magnus Group

2ND EDITION OF INTERNATIONAL OPHTHALMOLOGY CONFERENCE

OCTOBER 2023

19

VIRTUAL EVENT

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BOOK OF ABSTRACTS

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Speakers

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NHS Tayside, United Kingdom

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Thank You All...

Welcome Message

Dear Colleagues,

It is my privilege and honor, to invite you to "Ophthalmology 2023 Boston, Massachusetts,USA.

Glaucoma has been a major reason for world- wide blindness. The primary treatment modality over many years, has been the use of pressure lowering glaucoma eye drops. The problems with this modality of treatment, particularly in underprivileged communities, is the cost of the medications, as well as the difficulties associated with their use. The subsequent treatment,should the drops fail, is a surgical drainage procedure. The ultimate treatment, if the surgical drainage treatment fails, is the use of a glaucoma implant. These implants were devised in South Africa and are named after their developers, Dr Molteno the originator, and Dr Baerveldt. The final iteration of the implant was by a non-South African, Dr Ahmed, who inserted a valve mechanism into his invention. Glaucoma Implants have subsequently become an important modality for the prevention of blindness.

Jeffrey Freedman

Emeritus at State University of New York, United States

Welcome Message

Dear Ladies and Gentlemen, dear colleagues,

Especially in times of rapidly developing research, the promotion of ophthalmological training is an essential goal of our congress. Therefore, I would like to cordially invite you to the innovative second International Ophthalmology Conference, which will take place as a hybrid congress on October 19-21, 2023 in Boston (USA).

We are committed to providing our patients with the best possible ophthalmological care. In order to meet this requirement, we need an intensive and collegial exchange of knowledge in order to be able to adequately use the proven but also constantly expanding level of knowledge in our specialist discipline, supported by the best and current technologies. With this in mind, I would like to invite you all to our upcoming congress in 2023.

All our best wishes, we are very much looking forward to meeting you at the 2nd Edition of the hybrid INTERNATIONAL OPHTHALMOLOGY CONFERENCE 19-21, October, 2023 in Boston, USA!

Sibylle Scholtz

Institute of Experimental Ophthalmology, Germany

Welcome Message

I am honoured and humbled to be member of scientific committee key opinion speeker and chairman of one othe sessions of ophthalmology 2023

Cmes and ophthalmic conferences are key for updating and sharing the knowledge in the field of ophthalmology which in the present era is kind of SUBSPECIALTIES like laser Lasik phaco glaucoma MEDECAL and surgical retina pediatric ophthalmology neurophthalmology ocular oncology

Since we had COVID for years that caused paucