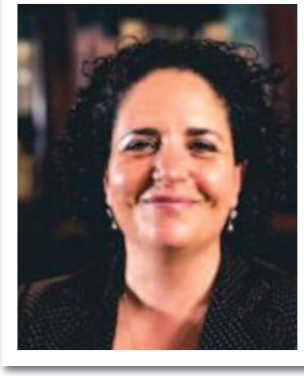
Consultant Gastroenterologist, Connolly Hospital, Dublin

Professor Richard Farrell graduated first in his class from UCD in 1990, obtained his MRCPI in 1993 and was awarded his MD thesis in 1998 for research on steroid resistance in inflammatory bowel disease carried out at Sir Patrick Dun's Research Laboratory, Trinity College Dublin.

In 2000 he completed a combined Gastroenterology and Hepatology fellowship at Beth Israel Deaconess Medical Center, Boston and was appointed as a staff physician at Harvard Medical School. He was Co-Director of the Center for Inflammatory Bowel Disease until returning to Ireland in 2005 to take up his current post at Connolly Hospital and the RCSI. He served as Secretary of the Irish Society of Gastroenterology from 2007 and 2010 during which time he introduced a Direct Access Endoscopy, an IBD Nurse and an Endoscopy-based Biologic Infusion service to Connolly Hospital. In 2010 he oversaw the move to a new state-of-the -art endoscopy department at Connolly Hospital which now performs over 7000 endoscopy cases annually. In 2013 as Clinical Lead he helped secure JAG accreditation and subsequent introduction of BowelScreen at Connolly Hospital.

He is the RCSI Graduate Entry Programme Co-ordinator for Gastroenterology & Hepatology and has fostered numerous collaborative research ties with RCSI, DCU, UCD and TCD.

His clinical and research interests include inflammatory bowel disease, coeliac disease, colorectal cancer screening and endoscopy and has published over 100 papers, numerous book chapters, reviews and case reports



Ms Hadas Levy

Psychologist, Education Development Department, Royal College of Physicians of Ireland

Hadas Levy is the Manager of the Education Development team in RCPI. This team provides educational expertise and is responsible for the design and development of a range of high quality educational interventions including physicians' wellbeing, curricula, examinations, workshops and online products development. Hadas has a B.A. in Psychology, a M.Sc. in Counselling Psychology and a Postgraduate Certificate in Statistics. Prior to working in RCPI, Hadas worked as a counselling psychologist in the HSE Primary Care, Dublin City University and private practice. In addition, Hadas worked as a consultant with national and international organisations, designing and delivering training interventions and managing training-related projects.

Mr Stephen McIvor

Sports Psychologist and Former Professional Rugby Player

Stephen McIvor operates 'Balancing Excellence' a company focused on performance psychology for athletes, coaches and teams both in sport and business. Integral in these approaches and the core research of 'Balancing Excellence' is the development of leadership skills and mental toughness while maintaining life balance. Stephen also delivers coach education programs for several institutions (Setanta College, ITT Dublin, and several NGBs).

Prior to this, Stephen played rugby for Munster and Ireland and worked as a professional coach in Ireland and abroad for 10 years.

Professor Pinar Aydin O'Dywer

Professor of Ophthalmology and Neuro-ophthalmologist, Andara, Turkey
International Council of Ophthalmology Board of Trustees

Professor Aydin O'Dwyer, completed her ophthalmology training in Turkey and founded the Ophthalmology Department of Baskent University, Ankara. She serves as a member of Academia Ophthalmologica Internationalis (AOI, chair LVI), and a member of the Board of Trustees, as well as a member of both the Examinations Committee and of the Fellowships Committee, of the International Council of Ophthalmology (ICO). In the past she served as the Treasurer and Neuro-ophthalmology Section Program Officer of the European Association for Vision and Eye Research (EVER), Treasurer of the European Neuro-ophthalmology Society (EUNOS), and Head of Ethics Committee of the ICO. Author of some 200 scientific publications and editor of 28 books on ophthalmology in Turkish, she has been managing editor and editorial board member on several ophthalmic journals and has given many conferences and courses internationally.

In addition to neuro-ophthalmology her other main interests include coaching young academicians, in particular integrating local perspectives into an international approach which recognizes cultural diversity and distinctiveness. She also promotes consensus and fellowship through art and music in her presentations on 'Ophthalmology in Art', and in the pursuit of her hobbies of playing flute and cello, dancing ballet and in her writing as an opera and ballet critic. She has published two books on the arts: The Book of Ballet (2012) and The Book of Opera (2015).

Chris White

CEO, National Council for the Blind of Ireland

Chris White was appointed CEO of NCBI in May 2014, with an expertise in leadership and good governance. Chris was CEO of Boardmatch Ireland from July 2010 to May 2014, where his work on improving governance in the not-for-profit sector led to the strengthening of numerous boards and committees.

He has a strong background in the not-for-profit and charitable sector, with previous roles as CEO of the Sue Ryder Foundation and as Head of Development at the Irish Council for Social Housing.

Chris has a primary degree in Classics and History from the University of Surrey (UK) and a Master of Social Science in Irish Political Studies from Queens University Belfast (UK). He is also a Chartered Director with the Institute of Directors, with a Diploma in Strategic Leadership and Governance.

Prize Winners and Honorary Lectures

Each year the ICO awards a number of prizes including the Sir William Wilde Medal for Best Poster presentation, the Barbara Knox Medal for best paper presentation. In 2016-2017 two bursaries were awarded one for research supported by Novartis and one clinical fellowship supported by Bayer.

At this year's conference a travel and education bursary, supported by Scope Ophthalmics will be awarded for the best case submitted for the Medical Ophthalmology Sub Specialty Workshop.

Each year the College invites two distinguished ophthalmologists to give honorary lectures; the Montgomery Lecture and the Mooney Lecture.

ICO/Novartis Eye Research Bursary 2016

Sinead Connolly and Reinold Goetz were announced the winners of the ICO/Novartis Eye Research Bursary 2016 at the Annual Adare Retinal Meeting in Limerick on September 29th, 2016.

The annual bursary is an unrestricted educational grant awarded to a doctor who wishes to undertake a research project or specific training in the field of ophthalmology. The bursary has been instrumental in facilitating eye doctors in Ireland to undertake pioneering research into potential cures and treatments for sight-threatening conditions.

Sinead Connolly's study is focused on developing new therapies for dry eye disease in Sjögren's syndrome, an autoimmune condition characterised by severe dry eye, which is difficult and costly to treat, and causes great distress to patients. She has developed a nanoparticle to normalise levels of microRNAs- short messengers that can control inflammation. When the nanoparticles are administered to ocular surface cells in the lab, they decrease levels of a microRNA which promotes inflammation, and increases expression of an anti-inflammatory gene – indicating a promising new avenue for precision therapy of dry eye in Sjögren's syndrome.

Reinold Goetz's study is examining potential new areas for therapeutic targeting in the treatment of primary open angle glaucoma (POAG). The research goal of Reinold's study is to determine what is happening on a molecular and biochemical level to cause the fibrotic changes at the trabecular meshwork (TM)and fibrotic changes at the lamina cribosa LC.

Reactive Oxygen Species, Fibrosis and NOXs in Glaucoma

Dr. Reinold Goetz

Catherine McAuley Research Laboratory, Mater Hospital, Department of Ophthalmology, University College Dublin & Biosciences Institute, University College Cork

Background:
Glaucoma is an umbrella term for a group of diseases that cause degeneration of retinal ganglion cells. Though the exact molecular link between raised intraocular pressure (IOP) and retinal ganglion cell axon loss is ill-defined, IOP is the main therapeutic target in glaucoma. In primary open angle glaucoma (POAG), the increase in IOP is due to resistance to aqueous humour outflow through the trabecular meshwork (TM) which is secondary to remodelling of the extracellular matrix and fibrosis. Recent studies have suggested that transforming growth factor-β (TGF-β) plays a major role in the fibro-proliferative process at the TM. The main site of damage in glaucoma is the lamina cribrosa (LC), through which the retinal ganglion cell axons exit the eye. TGF-β is also produced in abnormally high levels at this site. Thus, we have selected NOX4, which has recently been implicated in numerous fibrotic diseases and is a downstream target of TGF-β, with the aim to examine its role in the fibro-proliferative pathophysiology of glaucoma, both at the TM and the LC, potentially revealing new therapeutic targets.

Methods:
Primary trabecular meshwork and lamina cribrosa cells were acquired and cultured in primary cell culture medium. They were passaged to confluence and treated with TGF-β. Antibodies used for qPCR and western blotting include anti-NOX4, anti-Collagen 1A1, anti- α smooth muscle actin, anti-Periostin, anti-Beta actin as well as specific pathway antibodies.

Results:
The flow cytometry protocol was optimised for ROS production in retinal cell lines. Western blotting and qPCR results showed that normal trabecular meshwork cells, stimulated with TGF-β demonstrated an increase in expression of Collage 1A1 and a large increase in NOX4 expression.

Conclusion:
Our results implicate NOX4 in the pathophysiology of glaucoma through stimulation by TGF-β and production of ROS with oxidative damage and subsequent fibrosis. Specific NOX4 inhibitors such as GKT137831, as well as pleiotropic acting inhibitors such as Metformin are now being used to determine their effect on this fibro-proliferative process

microRNA Nanomedicines in Sjögren's Syndrome Dry Eye Disease

Dr Sinead Connolly

Department of Molecular and Cellular Therapeutics, RCSI, Department of Ophthalmology, Royal Victoria Eye and Ear Hospital, Dublin, School of Pharmacy RCSI, Department of Ophthalmology, RCSI, Dublin

Objectives: Primary Sjögren's syndrome (pSS) is a disorder characterised by autoimmune destruction of exocrine glands, leading to the sicca complex of dry eyes and dry mouth. The exact aetiopathogenesis remains obscure however a signature of Type 1 interferons and pro-inflammatory cytokines is strongly associated with pSS. microRNAs are endogenous small RNAs which modulate gene expression by acting on messenger RNA at a post-transcriptional level. There is a growing understanding that altered expression of microRNA is involved in the pSS phenotype, and may promote inflammation in pSS by increasing cytokine production. Modulation of microRNA presents a potential new treatment paradigm for pSS dry eye, but effective and safe methods of delivery to the ocular surface limit clinical translation.

Polymeric nanoparticles were investigated for delivery of microRNA modulating compounds to the ocular surface. Antisense RNA to miR-744-5p cargo, a microRNA overexpressed in conjunctival epithelial cells of pSS patients, was used to determine efficiency.

Methods:
Chitosan polymers were used to prepare miRNA nanomedicines, characterised for their size, surface (zeta) potential, RNA complexation efficiency, and screened for transfection efficiency and toxicity in IMCEC Human Conjunctival Epithelial Cells. Manufacture was optimised to obtain small particles which effectively complex miRNA at a variety of NP ratios. The effect of chitosan-miR loaded nanoparticles on Pellino3 and inflammatory cytokine expression was determined by qPCR. Nanoparticle biocompatibility was investigated using the MTT cell viability assay.

Results:
Average hydrodynamic diameter of chitosan nanoparticles was 207 nm with a narrow size distribution. The nanoparticles also possessed positive surface charges up to +25 mV in water, thus enabling effective condensation of negatively charged microRNA. Cells treated with chitosan nanoparticles showed decreased expression of miR-744-5p and increased expression of Pellino 3 mRNA.

Conclusions:
An optimized microRNA nanoparticle delivery system has therapeutic potential for modulating inflammation at the ocular surface.

ICO Medal Winners 2016

The winner of the Barbara Knox Medal for Best Paper 2016 was Sinead Connolly for her presentation on the "Design of Nanoparticle- based MicroRNA Therapeutics in Sjögren's Syndrome". The study is being carried out at the Molecular and Cellular Therapuetics, RCSI, the Royal Victoria Eye and Ear Hospital and the School of Pharmacy, RCSI, Dublin where they are developing a nanoparticle drug-delivery system to restore normal micro RNA levels at the surface of the eye. Preliminary findings indicate that it can reduce increase anti-inflammatory gene expression, which is a promising strategy for reducing inflammation, and, hopefully, the symptoms of dry eye.

The winner of the Sir William Wilde Medal 2016 for Best Poster was Patrick Murtagh for his presentation on the "Workings of the Royal Victoria Eye and Ear Hospital Application for Smart Phones". The aim of this application is to aid prescribing of the common and uncommon ophthalmic medications and to provide easy access to protocols and procedures used throughout the hospital. The application is currently available for download form the Apple iStore and from the Google Play store by searching "RVEEH".

Annual Mooney Lecture 2016

The Annual Mooney Lecture 2016 was given by Professor Reza Dana, Claes H. Dohlman Professor of Ophthalmology, Harvard Medical School on "Regulation of Corneal Inflammation and Immunity".

Dr. Dana's research program includes ocular surface autoimmunity, mechanisms of T cell activation and regulation in transplantation, cytokine regulation of leukocyte trafficking, corneal angiogenesis, novel immunomodulatory strategies in ocular inflammation, and development of bioengineered stromal constructs.

Annual Montgomery Lecture 2016

The 2016 Montgomery Lecture was delivered by Mr Frank Larkin, Consultant Ophthalmic Surgeon at Moorfields Eye Hospital, London.

The lecture entitled "Accepting the Unacceptable: Prevention and Treatment of Rejection of Donor Cornea" illustrated the varied appearances of corneal transplant rejection, immune privilege of donor cornea and its erosion, pathways to rejection, and the management of high rejection risk patients in 2016.

Bayer/ ICO Clinical Fellowship in Ophthalmology 2016/17

Elizabeth McElnea and Andrea Ryan were awarded as joint winners of the inaugural Bayer/ICO Clinical Fellowship in Ophthalmology 2016/2017. The announcement was made at the ICO Annual Winter Meeting in The Gresham Hotel, Dublin on December 1st, 2016.

Elizabeth McElnea will commence a fellowship in ophthalmic plastic, lacrimal, orbital and reconstructive surgery.at Macclesfield District General Hospital in Cheshire in July 2017.

Andrea Ryan is currently carrying out a fellowship in medical retina at Moorfields Hospital in London where she has gained access to novel retinal imaging techniques, electrodiagnostics, research opportunities and extensive teaching sessions under the supervision of experts in the field.

A full list of the past Honorary lectures and ICO medal winners is available on the ICO website www.eyedoctors.ie

Paper Session
Wednesday 17th May 9.00am

The Correlation of Clinical Features with Aqueous Humor Cytokine Levels in Patients with Neo-Vascular Age-Related Macular Degeneration and Controls

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Royal Victoria Eye and Ear Hospital and Research Foundation, National Children's Research Centre, Trinity College Dublin

Objectives:
Age-related Macular Degeneration (AMD) is the leading cause of central vision loss in the over 50s worldwide and is the primary cause of recorded blindness in Ireland, accounting for 23% of people registered as blind up to 2010 with 7,000 new cases every year. Early AMD can progress to two late forms of disease, one form, "wet" AMD, is characterized by pathological choroidal neovascularization (CNV). Although "wet" AMD is the minority form of the disease it accounts for 90% of blindness caused by this condition. The build-up of drusen between the Bruch's membrane and the RPE is the first clinical sign of AMD. It is probable that these drusen deposits are not being efficiently cleared from this space due to inefficient phagocyte activation. One possible reason for this is that the resident macrophages and microglia are tuned to be "anti-inflammatory" due to high levels or over-activation of negative regulators of inflammation. This study builds on previous work carried out to explore the potential relationship between dry form of AMD and, later, newly-diagnosed neo-vascular AMD and markers of the innate immune response in the peripheral circulation. The aim is to explore the potential relationship between the development and severity, through clinical features and impact on vision, of neo-vascular AMD and markers of the inflammatory response.

Methods:
Full ethical approval granted by SVUH ethics committee. A total of 35 patients were recruited from specialist out-patients clinics for this prospective study. Exclusion criteria for patients with wet form of AMD included having new diagnosis and not having undergone any previous intra-ocular treatment. Clinical assessment carried out, including detailed questionnaire and examination, visual acuity, fundal photography, OCT and fluorescein fundal angiography. This was repeated following a course of three intra-vitreal injections. At time of injection, aqueous samples (0.05 ml) were obtained and stored appropriately. A group of controls were recruited from patients undergoing elective cataract surgery; exclusion criteria included no diagnosis or features of AMD and no previous intra-ocular treatments. Similar aqueous samples were obtained at time of surgery. Both protein and RNA were isolated from these samples using TriZol reagent. All samples underwent analysis using panel ELISA to measure levels of various cytokines, including IL-18 and IL-6. Correlation analysis carried out comparing clinical features with bio-chemical findings and between patients and controls.

Results:
The results indicate a trend towards lower levels of IL-18 in the internal ocular environment of patients with neo-vascular AMD vs. controls. This correlated with lower baseline visual acuities and lower visual prognosis. No significant change in levels elucidated over the course of treatment. Further identification of levels of other bio-markers underway.

Conclusions:
The investigation of the role of the innate immune response and cytokine dynamics in the pathogenesis of neo-vascular AMD is ongoing. In an era where most therapy is targeting the VEGF pathway, this is a promising field with the potential of identifying bio-markers of disease risk and potential targets for early intervention.

Patients' Informational Needs and Understanding About Their Retinal Vein Occlusion

Steenson C, Monaghan M, Williams M.
Northern Ireland Medical and Dental Training Agency, University of Dundee, Queen's University Belfast.

Objectives:
Anecdotal clinical experience suggests that patients presenting with a retinal vein occlusion (RVO) have little insight into the nature of their eye condition, in contrast to patients with age-related macular degeneration (AMD) or diabetic eye disease. The aim of this study was to describe what topics RVO patients in the real world want to know more about, and to explore their understanding or RVOs. There are several benefits of exploring this. Firstly identifying specific areas of patients' lack of understanding would allow clinicians to focus on patients' informational needs. Patients with poor understanding of their RVO may have unjustified anxieties that could be addressed. Finally there are several ways to treat macular oedema related to RVOs, which differ in ways sensitive to patient preferences.

Methods:
This was a pilot prospective qualitative study, designed to allow planning of further ethnographic studies. Consecutive patients with RVOs attending clinic were invited to participate before their consultation with the doctor that day. Some had received intravitreal treatments in the past and some had not. A questionnaire was administered face to face by one investigator (MTM) who wrote down the answers. Participants were asked to give their age, sex and number of prior visits to the macular clinic. Then patients were asked two open questions. They were continuously prompted with neutral utterances, such as 'go on' or 'tell me more' until no further topics were offered. No personally identifiable information was collected and all data was treated confidentially. The raw responses were categorized using thematic analysis by two researchers (MW and CS), with disagreements resolved by discussion.

Results:
Data from 20 patients was collected (12 female). The median age was 70.5 years (range 38 to 88). Three were visiting the eye clinic for the first time, while 13 had visited over 5 times previously. In response to the question "you have been diagnosed with a retinal vein occlusion. What do you want to know about your eye condition, but don't know or understand at present?" several themes emerged. Firstly concern was expressed about the cause of the RVO, specifically that the condition may be cancerous ("rogue vessels"), or that it was AMD (because other patients in the waiting area had AMD). Some admitted to no understanding: "what's wrong with the eyes?" was a question of a first time attendee. A second theme was uncertainty about the prognosis. General questions on prognosis were raised: "will this resolve?" and "will it get worse?". Questions were also expressed on prognosis relating to specific activities: "…worried I wouldn't be able to read or drive", as well as concerns about occupation, a carpenter for example asking "can I do this?". A third theme related to aspects of treatment. Patients wanted to know about alternatives: "Should I get glasses?"; "…will an operation help?", one asking if a new cornea would help. There was a desire to know about treatment effectiveness: "would it have been worse if I didn't get injections?". Treatment duration was also of interest to patients: "…will there be an end to it?". The word 'implant' was uttered in association with concern about complications, one patient asking what the effects of the implant would be as the patient "wouldn't like to lose their sight". Finally some expressed no uncertainties, either because of a "good explanation using images taken by the optician", or related to fatalistic views: "I'm getting old and I've got to remember that". In response to the question: "can you tell me, in your own words, what a retinal vein occlusion is, why a retinal vein occlusion happens and what treatment is possible?", most patients mentioned fluid, a bleed or a blockage as the cause, and while most patients mentioned injections or implants as treatments, several mentioned systemic and lifestyle factors.

Conclusions:
The patients' comments reveal a variety of messages that patients have picked up on. Although some areas of their uncertainty could be predicted by most clinicians in the field, also revealed are specific incorrect misunderstandings, an emphasis on uncertainty about treatment and light shone on outcomes that really matter to patients, which are not visual acuity or anatomical parameters. A limitation of this study is that data were collected by making notes, rather than recording answers and having transcriptions. Time with the patient was brief and consequently patients' understanding was explored only at a superficial level. However the aim of this audit was to help plan further studies to examine patients' perspectives in greater depth, including studying associations between informational deficiencies and other relevant factors, such as patient characteristics (to better predict which patients may have specific misunderstandings) and with patient-reported outcomes (to determine which gaps in knowledge matter most to patients, allowing planning of pertinent interventions).

Defining the Current Role for Verteporfin Photo-Dynamic Therapy (PDT)

Gallagher D, O'Rourke M, Kinsella F, Townley D.
University College Hospital, Galway

Objectives:
Establish the annual number of PDTs carried out. Examine diagnosis for which PDT is currently being used. Examine the outcomes, side effects and safety of PDT. Compare different PDT parameters with outcomes

Methods: Clincial parameters were ascertained from the medical records of patients undergoing PDT between 3/6/2000 and 30/06/2016. This included indications for PDT, dosing regimens of verteprofin PDT (which includes treatment dose of vertoporfin and fluence). Response to treatment was measured by visual acuity, ocular coherence tomography and fluorescein angiography. Complications and side effects were recorded.

Results: The total number of patients who underwent PDT since 2001 was three hundred sixty-three. This includes an average of 54.6 treatments per annum prior to the introduction of intravitreal Anti-Vascular endothelial growth factor (Anti-VEGF). There was a dramatic decrease to an average of 5.4 treatments per annum over the following five years. There was an average of 8.8 cases treated per annum over the past five years due to the changing role of PDT. The main indication currently is for recurrent or chronic central serous chorioretinopathy (CSCR). 67.4% (31/46) of PDT treatments performed over the last five years were for CSCR. 58.7% (27/46) of patients received other treatments prior to PDT. Of those twenty-seven, 55.6% showed a failed response on OCT or visual acuity to Anti-VEGF, focal laser or both, but improved visual acuity after PDT treatment. There were no serious complications with just 1.4% (5/363) reported back pain.

Conclusions: PDT continues to have a role in the management of medical retina conditions. Our results show PDT is effective in improving and stabilizing visual acuity in recurrent and chronic CSCR

The Value of Carotid Doppler Ultrasonography in Patients with Incidental Retinal Arterial Emboli detected on Diabetic Retinopathy Screening and the Success of an Integrated Care Pathway – The Mater Misericordiae University Hospital Experience

Elseed N, Murphy S., Mc Donnell C, Small C, Keegan D.
Mater Misericordiae University Hospital, Dublin.

Objectives: Retinal arterial emboli (RAE) are frequently detected on diabetic retinopathy (DR) screening imaging. Current literature suggests that RAE are associated with carotid artery disease and an increased risk of stroke.To date there is ongoing debate on how to best manage these patients and no standard guidelines exist regarding their management. The aim of this ongoing study is to evaluate the prevalence of significant carotid artery stenosis in this cohort of Asymptomatic retinal emboli detected on DR screening through a new care pathway in a tertiary referral center (Ophthalmology, stroke & vascular) and assess the need for further vascular work up.

Methods: Participants were asymptomatic adults referred to the Mater University Hospital DR Treatment program between April 2016-December 2016 with Incidental RAE. Patients were then referred onto the new RAE pathway for vascular risk assessment and Carotid Doppler Ultrasonography & were offered best medical treatment and counselled or offered surgery.

Results: Over the 8-months study 74 patients out of 900 patients referred (equates to ~9000 screen events) had Incidental RAE on imaging. A total of 42 patients underwent Doppler scanning.Twenty two patients (52%) had mild carotid artery stenosis.Ten patients (24%) had moderate carotid artery stenosis and 50% of those required follow up appointments in view of suspicious plaque characteristics .Ten patients (24%) had significant ipsilateral Carotid artery stenosis. Out of those, five patients (12%) went on to having carotid endarterectomy and one patient is awaiting pre-operative carotid MRI. One patient had complete occlusion of one Carotid artery along with moderate contralateral stenosis.Overall 60% of patients with significant carotid artery disease were detected following Ophthalmology referral.

Conclusion: This study demonstrates the prevalence of significant carotid artery stenosis in diabetic patients having Incidental Retinal Arterial Emboli. Carotid ultrasonography should be utilised for identifying those patients & detecting those developing progressive stenosis.Since patients with embolic signals were reported to have a higher risk of stroke, tracking patterns of retinal emboli & transcranial Doppler studies may offer future guidance in the management of asymptomatic carotid artery stenosis and outline the role of novel therapies as Carotid artery stenting. The current pathway proved to efficient and helped improve the care experience for patients in this risk group.

Rhegmatogenous Retinal Detachments; Primary Reattachment Rates in a Specialist Centre in Dublin Over a Four Year Period

Murtagh P, Rhatigan M, Stephenson K, Harris E, McElnea E, Connell P, Keegan D.
Mater Misericordiae University Hospital, Dublin.

Objectives:
To describe rhegmatogenous retinal detachment surgery in a Dublin specialist centre including primary reattachment rates, complications, type of procedure and tamponade, age and sex of patient, type of detachment, anesthesia used and visual outcomes three months post op.

Methods:
A retrospective audit was conducted over a 4 year period of all presenting primary rhegmatogenous retina detachments to a tertiary referral retina centre. Approximately 300 to 400 vitreoretinal cases are performed in the hospital on a yearly basis of which approximately 100-150 are primary rhegmatogenous retinal detachment repairs. Data was extracted from the surgical logbook in theatre and then the appropriate medical flies were pulled and the relevant information obtained from each.

Results:
Over the four year period 1,393 vitroretinal cases were performed of which 491 were primary retinal detachment repairs. The right eye was the most commonly involved eye with an incidence of 56.01%. There was a male: female ratio of 243:248 (49.49%:50.51%). 242 (49.29%) operations were for macula off detachments The age ranged from 16 to 89 years with a mean age of 54.66+/- 15.29 years. PPV was the most commonly performed surgical procedure, with 265 cases out the total 491 (53.97%). PPV-SB consisted of 125 (25.46%) cases and SB with the remaining 101 (20.57%) surgeries. 291 (59.27%) of the procedures were performed under general anaesthetic and 200 (40.73%) were performed under local anaesthetic. A primary success rate of 89.2 % was recorded across all procedures with 53 patients re-detaching in the 3 month post-operative period. Criteria for success was defined as an improvement in VA of 0.3 logMAR units or a final visual acuity of greater than or equal to 0.3 logMAR. 71.81% of eyes achieved visual success.

Conclusions:
This study hopes to help benchmark our primary reattachment rates, intraoperative complication rate and surgical technique with international standards including the BEAVRS criteria and to demonstrate again that the benefits of RD surgery greatly out weight the risks.

Final Anatomic and Visual Outcomes are Independent of Duration of Silicone Oil Intraocular Tamponade in Complex Retinal Detachment Surgery

Rhatigan M, Keegan D, Connell P.
Mater Misericordiae University Hospital, Dublin.

Objectives:
The objectives of this study were to report anatomic and visual outcome following silicone oil removal in a cohort of patients with complex retinal detachment, to determine association between duration of tamponade and outcomes and to compare patients with oil removed and those with oil in situ in terms of demographic, surgical and visual factors.

Methods:
We report a four year retrospective case series of n=143 patients with complex retinal detachments who underwent intraocular silicone oil tamponade. Analysis between anatomic and visual outcomes, baseline demographics, duration of tamponade and number of surgical procedures was carried out using Fisher's exact test and unpaired two-tailed T-test.

Results:
One hundred and six patients (76.2%) had undergone silicone oil removal at the time of review with 96 (90.6%) showing retinal reattachment following oil removal. Duration of tamponade was not associated with final reattachment rate or with a deterioration in best corrected visual acuity (BCVA). Patients with oil removed had a significantly better baseline and final BCVA compared to those under oil tamponade (p= 0.0001 and p= <0.0001 respectively

Conclusions:
Anatomic and visual outcomes in this cohort are in keeping with those reported in the literature. Favourable outcomes were seen with oil removal but duration of oil tamponade does not affect final attachment rate with modern surgical techniques and should be managed on a case by case basis.

Pneumatic Vitreolysis with Reading Posture for the Treatment of Vitreomacular Traction

McGrath R, Ng E.
Cork University Hospital, Cork, Institute of Eye Surgery, Waterford.

Objectives:
Pneumatic vitreolysis has potential to be an effective and cost-efficient means to treat vitreomacular traction (VMT). This interventional study describes the resolution of VMT following C3F8 injection, with induction of ocular saccades to increase the effect of the gas. All patients had previously failed ocriplasmin therapy for VMT.

Methods:
Five eyes (four patients) were given a 0.3ml intravitreal injection of 100% C3F8. Procedure was identical to that of pneumatic retinopexy and careful examination of the inferior retinal periphery was carried out beforehand. Patients were instructed to read as much as possible and avoid holding up the reading material to massage the expansile gas against the vitreous adhesion. Serial OCT and wide field imaging was used to monitor progress of posterior vitreous detachment. All patients were pseudophakic and one had concurrent macular degeneration, which increased the risk of ocriplasmin failure.

Results:
All eyes demonstrated a complete detachment of the vitreous face within 1 to 2 weeks of injection. Patients were encouraged to increase the time they spent reading after 1 week if vitreous detachment had not occurred. One eye developed a small macular hole and small peripheral retinal detachment after injection of the gas which. This was treated successfully with vitrectomy. Visual acuity gradually increased in the ensuing months.

Conclusions:
A limited number of eyes has demonstrated that a non-intrusive reading posture may be a means to increase the effect of pneumatic vitreolysis. The procedure is not without the risk of an iatrogenic macular hole or retinal detachment however. Pneumatic vitreolysis has the potential to be an effective and cost-efficient alternative to surgical intervention or Ocriplasmin therapy for VMT.

Endophthalmitis Vitrectomy Study: Is It Still Relevant in Current Practice?

Ramasamy P, Pokrovskay O, Doris J.
University Hospital, Waterford.

Objectives:
The Endophthalmitis Vitrectomy Study (EVS) is a 22 year old study that is still being used as evidence-based medicine for the management of endophthalmitis. It only included endophthalmitis following cataract surgery and was performed during in era where vitrectomy was performed using older technology and viewing systems, associated with higher rates and severity of complications. Although the landmark trial was relevant and best practice at the time, there is growing evidence to support early vitrectomy in endophthalmitis.1-5 It aims at reducing the amount of infective and inflammatory material present within the eye before vision is irreparably damaged. The objective of this study is to report the visual outcomes and complications of endophthalmitis managed with early vitrectomy, regardless of aetiology or visual acuity at presentation.

Methods:
Retrospective review of 10 consecutive cases of endophthalmitis referred to a single vitreoretinal surgeon over a 3 year period was carried out. Demographic information, clinical features, aetiology, treatment, visual outcomes and complications were obtained from patients' medical records.

Results:
Corneal scarring following endophthalmitis caused by infective keratitis subsequent Seven cases were following cataract surgery, 1 following intravitreal injection, 1 following trabeculectomy and 1 following traumatic corneal perforation repair. Visual acuity at the time of diagnosis was counting fingers, hand movements and light perception in 3, 5 and 2 eyes respectively. Eight eyes received intravitreal vancomycin and ceftazidime while 1 eye underwent vitrectomy on the day of diagnosis. Patients were postured upright to prevent toxic damage of the macula from accumulation of infective and inflammatory material at the posterior pole. All 10 patients underwent 23 gauge pars plana vitrectomy and removal of anterior chamber hypopion (9 performed by JD, 1 by PR). Fifty percent of cases were performed under local anaesthesia. The mean interval from diagnosis to vitrectomy was 3.0 days (SD: 2.16, range 0-8). Double air-fluid exchange was performed to ensure

near complete removal of infective and inflammatory material, followed by injection of vancomycin 1mg/0.1mL and ceftazidime 2mg/0.1mL into the vitreous cavity. The mean follow up was 133.7 days (SD: 84.26, range 40-280 days). The final BCVA was ≥ 6/12 in 60% of eyes (6/6 in 1 eye, 6/9 in 2 eyes, and 6/12 in 3 eyes). In 3 eyes (30%), the final BCVA was 6/19. Of these, 1 eye developed endophthalmitis following traumatic corneal perforation repair with subsequent corneal scarring, 1 developed endophthalmitis following intravitreal injection for neovascular AMD, and 1 eye had heavy silicone oil tamponade for macula-on retinal detachment, which developed 18 days later originating from an area of retinal necrosis observed during the initial vitrectomy. In 1 eye (10%), the final BCVA was CF. This was due to to complicated cataract surgery and secondary ACIOL insertion.

Conclusions:
This case series supports the benefits of early vitrectomy for endophthalmitis, regardless of aetiology or presenting visual acuity.

A Phase 1 Device Trial for a Next Generation Injectable Miniature Telescope for End-Stage AMD

Stephenson K, Mulqueen C, Ahroni E, Keegan D.
Mater Private Hospital, Dublin, VisionCare Ophthalmic Technologies, Saratoga, Caifornia.

Objectives:
To describe the surgical technique and 21 month outcomes of 3 patients with end stage AMD who underwent implantation of a next generation injectable miniature telescope. This outlines inclusion/exclusion criteria, safety parameters and visual outcomes up to 21 months post-implantation.

Methods:
Patients with end stage dry or stable neovascular age-related macular degeneration were screened. Those that met all of the inclusion criteria and none of the exclusion criteria advanced to surgery (n=3). Patients were followed on a planned schedule up to 21 months (review ongoing). At each post-operative visit visual acuity for near and distance was recorded as were safety parameters (anterior chamber depth, serial endothelial cell count) and adverse events.

Results:
All patients gained a minimum of 2 lines of LogMAR acuity (mean 20 letters), in keeping with the first generation device. Recovery to this level of vision was quicker than the initial device. Endothelial cell counts were comparable to similar temporal data from implantation of a sulcus IOL (21 month loss of 8-15%). Anterior chamber depth was deeper than with the original telescope, providing increased support to the hypothesis that decrease in ECC is due to surgical fluidics and post-op inflammation rather than ongoing endothelial-implant touch. There were no serious adverse events, with 1 case of post-operative inflammation extending to 1 month, managed by topical corticosteroids.

Conclusions:
The injectable miniature telescope has similar visual outcomes to the original device, with quicker recovery due to a smaller corneal wound. There is improved safety with a deeper anterior chamber. We aim to recruit further patients to increase statistical significance. Although this device does not cure the underlying AMD process, in appropriate patients, it improves visual acuity with gains in independence and quality of life.

National Diabetic Retina Screening Programme: Identifying Non-Diabetic Eye Disease

Murphy R, Keegan D.
Mater Misericordiae University Hospital, Dublin, Diabetic RetinaScreen, National Screening Service, HSE.

Objectives:
The Diabetic RetinaScreen Service offers nationwide screening to all diabetics over the age of 12. It is internationally unique given the integrated nature of its screening and treatment arms. It is now well established, demonstrating impressive uptake with considerable clinical impact. The aim of this study is to explore the significant and increasing number of referrals from the Diabetic RetinaScreen Service with non-diabetic eye disease. We determine the individual contributions of pathology sub-groups and their respective outcomes.

Methods:
We retrospectively examined a 12-month referral assessment database from the MMUH treatment center from January 2016 to 2017. Non-diabetic eye disease referrals were identified and analysed with respect to their frequency of referral and outcome.

Results:
One thousand nine hundred and ninety-three patients seen in the MMUH during the 12-month period were included in the study. Diabetic eye disease referrals comprised 1250/1,993 (63%) referrals, with 743/1,993 (37%) referred for assessment of non-diabetic eye disease. Substantial pathology sub-groups included retinal artery and vein occlusions; Arterial emboli; Cataract; Glaucoma; Age Related Macular Degeneration; and Pigmented retinal lesions. We discuss the relative contribution from each pathology and the subsequent assessment outcomes.

Conclusions:
Several non-diabetic ocular pathologies, which are often asymptomatic in their early course, are being identified and referred for appropriate treatment. The referral volume is increasing. Quantifying this additional and welcomed benefit to the screening program promotes a more informed discussion on increased service demands, helping predict its practical and financial impact, and influencing strategies on future service provisions.

Changing Trends in Laser for Diabetic Retinopathy and Maculopathy: The Impact of the National Diabetic Screening Programme on a Regional Diabetic Retinopathy Service

Mongan AM, Hegazy E, McAteer D, Maguire M, Mullaney P, Chetty S, Morgan M, Quinn S.
Sligo University Hospital, Sligo

Objectives:
The prevalence of diabetic retinopathy is increasing worldwide due to an increasing number, and prolonged survival, of diabetic patients. The Irish Diabetic Retinal Screening (DRS) programme commenced on a phased basis at the end of February 2013. One of the key objectives of the service is to allow intervention with laser in patients with proliferative retinopathy before sight is affected. Prior to this there had been inconsistent screening for diabetic retinopathy. A regional diabetic screening service has been in place in Sligo University Hospital since 2002. This study aims to evaluate changing trends in laser treatment for patients with diabetic eye disease in a tertiary referral hospital following the introduction of the national screening service.

Methods:
A retrospective review was performed of all patients undergoing laser for diabetic retinopathy or maculopathy in Sligo University Hospital over an eight-year period including the roll-out of the national DRS in 2013.

Results:
In the four-year period preceding the national screening programme (2009-2013), 440 pan-retinal photocoagulation (PRP) procedures were performed on 211 eyes of 162 patients. Trainees performed 23% (n=101) of these procedures. In the four-year period following the introduction of the national screening programme (2013-2017), 492 PRPs were performed on 278 eyes of 205 patients, and trainees performed 16% of these procedures. In the pre-national screening period, 386 macular lasers were performed, 20% (n=75) by trainees. In the post-national screening period, 244 macular lasers were performed, 10% (n=25) of which were performed by trainees.

Conclusions:
This study did not demonstrate an upsurge in the number of PRPs performed following the introduction of screening as previously reported in other centres, possibly reflecting the robust regional diabetic screening system that has been in place in Sligo University Hospital since 2002. With the advent of anti-VEGF therapy for diabetic maculopathy, the number of macular lasers performed has decreased, and is rarely performed by trainees. The introduction of the diabetic screening programme has important implications for service provision and training.

Expanded 2-Year Follow Up of Visual Outcome of Focal Laser Guided by FFA and Different Types of Intravitreal Injections of ANTIVEGF Drugs for Diabetic Macular Oedema

O'Connor G. Mahmoud E.
Cork University Hospital, Cork.

Objectives:
Diabetic Macular Oedema results in a significant loss of vision and is a major cause of visual morbidly in patients with Diabetes. Conventional and modified Focal Macular Laser treatment in such cases is known to improve and stabilize visual outcome significantly.The aim of this study is to report visual acuity and anatomic changes from baseline to 24 months after treatment by conventional and Modified focal macular photocoagulation in eyes with diabetic macular oedema compared to different types of Intravitreal injections of Antivascular Endothelial Growth factor drugs such as aflipbercept, bevacizumab, and ranibizumab .

Methods:
Follow up of 196 eyes (of 161 patients) with diabetic maculopathy who underwent conventional and modified focal macular Photocoagulation guided by Fluorscein Fundus Angiography and different types ANTIVEGF drugs. All these patients underwent Visual Acuity check, slit lamp examination of anterior segment, IOP check. After dilation detailed examination of macula with 78/90 diopter lens and areas of retinal thickening recorded, optical coherence tomography, Fluorescein angiography, Fundus photography and visual field data were analyzed from with diabetic macular oedema. Patients were followed up for a minimum of 24 months and the visual acuity at the end 4-5 months was taken as final visual acuity after laser.

Results:
Among the 196 eyes having Diabetic macular oedema are divided into four different groups 50(25.51%) eyes having Course of three of bevacizumab intravitreal ANTIVEGF, 49(25%)eyes having course of three of ranibizumab intravitreal ANTIVEGF drug, 46(23.46%) eyes course of three of Aflipbercept intravitreal ANTIVEGF drug, and 51(26.02%) eyes received focal macular laser.24 month follow-up there is a significant improvement in Visual acuity by 3-4 lines in 29(56.86%) eyes received Focal laser (72.41%conventional focal Laser and 27.58% modified Focal laser) .The median central subfield Retinal thickness decreased by 61-91microns, median total macular volume decreases by 0.5 mm3, and median fluorescein leakage area with conventional and modified focal macular photocoagulation decreased by 1.1 disc areas.21(42.85%) eyes having visual improvement after ranibizumab course. The median central subfield Retinal thickness decreased by 49-53 microns and mean fluorescein leakage decreased by 0.9 disc areas.18(39.13%) eyes having improvement after aflipbercept course .The median central subfield retinal thickness decreased by 50-54 microns and mean fluorescein leakage decreased by 0.9 disc areas. 18(36%) eyes having visual improvement after bevacizumab course. The median central subfield retinal thickness decreased by 42-49 microns and mean fluorescein leakage decreased by 0.8 disc areas.More than 22(75.86%) eyes had stable visual outcome in focal laser group, 8(44.44%) eyes in aflipbercept group, 9(42.85%) eyes in ranibizumab group,and 7(38.88) eyes in bevcizumab group.

Conclusions:
More than 56.86% of eyes of patients had a significant improvement of visual acuity outcome, OCT thickness, volume measurement and decreased fluorescein leakage area that underwent both conventional and modified focal macular laser which is significant higher than course of three intravitreal injections of different intravitreal ANTIVEGF drugs. Also, visual outcome stability is higher in focal laser group than the other three groups of intravitreal ANTIVEGF drugs. Paracentral scotoma related to focal laser treatment was insignificant in the most of the cases.

Aflibercept in Diabetic Macular Oedema Previously Refractory to Standard Intravitreal Therapy: An Irish Perspective to Compare Against International Trends

McCloskey C, Mongan AM, Quinn S.
Sligo University Hospital, Sligo.

Objectives:
To determine the visual and anatomical outcomes of diabetic macular oedema (DMO) patients, in a tertiary centre, following conversion to Aflibercept having been refractory to previous treatment with Bevacizumab and/or Ranibizumab and to make comparisons to real-life studies.

Methods:
A retrospective case series of patients with a diagnosis of DMO undergoing Aflibercept intravitreal therapy for at least six months who had previous treatment with three consecutive Bevacizumab +/- Ranibizumab injections prior to switch. Exclusion criteria included any other procedures affecting visual outcome (phacoemulsification, YAG capsulotomy, corticosteroid implant/sub-tenon injection) performed within the treatment period. Outcomes measured included visual acuity, central macular thickness and injection frequency.

Results:
Twenty-eight eyes of 18 patients were included, 13 (72%) of which were male. Mean BCVA (Best Corrected Visual Acuity) pre switch was 61+/-13.3 letters and CMT (Central Macular Thickness) was 438.3µm+/-111.8. Eyes received a mean of 11+/-6.2 prior Bevacizumab/Ranibizumab. The mean follow up post switch was 13 months (SD=5.7). Mean BCVA improved by 3.4 letters at six months (SD=6.05, $p<0.05$), by 5.0 letters at 12 months (SD=5.9, $p<0.01$) and by 5.5 letters (SD=4.2, $p<0.01$) at 18 months. The mean CMT decreased by 91.8µm at six months (SD=141.2, $p<0.01$), 111.7µm at 12 months (SD=102.1, $p<0.001$) and 149.8µm at 18 months (SD=126.6, $p=0.09$). The mean number of injections in six months pre switch was 2.5. This increased to 3.3 injections in the first six months post Eylea switch, with a trend toward reduced injections in the following six-month period (mean=1.9, SD=1.2, $p=0.1$). There were no significant systemic or ocular adverse events.

Conclusions:
Switching to Aflibercept in patients with treatment resistant DMO produces significant improvements in anatomical outcomes and also statistically significant improvements in visual outcomes with eventual maintenance of visual acuity levels. These results from a tertiary centre seem to be in keeping with other real-life published studies.

A Survey of the Treatment of Optic Neuritis Comparing the Practice Among Ophthalmologists, Ophthalmic Trainees, Neurologists and Neurology Trainees in Ireland

Kobayter L, Chetty S.
Sligo University Hospital, Sligo.

Objectives:
To determine the different approaches regarding treatment practices for acute optic neuritis among ophthalmologists, ophthalmic trainees, neurologists and neurology trainees in Ireland and compare them to established guidelines such as the Optic Neuritis Treatment Trial (ONTT)

Methods:
A survey was designed and emailed to all ophthalmology trainees, medical ophthalmologists, and ophthalmology consultants in Ireland who have their email addresses available to the Irish College of Ophthalmologists (n=270). It was also emailed to all neurology specialty registrars and neurology consultants who have their email addresses available to the Irish Institute of Clinical Neuroscience (n=80). It consisted of a short clinical scenario and 14 questions regarding routine investigations and treatment protocol in a patient with a diagnosis of acute retrobulbar optic neuritis. The email was sent on three separate occasions within a two-month period.

Results:
161 completed responses were received out of 350 recipients in both the ophthalmology and neurology group. The estimated compliance rate amongst the ophthalmology group was 41% and 64% amongst the neurology group. Of these 161 respondents, 48% were consultants, 42% were trainees and 10% were medical ophthalmologists. 87% of the respondents stated they would initiate steroid treatment regardless of the patient's visual acuity, 13% would not initiate steroids for the patient at all, and others would base it on the patients presenting visual acuity. 98% of respondents would treat as per the ONTT guidelines with 1g intravenous methylprednisolone, either as an inpatient (47%) or as a day admission (47%). There was a larger fluctuation in responses with regards to duration of IV methylprednisolone and tapering regime, 80% would give it for 3 days, the rest chose 5 days or longer, and 47% would give 1mg/kg oral prednisolone for 11 days and then taper, 28% would taper to a complete stop in 11 days, and 22% would not give any oral steroids after the initial treatment. Despite the ONTT guidelines regarding 1g IV methylprednisolone being split over 4 doses, the majority would give it as a once daily dose (88%). With regards to imaging, 79% chose MRI brain and orbits with contrast, 14% stated they would order MRI brain and orbits with no contrast, and another 10% would order a CT brain and orbits. 24% of respondents stated they wouldn't order any laboratory testing, the rest responded that they would, and a lumbar puncture being the most popular (57%), followed by full blood count (53%), urea and electrolytes (49%), ESR and CRP (45%) and syphilis serology (35%).The vast majority stated they would mention multiple sclerosis to the patient (88%) at the acute first presentation. Of the consultants in either group, completing the survey, 30% would treat independently, 5% would refer onwards either to a neuro-ophthalmologist and/or neurologist, and 65% would treat but also obtain a further opinion.

Conclusions:
Overall, the response rate was very good in comparison with previous international similar surveys. The vast majority of respondents who would treat the patient in the clinical scenario proposed would follow the ONTT guidelines with regards to intravenous methylprednisolone vs. oral, however there was a fluctuation in responses with regards to duration of initial treatment, location of treatment, tapering regime and appropriate and relevant investigations. There was also a disagreement regarding the criteria for treatment and whether or not a patient should be treated by any consultant ophthalmologist, a neuro-ophthalmologist or a neurologist or both.

Poster Session
Wednesday 17th May 9.00am

Effect of Conventional and Modified Focal Laser Guided by FFA on Visual Acuity and Retinal Thickening in Eyes with Chronic Vascular Macular Oedema Treated Previously by Many Different Intravitreal Injections of Anti-Vascular Endothelial Growth Factor Drugs

Fenton S, Mahmoud E.
Cork University Hospital, Cork.

Objectives:
Chronic vascular macular oedema results in a significant loss of vision and is major cause of visual morbidly in patients with diabetes and Retinal vein occlusion. Conventional and modified focal macular laser treatment in such cases is known to improve and stabilize visual outcome significantly. The aim of this study is to report visual acuity and anatomic changes from baseline to 24 months after conventional and modified focal Macular photocoagulation in eyes with chronic vascular macular oedema caused by retinal vein occlusion and diabetes Mellitus treated by different types of Intravitreal injections of Antivascular Endothelial Growth factor drugs such as aflipbercept, bevacizumab and ranibizumab and they had no improvement of visual outcome.

Methods:
Follow up of 98 eyes (of 82 patients) with chronic diabetic and vein occlusion maculopathy who underwent conventional and modified Focal macular photocoagulation guided by Fluorscein Fundus Angiography. All these patients underwent visual acuity check, slit lamp examination of anterior segment IOP check .After dilation detailed examination of macula with 78/90 diopter lens and areas of retinal thickening recorded, optical coherence tomography, fluorescein angiography, fundus photography and Visual field data were analysed from with chronic Vascular macular edema. Patients were followed up for a minimum of 24 months and the visual acuity at the end 3-4 months was taken as final visual acuity after Laser.

Results:
Among the 98 eyes having chronic vascular macular oedema and they hadn't any improvement by different types of Intravitreal injections of ANTI-VEGF drugs. 43 (43.87%) eyes having diabetic macular oedema, ,22(22.44%) eyes having macular oedema related branch vein occlusion, and 33 (33.67%) eyes having macular oedema related to central vein occlusion. 26(26.53 %) eyes having different Intravitreal injections of ANTIVEGF drugs of bevacizumab, ranibizumab, and aflipbercept ,35(33.71%) eyes having Intravitreal injections of bevacizumab only more than 6 times and 19(19.38%) eyes having Intravitreal injections of ranibizumab only more than 6 times and 18 (18.36%) eyes having intravitreal injections of aflipbercept only more than 5 times.76(77.55)eyes were received focal macular laser only (89.47% conventional focal laser and 23.68% modified Focal laser), 12(12.24%) eyes having combined conventional focal laser with panretinal photocoagulation and 10(10.2%)eyes having combined conventional Focal laser with sectorial panretinal photocoagulation24 month follow-up there is a significant improvement in Visual acuity by 3-4 lines in 45(45.91%) eyes. The median central subfield retinal thickness decreased by 61-91microns, median total macular volume decreases by 0.5 mm3, and median fluorescein leakage area with conventional and modified focal macular photocoagulation decreased by 1.1 disc areas.38(84.44%) eyes having stable improvement of visual outcome and 7(15.55%) eye having deterioration of their baseline visual acuity and when repeated focal laser to this group, there was 2 (28.57%) eyes having two lines improvement.

Conclusions:
More than 45.91% of eyes of patients had a significant and stable improvement of visual acuity outcome, OCT thickness, volume measurement and decreased fluorescein leakage area who underwent both conventional and modified focal macular laser. Those patients had a chronic vascular Macular Oedema and their visual acuity didn't improve by different types of ANTI-VEGF drugs. More than 84% of eyes had stable Visual outcome.

An Audit of Intravitreal Injection Outcomes in Diabetic Macular Oedema Patients Referred to Cork University Hospital from the National Diabetic Retinopathy Screening Programme

Choo G, James M.
Cork University Hospital, Cork

Objectives: To determine the proportions of different intravitreal injections used, time taken to commence treatment and the mean annual number of injections received per eye for patients attending a designated treatment centre.

Methods: A retrospective clinical file audit of 62 patients enrolled from February 2014- June 2016 was performed. Best corrected visual acuity (BCVA) and Optical Coherence Tomography (OCT) readings for the study eyes (N=77) were collected pre-and post-treatment. Additional data were collected if they had been relisted for more injections, to assess efficacy. This "real-world" data was compared to treatment targets as advised by the relevant clinical trials and the DRS clinical practice guidelines. Data were analysed using Microsoft Excel and SPSS.

Results: Intravitreal injections used were Ranibizumab (35.5%), Bevacizumab (30.6%), Aflibercept (12.9%) and combination (21.0%). The mean number of injections was 3.3 per patient in the first year of enrolment. The findings showed that 56.5% received treatment within 60 business days. Post treatment, mean BCVA improvement was log(MAR) = 0.03 + 0.21; (P=0.104) which was not significant. However, the BCVA mean difference between pre-treatment and post-relisted treatment was significant, log(MAR) = 0.07+ 0.20; (P=0.002). Mean OCT improvement was highly significant between pre-treatment and post- treatment 70 + 93.2 µm (P<0.001) but was not significant for the difference between post-treatment and post-relisted cases 13.4 + 79.3 µm (P=0.25). No cases of endophthalmitis were encountered.

Conclusions: While patients treated with anti-VEGF injections in CUH showed improvements both functionally and anatomically, the DRS quality assurance requirement for 70% of the patients to be treated within 60 days of listing was not met. Mean number of injections received per eye in the first year was below that of international controlled clinical trials and can be improved.

A Randomised Controlled Trial to Determine the Impact of a SMS Reminder in Adherence to Diabetic Retinopathy Screening

Tang B, Chen T, Congdon N.
Queens University Belfast, Sun Yat-sen University, China.

Objectives: The purpose of this study is to use a randomized controlled design to determine the impact of a SMS messaging intervention on adherence to screening among persons diagnosed with diabetic retinopathy in rural China.

Methods: A total of 233 consecutive diabetic patients enrolled in eye clinics at 5 rural hospitals in Guangdong Province, China from March 1, 2015 to May 31, 2016, were randomized in a 1:1 ratio to receive automated SMS reminders at 1 week and 3 days prior to scheduled eye appointments or standard appointments without reminders. Patients' demographic characteristics, knowledge of diabetic retinopathy (DR), satisfaction with care, distance travelled and ocular examination results were assessed at baseline in masked fashion. Main outcome was attending within +/- 1 week of the scheduled visit. Generalized linear models with Poisson regression on intention-to treat principles were used to estimate association between main outcome and membership in the Intervention group, with and without adjustment for other potential determinants.

Results: From data collected at this point: 104 patients (mean age 57.5±11.0 years, 39.4% men) completed follow-up by 30 November 2016, 56 (53.8%) randomised to SMS intervention (58.6±11.8 years, 37.5% men), 48 (46.2%) to Control (56.3±9.83 years, 41.7% men). Appointments were scheduled for a median of 30.7 weeks after baseline examination for all subjects (IQR 26.1 to 51.4 weeks). Attendance for the Intervention group (21/56, [37.5%]) was significantly higher than for Control (4/48, [8.33%], P<0.001). Factors associated with attendance in multiple regression models included Intervention group membership (RR, 3.51; 95% CI, 1.19-10.4; P=0.02) and DR knowledge (RR, 1.58; 95% CI, 1.19-2.10; P=0.002).

Conclusions: SMS interventions can improve adherence to diabetic retinopathy screening programmes in LMIC settings, although further interventions are necessary to achieve an acceptable level of adherence. As DR knowledge is also associated with adherence, this highlights the key role of patient education in improving adherence.

The Effect of Geodemographic Factors on the Attendance Rates at a Regional Treatment Centre for a Newly Established National Diabetic Retinopathy Screening Programme

Salim M, Grenan E, James M, Coakley D.
Cork University Hospital, Cork.

Objectives:
To determine whether geodemographic factors such as age, gender, retinopathy grade and commuting distance to Cork University Hospital (CUH) affects the attendance rates of those referred from the DRS to the CUH Diabetic Retinopathy Treatment (DRT) clinic.

Methods:
A retrospective analysis of the first 1200 diabetic patients who were referred for ophthalmic assessment to the CUH DRT Clinic from the DRS was completed between June and August 2016. The data was collected from the DRT clinic database in CUH. This database was comprised of demographic information, clinic attendance and screening outcome. The commuting distance was derived using online geographical-related web resource via Google Map.

Results:
A total of 972 (81%) patients attended all their scheduled CUH DRT clinic appointments, with rates for those living in Cork and Kerry of 84% and 72.5% respectively. Fifty seven (4.75%) patients failed to attend any of their clinic appointments (2.2% of Cork referrals and 11.8% of Kerry referrals). Patients within 60 km of the treatment center were more likely to attend screening (p=0.013). Both age and gender were also found shown to have a statistically significant impact on attendance rates, with 32% (n=28) of those under the age of 40yrs and 21% of male patients (n=167) less likely to not attend their scheduled appointments (p= 0.03). Finally, patients with a lower retinopathy grade (R=1) were also more likely to attend (p=0.04).

Conclusions:
This study shows that there is a correlation between commuting distance to the CUH DRT Clinic and the attendance rate. The longer distances Kerry patients are required to travel is likely to contribute to their higher non-attendance rates, indicating a possible need to provide a satellite treatment center to improve patients' accessibility. Furthermore, age and gender were found statistically significant factors in rates of attendance, as was a lower grade of retinopathy.

Evaluation of a Joint Ophthalmic / Diabetes Nurse Specialist Clinic to Support Patients with Sight Threatening Retinopathy

Morgan M, Crerand K.
Saint Conal's Hospital, Letterkenny, Community Diabetes Service, Co Donegal.

Objectives:
It was realised that many patients attending the ophthalmic diabetic laser clinic were not attending hospital diabetic clinics. A joint Ophthalmic/ Diabetes Nurse Specialist clinic was established to provide education and support to patients with diabetes with sight threatening retinopathy. The aim of this joint clinic was also to improve communication between ophthalmic and diabetes team members, engage these high risk patients into structured diabetes care and improve glycaemic control to prevent/ slow progression of retinopathy which were evaluated in this study.

Methods:
The community Diabetes Nurse Specialist attended a monthly diabetic laser clinic. Evaluation was carried out by auditing pre and post Hba1c, patient satisfaction questionnaires and monitoring number of patients agreeing to referral to and attendance at structured diabetes care.

Results:
54 patients with diabetes were reviewed at least once in the 1st year of this clinic. 18 pt with type 1 diabetes, 36 with type 2 diabetes. Average years with diabetes 15.3 years. The majority of the patients were receiving laser therapy for maculopathy (34pts) and / or proliferative retinopathy (20pts). 61% of pts had at least one other diabetic complication. 33%(18 pts)had not attended a diabetic clinic for >1 yr, with 13%(7)not attending for >3years and 1 not attending for >10yrs. The majority of these (12 pts) agreed to referral back to the endocrinologist with the remaining 6 returning to community Diabetes clinics. 2 patients were referred to nephrology. There was an overall reduction in Hba1c pre 73.23 mmol/mol(8.8%)vs post

65.56 mmol/mol (8.1%). Patient satisfaction questionnaires revealed patients very satisfied with the opportunity to avail of the diabetes nurse specialist service while at laser clinic. Overall it has led to increased communication and collaboration between ophthalmology and diabetes teams.

Conclusions:
The development of the clinic has led to increased opportunity to engage with patients with diabetes to provide support and education and referral into appropriate diabetes services for this high risk group. It has resulted in improved glycaemic control and improved joint working between ophthalmology, diabetes clinics and primary care. These changes have the potential to produce significant changes in people with diabetes and may help to reduce progression and development of diabetes complications.

The Impact of PRP on Driving Vision in Diabetic Retinopathy

O'Halloran O, Townley D.
University Hospital Galway, Galway.

Objectives:
The aim of this study is to investigate if multifocal PRP used in the treatment of diabetic retinopathy, has an impact on driving vision standards in particular contrast sensitivity and peripheral vision.

Methods:
This is a prospective non randomised study carried out between October 2016 and March 2017. Participants underwent visual fields and contrast sensitivity before PRP and 2 months after PRP.

Results:
7 participants were recruited that satisfied the inclusion criteria. No significant change was found between the mean contrast sensitivity (p=0.520), mean deviation (p=0.768) or number of points missed on an Esterman assessment (p=.269) following PRP. No participants failed to meet driving standards following PRP. No correlation was found between the amount of PRP given and the Humphrey mean deviation (r=0.322, P=0.365).

Conclusions:
Despite the small sample size, this study does suggest that, PRP is unlikely to result in driving licence restrictions for both uniocular and binocular individuals in this time period. We will continue to review this.

Swept Source OCT and Angiography: The University Hospital Waterford Experience

Ramasamy P, Doris J, Henry E.
University Hospital, Waterford.

Objectives:
The introduction of SS OCT to clinical practice has enabled more detailed evaluation of retinal diseases. It also allows visualisation of retinal and choroidal circulation in greater detail, without the need for invasive fluorescein angiography. The purpose of this study is to report a case series of clinical findings identified on SS OCT in various retinal diseases.

Methods:
Clinical cases of retinal diseases where new findings were identified using SS OCT and angiography (Topcon DRI Triton Plus) over a 6 month period were included in this study.

Results:
SS OCT and angiography findings in retinal diseases such as proliferative diabetic retinopathy, diabetic maculopathy, neovascular age-related macular degeneration, retinal vein occlusion, central serous chorioretinopathy and retinal detachment will be discussed in this study. The management of these conditions, including its use to aid surgical approach in diabetic vitrectomy will also be discussed.

Conclusions:
In our clinical practice, the introduction of SS OCT and angiography has enabled better visualisation of retinal pathology and management of these diseases.

Visual and Anatomical Outcomes Following Aflibercept Switch in Treatment-Resistant Neovascular Age-Related Macular Degeneration

Mongan AM, McCloskey C, McAteer D, Mullaney P, Chetty S, Quinn S.
Sligo University Hospital, Sligo.

Objectives:
There are three intravitreal anti-VEGF agents currently available in the treatment of neovascular age-related macular degeneration (nvAMD): Aflibercept, Bevacizumab and Ranibizumab. There is no clear evidence demonstrating a significant difference between these three agents for the treatment of either naïve or resistant nvAMD. This study aims to evaluate the visual and anatomical outcomes in patients with nvAMD, following conversion to Aflibercept having been refractory to previous anti-VEGF.

Methods:
A retrospective chart review of patients with a diagnosis of nvAMD undergoing Aflibercept intravitreal therapy who had previous treatment with at least three consecutive Bevacizumab +/- Ranibizumab injections prior to switch. Exclusion criteria included any other procedures affecting visual outcome within the treatment period (corticosteroid treatment, cataract surgery). Outcomes measured included best corrected visual acuity (BCVA), central macular thickness (CMT) and injection frequency.

Results:
Sixty-two eyes of 52 patients were included, 25 of which were male. Mean BCVA pre-switch was 55 +/- 15.3 letters, and CMT was 287 +/- 78.2 m. Eyes received a mean of 14 intravitreal injections prior to switch (Bevacizumab and/or Ranibizumab). Mean follow-up post-switch was 13 months (Standard deviation/SD=5.5). Mean BCVA post-switch improved by two letters at six months (SD=6.7, $p<0.05$), and four letters at 12 months (SD=6.4, $p<0.01$), however, there was no difference between VA at time of switch and VA 18 months post-switch. Mean CMT decreased by 46.9µm at six months (SD=74.1, $p<0.0001$), 48.4µm at 12 months (SD=88.1, $p<0.01$), 48.0µm at 18 months (SD=2.4, $p<0.001$). There was no significant reduction in number of injections post-switch.

Conclusions:
Switching to Aflibercept in patients with treatment resistant NVAMD produces significant improvements in visual and anatomical outcomes, however visual improvements were not sustained one year post-switch.

Inherited Retinal Dystrophy: From Research to Reality

Stephenson K, Saad T, Dockery A, Carrigan M, Farrar GJ, Kenna P, Keegan D.
Mater Misericordiae University Hospital, Dublin, Trinity College, Dublin, Royal Victoria Eye & Ear Hospital, Dublin.

Objectives:
Inherited retinal dystrophies (IRD) are a heterogeneous group of rare diseases requiring complex long term management. This talk aims to outline the transition from an IRD research project to a national clinical care program involving primary and secondary treatments, with wide-ranging tertiary supports

Methods:
Via the Target 5000 project (Fighting Blindness), patients with IRD are recruited to the Mater Misericordiae University Hospital, Royal Victoria Eye & Ear Hospital and Belfast Trust for phenotyping. Genotyping is carried out by panel-based next generation sequencing in the Department of Genetics, Trinity College Dublin. Subsequent clinically accredited validation testing is performed in Manchester Centre for Genomic Medicine. Each patient is assessed for specific points of interventional on a case by case basis and reassessed in a specialist clinic.

Results:
Primary treatments modify retinal function, such as gene therapies, stem cell therapies and retinal implant technology. These treatments are in development and in some cases are at the human clinical trial stage (e.g. X-linked retinoschisis). Secondary treatments are those that alter aspects of the eye other than the retina (e.g. cataract surgery, glaucoma treatment, secondary CNVM treatment). Tertiary or supportive treatments are the largest and most available group of interventions. This ranges from counselling to mobility & low vision aids, often with the support of the NCBI and Fighting Blindness. Although often low tech, these services can drastically improve independence and quality of life for people with IRD and may be underutilized. Here we describe examples from the Irish population that are amenable to each group of interventions.

Conclusions:
This under-serviced group has often disengaged from follow up for various patient or healthcare-related reasons. This leads to treatable pathology going unrecognized with diminishing independence and quality of life. With a changing frontier of new treatments on a platform of existing supports, we aim not only to identify causative genetic variants, but to offer a comprehensive plan for treating and supporting patients with IRD in Ireland.

Acute Exudative Polymorphous Vitelliform Maculopathy Syndrome; Workup, Differential Diagnosis and Natural History

Murtagh P, Treacy M, Dooley I, Connell P.
Mater Misericordiae University Hospital, Dublin.

Objectives:
To describe in detail the diagnosis, workup, differential diagnoses and natural course of this rare disease entity with reference to images recorded throughout the course of our patient's treatment.

Method:
Case report

Results:
A 33-year old male presented with a ten day history of bilateral blurred vision on a background of a prodromal flu like illness. Ocular coherence tomography and fundal examination coincided with a diagnosis of atypical central serous retinopathy. The patient's symptoms worsened during follow up and was commenced on steroids. Subsequent fundal examination revealed yellow deposits in a honeycomb pattern and hard exudates in the perimacular region. OCT revealed worsening of intraretinal and subretinal fluid. He was subsequently admitted to hospital for a full paraneoplastic workup. Liaison with our colleagues in other specialist retinal centres led us to a diagnosis of acute exudative polymorphous vitelliform maculopathy syndrome.

Conclusions:
Acute exudative polymorphous vitelliform maculopathy syndrome is a rare disease entity that may mimic signs and symptoms of other diagnoses. The diagnosis is one of exclusion and therefore a neoplastic basis should be out ruled. The syndrome may have a viral aetiology.

A Rare Complication Post Pneumatic Retinopexy

Gallagher D, Kinsella F.
University College Hospital, Galway.

Background:
Pneumatic retinopexy (PR) is a minimally invasive technique for the repair of rhegmatogenous retinal detachment (RRD). It is composed of intravitreal gas injection, either cryopexy or laser, and postoperative positioning.

Methods:
A case report of a fifty-three year old lady who underwent right eye PR for a supratemporal RRD on the 1/3/17. This was completed with Sf6 gas on a 30G needle. Subsequent anterior chamber paracenthesis was performed to lower the intraocular pressure. She developed hypotony and retinal folds one day post operatively.

Results:
LF reported poor visual acuity one day post operatively. Visual acuity was 6/60 and had an intraocular pressure of 2mmHg. There were marked retinal folds inferior to the optic disc (Photo1). LF right eye was double padded and was due for theatre in the morning. Twelve hours later her intraocular pressure was 12mmHg and the retinal folds had resolved (Photo2). Sufficient Sf6 gas remained to cover the retinal break.

Conclusions:
The most common complications post PR include misplaced gas injection, vitreous hemorrhage, new retinal breaks, failure to reattach the retina, proliferative vitreoretinopathy, and delayed reabsorption of subretinal fluid. Retinal folds are a very rare complication of PR and the treatment includes watch and wait as many will spontaneously improve. If the vision is significantly affected surgical correction is often warranted.

Waldenstrom's Macroglobulinemia. Case Report and Literature Review

Curtin K, Hosny M, Idrees Z.
Cork University Hospital, Cork.

Objectives:
To describe hyperviscosity syndrome (HVS)-related retinopathy associated with Waldenstrom's Macroglobulinemia. Through case description we aim to describe the classic ocular and systemic manifestations along with the work-up of this rare phenomenon.

Methods:
Case Report with literary synthesis.

Results:
Waldenstrom's macroglobulinemia is characterized by the accumulation of monoclonal IgM, muti-organ infiltration, rapid response to plasmapheresis and the potential for bilateral Central Retinal Vein Occlusion (CRVO) and serous macular detachment.

Conclusion:
Many patients with HVS-related retinopathy present to the Ophthalmologist with visual loss prompting an evaluation that leads to systemic diagnosis. Physicians should consider this in the differential when faced with retinal changes. Early diagnosis is warranted as plasmapheresis, if instituted early, can reverse visual distu

A Rare Case of Optic Nerve Aplasia

Moran S, McCreery K
Our Lady's Children's Hospital Crumlin.

Objectives:
To report a rare case of unilateral optic nerve aplasia associated with Trisomy 9.

Methods:
Case Report and Literature Review. The patient in this case underwent extensive ophthalmological, paediatric, surgical, neurological, neurosurgical, endocrinological, and orthopaedic review, as well as genetic investigations, due to associated systemic anomalies. A comprehensive literature review was carried out.

Results:
We report a case of unilateral right optic nerve aplasia, associated with bilateral chorioretinal colobomas, and left iris and optic nerve coloboma. Findings were confirmed with B-scan ultrasound and MRI scanning. MRI of brain also revealed septo-optic dysplasia, as well as Dandy-Walker malformation. Genetic investigations confirmed Mosaic Trisomy 9.

Conclusions:
Optic nerve aplasia is a very rare congenital anomaly that is typically unilateral, and is characterised by congenital absence of the optic nerve, central retinal vessels, and retinal ganglion cells. Bilateral cases are exceedingly rare. Various ocular anomalies are associated with it. The prognosis of optic nerve aplasia is poor, and blindness inevitably occurs in the affected eye. Management of such cases is directed towards identifying any associated ophthalmological or neurological problems. Magnetic resonance imaging is useful to confirm diagnosis and to screen for other associated intracranial abnormality.

Audit of an Acute Hospital Orthoptic Database: Are identified "No ophthalmic defect" Always Normal?

McBride G.
Orthoptics, Ophthalmology Department, University Hospital Galway.

Objectives:
The aim of this audit was to establish how many patients were discharged following one appointment at an acute hospital in the West of Ireland. The second aim was to identify the re-attendance rate at a later point over a following 10 year period. The final aim was to establish whether continued assessments of "no ophthalmic defect" is supported.

Methods:
A review of a 10 year orthoptic patient database containing the data of 5640 patients.

Results:
1511 children attending were diagnosed as "no orthoptic defect". 985 (65%) of the children identified as "no ophthalmic defect" were discharged after one visit. 61 children were subsequently re-referred. The diagnosis changed from "no ophthalmic defect" in 30 (53%) of the children re-referred (p-value $P < 0.01$).

Conclusions:
There are both organisational and clinical viewpoints to the discussion of whether identified "no ophthalmic defect" will always be "no ophthalmic defect". However, in the absence of other published audits, this audit would not support annual assessments in an acute hospital eye unit setting.

Audit of an 18 Month Orthoptic Secondary Screening Clinic in Galway City

McBride G.
Orthoptics, Ophthalmology Department, University Hospital Galway, PCCC Galway City.

Objectives:
The aim of this audit was to establish how many new patient referrals were discharged after one appointment with a senior Orthoptist. The second aim was to identify the reasons for a review with either a Community Ophthalmologist or Orthoptist.

Methods:
A review of the 18 month orthoptic patient database containing the data of 2010 children who were offered an appointments.

Results:
1275 children attended one of the 75 secondary screening clinics (attendance rate 63%). 701 (55%) children who attended were diagnosed as "no orthoptic defect" and discharged. 303 (24%) children had an incomplete examination (distance vision and/or stereopsis could not be assessed) and required a further Senior Orthoptist/Ophthalmologist assessment. 199 (16%) children were found to have reduced vision/refractive error. 68 (5%) children were found to have a strabismus. Other reasons for COP review included ptosis, EOM defect, parental concern (<1%).

Conclusions:
In the UK, Orthoptic secondary screening occurs in many areas. The aim for these programmes is to identify children who require an assessment with an Optometrist/ Ophthalmologist. In Ireland, this is a relatively new concept. In November 2014, one of the two Galway COP retired and was not immediately replaced. This resulted in the new patient community children waiting list to significantly increase. An Orthoptic secondary screening programme was introduced in September 2015 to identify the children who needed to attend an Ophthalmologist. All children were assessed by either the PCCC or UHG senior Orthoptist. The children booked into these clinics had been triaged by the COP as "routine". The majority of routine referrals arise from "family history". There are clinical viewpoints to the discussion of whether retinal diseases/low refractive errors could be missed when an Orthoptist is not undertaking an internal eye examination, however PCCC Galway family history referrals are based on glasses/strabismus/amblyopia in childhood. Family history of other congenital eye diseases are referred to UHG and all these children are assessed by an Orthoptist in conjunction with a Consultant Ophthalmic Surgeon. For the Orthoptic secondary screening clinics we have designed a strict protocol for the assessment of children aged under 4 and aged over 4. In addition the accompanying adult is given a leaflet detailing what an Orthoptic secondary clinic assessed and did not assess.

An Audit of the Service Provision and Outcome in an Ophthalmology Inpatient Consultation Service in a Tertiary Hospital

Goodchild C, Logan P, Fulcher T.
Beaumont Hospital, Dublin.

Objectives:
To audit the delivery of the Ophthalmology inpatient consultation Service in Beaumont Hospital.

Methods:
Retrospective analysis ultilising consultation referral letters to evaluate the volume and type of service required from the Ophthalmology consultation service for the period of the month of January 2017

Results:
A total of 101 visits to the Ophthalmology consultation service occured in the month of January, including new referrals (62) and follow up appointement (39). The neurosurgery department requested the highest amount of consultations at 50% followed by medical teams at 40%. The majority of consults were for new presentation at 61%, pre existing ocular pathology at 21% and for screening purposes at 11%. We analysed the consultation request further and found there were 22 reasons for consultation. The most common request was for visual field examination at 40% followed by request to out-rule ocular pathology 18%, decreased vision in 13%, ocular screening 11%. The outcomes revealed a normal exam in 29%, a visual field defect in 13%, anterior segment pathology in 10% and optic nerve pathology in 10%. Of patients seen 31% of patients were refer to outpatients department.

Conclusions:
Ophthalmology consultation is a valuable inpatient service. This audit highlights the typical patients and ophthalmological problems encountered in a tertiary hospital setting. This information and analysis allows the planning and allocation of appropriate resources to effectively manage an Ophthalmology consultation service.

An Audit of the Quality of Inpatient Referrals Received by the Ophthalmology Consultation Service in a Tertiary Hospital

Goodchild C, Logan P, Fulcher T.
Beaumont Hospital, Dublin.

Objectives:
To evaluate the quality of information included in inpatient referral requests, when accessing the Ophthalmology consultation Service in Beaumont Hospital.

Methods:
Retrospective review of consultation referral letters printed from the hospital network "PIPE" for the period of the month of January 2017.

Results:
A total of 62 referral forms for the inpatient consultation service were received in the month of January 2017. The general medical history of the patient were included in 95% of referral and the ocular history patients was recorded in 46% of consults. The presenting ocular complain was mentioned in 60% of consults and ocular exam was carried out in 29 % Whether or not patient is attends an ophthalmologist was specified in 9% of referrals. The principle reason of consultation can be ascertained in 97% of patients and undetermined in 3%. 58% of patients were seen by the orthoptist and 89% by a doctor. The majority of patients at 97% were seen in the ophthalmology department and 3% of patients needed ward consultation. Only 18% of consults specify if patient is suitable to travel to the eye department.

Conclusions:
Ophthalmology consultation is a valuable medical inpatient service. This audit shows the varied quality of information received in referrals. The maybe due to a lack of a structured form. The next goal is to provide a standardised form available to all teams. The format will include all required fields thus helping streamline the service and ensuring the effective allocation of resources.

Tuberculosis and its Management; Challenges in Ophthalmology

Shaffi R, O Connell E
Cork University Hospital, Cork

Purpose:
To highlight the diversity of clinical presentation of ocular tuberculosis in a non-endemic setting and discuss an effective approach towards its diagnosis and management. Also to emphasize on close monitoring of patients as anti-tuberculous treatment itself can further complicate and prolong the course of the disease due to its ocular and extraocular complications.

Method:
Descriptive Case Series.

Results:
Three cases of varied presentation of ocular tuberculosis and one case of extrapulmonary TB associated with ocular complications due to treatment were diagnosed over a period of eight months at Dept. of Ophthalmology, CUH, Cork. Presentations included recurrent blephroconjunctivitis with chlazion, recurrent granulomatous anterior and posterior uveitis, choroidal tuberculoma, recurrent vitreous haemorrhage and pan uveitis. All patients had normal X-ray chest and negative Tuberculin Skin test (Monteux). Diagnoses were presumptive and assisted with positive Interferon Gamma Release Assay (IGRA); Quantiferon. Complications associated with treatment of tuberculosis included optic neuritis, ocular cranial nerve palsy and extra ocular complications including worsening liver functions.

Conclusion:
A high index of suspicion helps diagnosis of ocular TB in areas of low-prevalence of the disease. It forms part of differential diagnosis of chronic, recurrent blephroconjunctivits and uveitis especially in at-risk patients. Anti-tuberculous treatment seems highly effective, yet close monitoring is important to pinch up treatment related complications early on, a prompt referral to the related medical specialities can lead to favourable outcome without prolonging course of the disease.

Comparison of Differences Between Final Refraction and Target Refraction in Lenstar and Contact Biometry Groups Post Phacoemulsification and IOL Insertion.

Mc Elhinney K, Rahman N, Horgan N.
St. Vincent's University Hospital, Dublin.

Objectives:
To compare the difference between final post operative refraction and our refraction target in Lenstar and Contact biometry groups.

Methods:
Internal audit using SVUH Ophthalmology patient's medical records to analyse pre- and post-operative refraction, visual acuity, biometry, keratotomy and final refraction target. Sample selected from those who attended post-operative follow up clinic appointments in 2016. 23 patients who had Contact biometry and 23 patients who had Lenstar biometry selected.

Results:
Analysis showed that mean final refraction was -1.60 ±0.55 Dioptres (95% confidence interval) with Contact biometry and -1.00 ±0.40 Dioptres with Lenstar biometry. Comparing this to target refraction of -0.5 Dioptres, it is apparent that the Lenstar group was closer to the target with a reduced variance in final refraction value.

Conclusions:
Albeit a small sample set, it was shown that Lenstar biometry gives a final refraction value closer to our target refraction, with less variance in final refraction value when compared with Contact biometry.

Looking at Prostaglandin Associated Periorbitopathy (PAP) in Prolonged Prostaglandin Analogue Usage

Mc Elhinney K, Rahman N, Lee P.
St. Vincent's University Hospital, Dublin.

Objectives:
To identify prostaglandin associated periorbitopathy (PAP) in clinical practice, compare the associated symptoms, signs and presentation with the relevant literature and raise awareness to ophthalmologists of this side effect to PGAs.

Methods:
Analysis of medical records and clinical findings for three individuals identified with pathognomonic features of prostaglandin associated periorbitopathy (PAP).

Results:
In our case series we were able to identify a constellation of changes that have been referred to as prostaglandin associated periorbitopathy. These included upper eyelid sulcus deepening, dermatochalasis. relative enophthalmos, loss of eyelid fullness, upper lid ptosis and loss of inferior orbital fat pads.Of note, in one case, the individual was receiving unilateral prostaglandin therapy (previous trabeculectomy contralaterally) and thusly had unilateral PAP changes only.PAP is a rare and underappreciated adverse side effect to PGAs and a differential diagnosis to consider in those presenting with ptosis, dematochalasis or enophthalmos.

Conclusions:
With the increasing prevalence of glaucoma and current prescribing of PGAs, PAP prevalence is likely to rise. Thus, ophthalmologist awareness of PAP is important in preventing its potentially sequelae.

Familial Foveal Aplasia

Murphy R, Keegan D, Flitcroft I.
Temple Street Children's University Hospital, Dublin.

Introduction:
Foveal aplasia, or hypoplasia, refers to the lack of foveal depression with continuity of all neurosensory layers in the presumed location of the fovea. Whilst it is has been reported in cases of aniridia, albinism, microphthalmia and achromatopsia, foveal hypoplasia as an isolated entity is a rare phenomenon. We describe the presentation of a child and her mother with subsequent discussion on the spectrum of the disease.

Methods:
Case report and literary synthesis.

Case description:
A frustrated 16 year old girl was brought in by her mother for review following several attendances to opticians with best-corrected visual acuity of 6/9 both eyes. Ophthalmic examination revealed bilateral subtle spoke like cataracts with a featureless macula. There was no nystagmus present. Optical coherence tomography demonstrated lack of a foveal pit without extrusion of the plexiform layers. There was appropriate outer segment lengthening with a widened outer nuclear layer. Although asymptomatic, examination of her mother demonstrated best corrected visual acuity of 6/7.5 both eyes, with foveal tomography confirming foveal aplasia.

Conclusions:
Although foveal aplasia typically presents with other ocular pathology, and most often exhibits nystagmus with decreased visual acuity, the entity can exist in isolation and without nystagmus. Familial cases, and those with pre senile cataracts, have been associated with PAX6 gene mutations and subsequent alterations in ocular morphogenesis.

Outcomes and Risk Factors of Trachoma Trichiasis Surgery in Elgadarif, Sudan

Mohamed M, Elshafie B
Sudan National Programme for Prevention of Blindness, Khartoum, Sudan

Introduction:
Tachoma is the leading worldwide cause of preventable blindness. Surgery can alleviate trachomatous trichiasis (TT), the blinding sequelae of trachoma, but recurrence rates are high.

Objectives:
To evaluate the pattern of recurrence of trachomatous trichiasis (TT) one year after Trabut surgery. And to innumerate barriers to surgery, recurrence risk factors and postoperative complications.

Methods:
Prospective cohort study. A total number of 103 patients who had Trabut surgery on one or both eyes. The 163 study eyes were examined 12 months postoperatively. Patients living in Baladyat Elgadarif were identified from surgical lists. Participants were asked to fill a subjective questionnaire and then screened for recurrence of TT and postoperative complications.

Results:
Thirty one eyes had evidence of TT recurrence (19%), including 26 eyes graded as minor (81.3%) and 5 eyes graded as major (16.1%). In the examined eyes, left eyes had a higher rate of recurrence than right eyes (22.1% vs. 15.8%; P = 0.05). Among eyes with recurrence originating from 1 location, recurrence was highest temporally (56%). The most common noticed surgical complication was lid notching (20%). (83.3%) of recurred subjects had no clean water supply, while (87.5%) had no latrines or toilets at their houses. Although the majority of patients (93.2%) recognized their Trichiasis for almost one year, only (24.3%) had TT surgery, the commonest reason for this surgical deprivation was lack of awareness of surgery (57.7%). Only (28%) of patients who had previous TT surgery had recurrence, however. All recurred eyes (100%) were of patients who were known to have trachoma Trichiasis for more than a year.

Conclusions:
To our knowledge, this is the first study to demonstrate the prevalence of TT recurrence in endemic trachoma area in Sudan. Trichiasis recurrence rates were high, so this emphasizes the need for a community-based intensive surgical follow-up program with scheduled visits after surgery.

Paper Session
Thursday 18th May 9.00am

Cyclodiode Laser Ablation Outcomes: A Single Centre Review

Butler T, Kinsella F.
University Hospital Galway.

Objectives:
We wished to evaluate outcomes of cyclodiode laser ablation in our cohort of patients who underwent the treatment between 2013 and 2017 in Galway University Hospital for glaucoma refractive to alternative treatment options.

Methods:
We undertook a retrospective review of 21 cases of cyclodiode treatment. We stratified cases in terms of pre-treatment status and analysed the data looking at outcomes in terms of visual acuity, long term IOP control and further treatment needed in each case.

Results:
Outcomes of cyclodiode treatment were varied within our cohort with pre-treatment status a significant determining factor in success.

Conclusions:
Cyclodiode is an important option in the treatment of complex glaucoma, however results are variable and it should be undertaken using a standardised protocol, with a guarded prognosis advised to the patient.

The Efficacy of Baerveldt Glaucoma Tube Implants in Irish Paediatric Patients with Primary or Secondary Glaucoma

Hartnett C, Doyle A.
Royal Victoria Eye & Ear Hospital, Dublin.

Objective:
To evaluate the indications, complications and intraocular pressure outcomes of Baerveldt Glaucoma Tube Implantation in Paediatric glaucoma patients in Ireland.

Methods:
A retrospective case series was performed of all paediatric patients with either primary or secondary glaucoma who underwent Baerveldt Tube implantation.

Results:
10 eyes of 8 patients underwent Baerveldt Tube insertion from 2008 to 2016, all performed by one surgeon. The mean age of the patients was 9.5 years, ranging from 21 months to 16 years of age. 6 of the 10 eyes had previously undergone trabeculectomy procedures. The mean pre-operative intraocular pressure was 32.6mmHg with patients on between 3 to 4 topical glaucoma agents. Post-operative complications included iris incarceration in tube tip (1), tube erosion through pericardial graft and conjunctiva (1), tube endothelial touch (1), IOL dislocation (1).One patient required tube removal. Follow up ranged from 8.5 years to 10 months with a mean of 3.3 years. Final intraocular pressures ranged from 10 – 21 mmHg with a mean of 15.6mmHg and with a mean of 1.1 topical glaucoma agents required. No glaucoma medications were required in 3 eyes (30%) at follow-up. There were no cases of post-operative hypotony.

Conclusion:
Success in glaucoma filtration surgery is defined as IOP < 22 mmHg on the last two follow-up evaluations with or without glaucoma medications in eyes with a pre-operative IOP of > 21mmHg. The overall success rate in our patients was 90%. These results highlight the efficacy of Baerveldt Tube Glaucoma Implant in paediatric patients in both primary and secondary glaucoma conditions and can be considered a good treatment option in these patients.

Comparing the Effectiveness and Tolerability of Preservative-Free Tafluprost Versus Preserved Latanoprost in the Management of Glaucoma and Ocular Hypertension – a Clinical Trial

Brinkman D, Aukland B, McSwiney T, Dooley I, Ibrahim F, Cullinane A, James M.
Cork University Hospital, Cork.

Objectives: To determine whether there are any differences in intraocular pressure (IOP) control or severity of dry eye symptoms and signs between patients treated with either preservative-free tafluprost drops or latanoprost preserved with 0.02% benzalkonium chloride (BAC).

Methods: In a prospective randomised controlled trial, patients requiring monotherapy for the treatment of glaucoma or ocular hypertension were recruited between August 2013 and April 2016. One eye was chosen for trial purposes, which underwent an appropriate washout period as required of receiving no treatment. Patients were randomised to one of two groups: tafluprost 0.0015% with no preservative or latanoprost 0.005% preserved with BAC. Measurements of IOP and dry eye severity were taken at the initial trial visit including ocular disease surface index (OSDI), tear osmolarity, and other parameters used for grading according to a modified Dry Eye Worskshop Severity Scale (DEWSS). Patients returned after a minimum of two months of treatment for repeat testing. Data was analysed using SPSS.

Results: 44 patients were initially recruited, with 35 patients who successfully completed all parts of the study included in the final analysis. While both groups experienced a significant reduction in IOP, no statistically significant differences between treatment groups were detected in IOP response or any measures of dry eye severity scores, including tear osmolarity. There were no statistically significant differences in mean tear osmolarity values between the preservative free treatment group and the BAC containing treatment group either before treatment (304 versus 301 mOsms/L; p = 0.50) or after treatment (297 versus 297 mOsms/L; p = 0.99).

Conclusions: While papers have been published showing a difference in tolerability when patients are switched to preservative free drops, our study did not reveal any statistically significant differences in objective or subjective measurements of dry eye severity between preservative-free and preserved therapy.

Investigation of the Role of Methylation in the Regulation of Lysyl Oxidase Like 1 Expression in Pseudoexfoliation Glaucoma

Wallace D[1], McDonnell F[2], O'Brien C[1,3]
[1]Clinical Research Centre, School of Medicine, University College Dublin. [2]Department of Ophthalmology, Duke University Medical Centre, Durham. [3]Mater Misericordiae University Hospital, Dublin.

Objectives: Pseudoexfoliation (PXF) syndrome is the single most important identifiable risk factor for developing glaucoma (PXFG). While Lysyl oxidase-like 1 (LOXL1) is thought to be important for an individuals' predisposition to developing this syndrome 1, other factors may also play a role such as oxidative stress and hypoxia, which can also alter gene expression via epigenetics 2. LOXL1 has been shown to be silenced by DNA methylation in a case of Cutis Laxa 3, bladder cancer 4 and in aged human skin fibroblasts 5.The purpose of this study is to investigate the role of methylation in the regulation of LOXL1 expression in PXFG.

Methods: Human Tenon Fibroblasts (HTFs) were propagated from explanted subconjunctival Tenon's capsules isolated during surgery from PXFG and cataract (CAT) patients for comparison. qPCR and SDS-PAGE immunblotting were used for expression analysis and Global Methylation was determined by ELISA. (Passage 2-4) n=3 for PXFG & CAT biopsies. Analysis was performed by one-way analysis of variance, followed by Tukey's honestly significant difference post hoc test. In the case of two sample comparisons, a Student's t-test assuming unequal variances was used to determine whether there was a significant difference between samples.

Results: Expression of LOXL1 in PXFG was decreased compared to CAT ($P<0.01$). Enzymes responsible for the addition of methyl groups, DNMTs 1 & 3A & MeCP2 increased in expression; (DNMT1 $P<0.01$, DNMT3A & MeCP2 $P<0.05$) in PXFG compared to CAT. Results were confirmed at the protein level ($P<0.05$). Global DNA methylation (5-MeC) was increased in PXFG ($P<0.01$). Treatment of CAT HTFs with H2O2 (100µM) showed a decrease in the expression of LOXL1 and an increase in expression of DNMT1/3A and MeCP2 ($P<0.05$). PXFG HTFs subjected to 5-aza-dC (0.5µM) demonstrated increased expression of LOXL1 ($P<0.05$).

Conclusions: LOXL1 is differentially expressed in HTFs isolated from PXFG patients, possibly orchestrated via methylation. There is considerable interest in exploring ways of pharmacologically reversing epigenetic abnormalities for therapeutic benefits. These data provide evidence to embark on the potential use of chromatin modifying intervention in PXFG.

Paper Session
Thursday 18th May 11.30am

Ireland's First NCBI Eye Clinic Liaison Officer

Stephenson K, Higgins K, O'Sullivan C, White C, Keegan D.
Mater Misericordiae University Hospital, Dublin, National Council for the Blind of Ireland, Dublin.

Objectives:
To describe the impact of the first NCBI Eye Clinic Liaison Officer (ECLO) in Ireland. This is a representative of the NCBI present in the hospital eye clinic to educate service users regarding available services and supports as well as to coordinate training in specific supports. This concept is embedded in UK eye clinics, and this pilot study is to determine benefit with a view to expanding nationally.

Methods:
An NCBI representative (ECLO) was situated in the weekly inherited retinal dystrophy (IRD) clinic. After seeing the ophthalmologist, consent was acquired for the service user to see the ECLO. Comments were recorded from each service user.

Results:
Inherited retinal dystrophy clinics were carried out in December 2016 and January 2017 with both an ophthalmology team and ECLO present. During the pilot study period, 26 service users were seen by the ECLO. All patients were satisfied that support services were explained on the day, and felt there was better cohesion with the ophthalmic team than in any previous experience. 12% of patients had never been in contact with NCBI before and were unaware of the available supports. From the ophthalmologist's perspective, this direct link with support services is an ideal opportunity to maximizing visual function, independence and quality of life for people with a vision impairment as part of their ongoing treatment plan.

Conclusions:
The evidence from this brief pilot study of an ECLO in the Mater Hospital is positive and in keeping with expectations from UK data. The aim is to expand this service from IRD to all visual pathology within the Mater and then to recommend the introduction of ECLOs nationally.

Subgroup Analysis of Quality of Life Scores after Adult Strabismus

Power B, Murphy M, Stokes J.
University Hospital, Waterford.

Objectives:
Our primary objective was to determine if there was a difference in quality of life (QOL) outcomes between adult strabismus subgroups. Our secondary objective was to add to the growing body of evidence of the benefits of strabismus surgery.

Methods:
Pre and postoperative data was collected over a 4-year period on adult strabismus cases performed by a single surgeon. The validated adult strabismus score (AS-20) was used to score QOL before and after surgical repair (0-100). 35 patients were included in the study.

Results:
Postoperative patients achieved an average 14.22 score increase in QOL ($p=0.0018$). Psychosocial increases, compared with functional, accounted for the majority of this improvement (23.77 vs. 4.67). No difference was found between primary and consecutive strabismus repairs: average increases of 18.10 ($n=17$) and 16.55 ($n=18$) respectively. A trend towards greater score increases in females compared to males (21.05 vs. 5.12) was detected but did not reach statistical significance ($p=0.17$). Analysing subgroups divided by preoperative scores of low (0-30), medium (30-70) and high (70-100) demonstrated average score changes of 33.47 ($n=9$), 12.03 ($n=19$) and -4.57 ($n=7$).

Conclusions:
Selecting the patients who will benefit the most from strabismus surgery is challenging. Our data suggests some subgroups may achieve poorer results and even reduced scores than preoperatively. This data supports the use of the AS-20 scoring technique to help select patients and monitor results subjectively. We also add to the evidence of the effect of strabismus surgery on QOL and hope to continue to advocate its varied benefits on behalf of our patients.

The Integration of Community and Acute Ophthalmic Children's Eye Services in Galway 2016

McBride G, Loughrey F, Comer G.
University Hospital Galway and PCCC Galway Ophthalmic Services.

Objectives:
PCCC children's eye services were suspended in Galway West from November 2014 due to the retirement of a COP. The number of existing children awaiting assessment and treatment by summer 2015 was 2383, the number of children awaiting first assessment was 1559. PCCC Galway and Roscommon (PCCCGR) along with University Hospital Galway (UHG) created an agreement linking the units until a replacement Ophthalmologist was appointed. PCCCGR allocated €50,000 for the delivery of this integration project. The aim for PCCCGR was to ensure that children currently undergoing treatment where being monitored appropriately. The aim for UHG was to ensure services for children were maintained in the community setting, and prevent the transfer of all 3942 children into an acute hospital ophthalmology unit.

Methods:
PCCCGR allocated an Orthoptist and UHG allocated an Orthoptist and an Ophthalmologist to deliver the integrated service. Payment was transferred from PCCCGR to UHG for the additional hours undertaken by UHG staff. Saturday clinics were the arranged for the 3 project members.

Results:
3748 children were offered appointments. 2586 children attended their appointment (69%). 1191 children were discharged following assessment (46%). 40 children were transferred for ophthalmic surgery at UHG. The appointment cancellation rate was 11%. The 'Did not Attend' rate was 20%. In line with the HSE Discharge policy, children who DNA'd were discharged from the PCCCGR service. Therefore, from 3748 children the total number discharged was 1867 children (50%). The cost to-date for project is €61,589. The cost per patient seen is €23.82.

Conclusions:
Integration between acute and community staffing creates a highly effective and efficient model of care for children's eye services.

Addendum: The project was proposed to cease in December 2016 (12 months after commencing). However, due to the success of the project, additional funding was allocated to continue the Saturday clinics until May 2017.

Orbital Complications of Frontal Sinusitis

Murphy T, Moran S, Brosnahan D.
Our Lady's Hospital for Sick Children, Dublin.

Objectives:
To examine five cases of orbital cellulitis secondary to frontal sinusitis; To discern varying clinical presentation and complications of same; To examine patient demographics and risk factors; To examine management and outcomes of this patient cohort; To highlight the aggressive nature of complications related to frontal sinusitis

Methods:
Retrospective case series and literature review

Results:
Five patients with orbital cellulitis related to frontal sinusitis were identified between 2011 and 2017. Patients ranged in age from 12-15 years of age. Four patients were male and one was female. All patients had restricted extraocular movements on initial examination. CT scan of orbit revealed subperiosteal cellections in two patients, and orbital abscesses in the remainder. One patient developed intracranial complications. All cases required surgical intervention.

Conclusions:
Orbital complications of sinusitis, though less frequent in the antibiotic era, are a significant source of morbidity and mortality, that can be reduced by attentive physical examination, prompt medical therapy, and surgical intervention when indicated. Frontal sinusitis is a less common source of orbital complications; however this sinusitis subset is more aggressive. This is especially true in patients with a subperiostial abscess, as in this case series. Complications progress rapidly and result in dramatic and significant outcomes including orbital abscess, cavernous sinus thrombosis, extradural, subdural and cerebral abscess and meningitis. Surgical intervention is frequently required. Thus, orbital cellulitis secondary to frontal sinusitis may result in dramatic and serious complications. It is imperative that clinicians are wary of this serious path.

Eight Year Data of Graves' Ophthalmopathy Patients Managed With Endoscopic Orbital Decompression

Pilson Q, Timon C, Cassidy L, Khan R.
Royal Victoria Eye and Ear Hospital, Dublin.

Objectives:
Grave' ophthalmopathy (GO) affects 49% of Europeans with graves' disease (GD). Among these, 5% in turn develop dysthroid optic neuropathy (DON). There are many ways of managing the condition which includes medical and surgical methods. However, early identification of the condition is crucial in preventing permanent sight loss.

Methods:
We report a retrospective audit of the examination and management of 31 cases of 19 patients with GO that were managed with endoscopic orbital decompression (EOD) surgery in The Royal Victoria Eye and Ear hospital, Dublin between 2008 and 2016. European Thyroid Association / Eurpoean Group on Graves' Orbitopathy (EUGOGO) Guidelines for the Management of Graves' Orbitopathy. All patients had a full clinical history, slit lamp examination, best corrected visual acuity (BCVA), Hertel's exophthalmometer measurement, Ishihara colour vision test, pupil assessment, magnetic resonance imaging or computed tomography of the orbits. Additional tests including visual field perimetry and HASS tests were also performed. Cases were graded based on the EUGOGO classification of the severity of the opohthalmopathy.

Results:
Based on EUGOGO classification, 45% cases were sight-threatening, 51% were moderate-severe and 3% were mild. Indications for EOD in our study include optic nerve compression (45%) and increasing proptosis (51%). All sight-threatening cases were initially managed with intravenous glucocorticoids (IV GC) while moderate-severe cases were managed with either IV GC (11 cases) or oral GC (5 cases). The improvement of vision was statistically significant between preoperative BCVA with 1 month postoperative ($p=0.024$) and 3 months post operative ($p=0.001$). There was a statistically significant difference in the amount of proptosis reduction resulting from the surgery after 1 month ($p=0.001$) and 3 months ($p<0.001$). Ishihara colour vision test equally shows statistically significant improvement after 1 month ($p<0.01$) and 3 months ($p<0.0001$). Only 71% sight threatening cases had visual perimetry and all cases except one had a complete resolution of their visual field defect. No complications were observed in any of the cases in our study.

Conclusions:
Endoscopic orbital decompression is a safe and effective surgery to improve optic nerve function in GO while improving proptosis. The management of our cases was in concordance with the EUGOGO guidelines. However, there are many treatment options available for active moderate-severe patients available to consider. In addition, tests like visual field perimetry should be performed in all cases as it may give a complete picture and allow early detection DON and allow an optimal management of GO.

Paper Session
Friday 19th May 10.00am

Trends in Corneal Transplant Surgery in Ireland: Indications and Outcomes of Corneal Transplant Surgery and Intraocular Lens Opacification following Descemet's Stripping Automated Endothelial Keratoplasty

Quigley C, McElnea E, Fahy G.
Galway University Hospital,Galway.

Objectives:
To evaluate the indications for corneal transplantation, the procedures carried out and the postoperative outcomes obtained and to compare these with previous Irish corneal transplant studies.

Methods:
A retrospective review of the case notes of all patients who underwent corneal transplantation under the care of a single surgeon, from 2008 to 2015 was performed. The risk factors for postoperative complications including transplant failure were examined.

Results:
Over the seven year period studied, forty two corneal transplant surgeries were carried out on 40 eyes of 38 patients, 24 of whom were male (63%). The median age at surgery was 62 years (range 23-96 years). The most common indication for transplantation was pseudophakic corneal decompensation associated with Fuch's endothelial dystrophy (FED) (n = 13) followed by keratoconus (n=7). Seventeen penetrating keratoplasties, 15 DSAEK, eight anterior lamellar keratoplasties and two amniotic membrane transplant procedures were carried out. Transplant failure resulting in corneal oedema or repeat corneal transplant surgery (n = 4, 10%), was associated with previous transplant failure in the eye; odds ratio (OR)= 1.58 (p=0.05), and with co-morbid FED, OR = 1.50 (p=0.02). Intraocular lens opacification occurred in one lens following DSAEK, giving an incidence rate of 7%.

Conclusions:
Pseudophakic corneal decompensation is the commonest indication for corneal transplant surgery in this cohort, with lamellar keratoplasty now the most frequent approach to corneal transplant surgery. Previous corneal transplant failure and Fuch's dystrophy remain important risk factors for failure of a subsequent transplant. The risk of intraocular lens opacification and its potential effects on vision should be elaborated prior to endothelial keratoplasty.

Nurse-led Corneal Collagen Cross-Linking (CXL) Service at the Royal Victoria Eye and Ear Hospital, Dublin

Malata D, Power W, Murphy C.
Royal Victoria Eye and Ear Hospital, Dublin.

Objectives:
To describe the establishment of a nurse-led CXL service at the Royal Victoria Eye and Ear Hospital, Dublin and to review the first 12 months of the service

Methods:
The Moorfields Eye Hospital nurse-led CXL protocol was reviewed and adapted to RVEEH. With the support of the supervising consultant ophthalmologists, the training commenced in January 2016. Five CXL procedures were observed before starting the training programme in January 2016. Twenty CXL procedures were done under supervision, which was completed on the 23rd of February 2016. Total number of eyes treated in the nurse-led CXL service from January 2016 to December 2016 was 144. An audit was performed in January 2017 to assess the safety of the nurse-led CXL service. A telephone patient satisfaction survey was carried out to obtain patients' feedback on the service.

Results:
144 eyes were treated in the nurse-led CXL service from January to December 2016. Twenty eyes were treated under the supervision of the consultant or corneal fellow/registrar. 124 eyes were treated by the Corneal Nurse Specialist without direct observed supervision with no adverse events. Three (2.1%) eyes developed corneal infiltrates post operatively which responded well to treatment. Two eyes developed corneal haze which gradually improved after a month. Median waiting time for CXL fell from 71 days (range, 40-293 days) to 53 days (range, 7-194 days). 95 patients participated in the telephone patient satisfaction survey, result showed that 72% of patients were very satisfied with the nurse-led CXL service, 23% were satisfied, 2% uncertain, and 3% were not satisfied although in all of these cases the dissatisfaction arose from delays in receiving follow up appointments rather than the procedure itself. 78% of patients do not mind if a nurse or a doctor did the procedure, 9% preferred the nurse and 13% would have preferred if a doctor did the procedure. Overall, the nurse-led CXL service was well accepted by patients.

Conclusions:
Results from Ireland's first nurse-led CXL service at RVEEH shows that it is safe and effective as CXL performed by ophthalmologists.

Corneal Ectasia After Refractive Surgery

Arfat Y, O'Keeffe M.
Mater Private Hospital, Dublin.

Objectives:
The purpose of this study was to evaluate incidence of postoperative ectasia after refractive surgery and key factors in genesis of ectasia after myopic laser assisted in situ keratomeailusis (LASIK) and treatment of ectasia.

Methods:
Study was conducted in Mater Private Hospital, Dublin, Ireland. It is retrospective case series. Patients who underwent refractive surgery at Mater private Hospital, Dublin and the patients who referred to Mater private hospital for management of corneal ectasia. 12 eyes of 8 patients included in study. 3 males and 5 females. Age range was from 30 to 46 years. Onset of ectasia was minimum 3 years and maximum 15 years. All ectasia eyes were treated with CXL.CXL stabilized the ectasia. In one eye penetrating keratoplasty was done. In two eyes residual refractive error was treated with phakic IOLs.

Results:
Long term follow up shows that corneal ectasia is no epidemic but a rare condition.

Conclusion:
Corneal ectasia is a preventable disease if proper preoperative assessment is done. Corneal collagen crosslinking is successful treatment; It stabilizes the condition and also improves the BCVA.

Treatment of Vernal Keratoconjunctivitis with Supratarsal Injection of Corticosteroid

McSwiney T, McElnea E, Power W, Murphy C, Brosnahan D.
Royal Victoria Eye and Ear Hospital, Dublin.

Objectives:
To determine the effectiveness and safety of supratarsal injection of triamcinolone acetonide (TA) in vernal keratoconjunctivitis (VKC).

Methods:
A retrospective review of all patients with VKC who underwent a supratarsal injection of triamcinolone over a five year period in a single centre was performed. Demographic data recorded included age, gender, age at symptom onset and age at injection. Clinical data recorded included presenting symptoms, best corrected visual acuity at presentation and at final follow-up, the presence of shield ulceration, the number of injections given and associated adverse events.

Results:
Sixteen patients (thirty-one eyes) with VKC received supratarsal injections of TA over the five year period studied. The mean age at symptom onset was 9.1 years. Common presenting symptoms were blurred vision, photophobia and itch. Thirty five per cent of patients presented with shield ulceration. Patients required, on average, 6.8 injections and 3.4 years of treatment. Ninety seven percent reported symptomatic improvement at two weeks post injection. No patient experienced an increase in intraocular pressure. Best corrected visual acuity improved by a mean of 1.6 lines from initial presentation to last follow up.

Conclusions:
Supratarsal injection of TA is a safe and effective treatment for patients with symptomatic and/or severe VKC. The majority of patients reported symptomatic improvement and no patient suffered an adverse event secondary to the intervention.

Bean-Shaped Ring Segments ('Beans') in "Bag-in-the-Lens" Cataract Surgery as Augmentation Tool in Complex Capsule Cases

Altenburg A, Ní Dhubhghaill S, Tassignon M-J.
Royal Victoria Eye and Ear Hospital, Dublin, Antwerp University Hospital, Antwerp.

Objectives:
The Bag-in-the-lens (BIL) technique is a validated approach for cataract surgery, where both the anterior and posterior capsulorhexis are placed in the inter-haptic lens groove to support the centrally placed intraocular lens. This method provides a high degree of IOL centration and stability, but also largely dependents on the integrity of the capsule and zonules. In cases of significant capsular instability and zonular loss, Bean-shaped ring segments (beans) can be used to facilitate BIL by reinforcing the capsule. The aim of this study is to describe this technique and to report the outcome of this novel capsular or sulcular device.

Methods:
The study is a retrospective observational study of all consecutive cases of bean implantation operated between May 2011 and April 2015 in the Antwerp University Hospital (Belgium).

Results:
A total of 64 eyes in 57 patients, all implanted with beans to support the BIL implant, were included in this study. The positioning, visual outcomes, refractive outcomes and complications have been evaluated in all cases. The beans were implanted in 23 eyes after IOL exchange, in 4 cases of crystalline lens dislocation, in 8 traumatic cataracts, in 8 eyes presenting with intraoperative noted unstable capsules, and in 7 eyes beans were implanted secondary due to a postoperative instable BIL. The mean increase in visual acuity was 0.35 (Decimal Snellen) for the total cohort. Visual gain was highest in the crystalline lens dislocation group and the traumatic group. The best refractive outcomes were achieved in the traumatic cataract and IOL exchange group.

Conclusions:
The bean-shaped ring segments are a useful tool to improve the stability of the capsule/zonular/IOL complex in BIL cataract surgery, hereby expanding the indications of patients that can be treated with this technique. The first results with this novel surgical device are encouraging.

Surgery Simulation After Eyesi: Cataract Surgery, Anterior Vitrectomy and Corneal Suturing with Practice Eyes

Quigley C, Doolan E, Kamel K, Dervan E.
Mater Misericordiae University Hospital, Dublin.

Objectives:
Cataract simulator training using EyeSi has been found to improve technical skill in actual surgery, though it is less useful in later training. We evaluate use of practice eyes for improving skills in cataract surgery and corneal suturing.

Methods:
Three ophthalmic surgery trainees who had variable levels of experience, in their 1st, 2nd, or 5th years of training, were given training on practice eyes. Cataract surgery and corneal suturing training was carried out by one consultant trainer, and recorded by video in the eye theatre with the operating microscope. Videos of the trainees carrying out the procedures were obtained before and after this practice, and were scored by the Ophthalmic Simulated Surgical Competency Assessment Rubric (OSSCAR) and Objective Structured Assessment of Technical Skill (OSATS) scoring systems respectively.

Results:
Cataract surgery steps, including anterior vitrectomy using egg white, with sulcal lens implantation, and corneal suturing, were readily carried out on the practice eyes. Explanation of modifications of technique, with improvement of communication between trainer and trainee occurred. Improvement in handling in practice eyes was observed to translate to more stable hand position, with more efficiency when performing cataract surgery; initial cataract surgery score before practice was median 9.5 (range 4-15), which improved to median 14 (range 8-20) after training. Corneal suturing also improved; initial skill score was 5 (range 4 - 6) which improved to 7 (range 4-10).

Conclusions:
The current shortening of total ophthalmic surgery training time necessitates increasing the intensity and quality of training, to minimise adverse effects on patient safety and outcomes. We demonstrate a safe effective technique to improve surgery training, which may be a useful supplement to virtual simulator training, and which could be readily carried out in any eye theatre.

IRISH COLLEGE OF OPHTHALMOLOGISTS

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

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

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

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

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

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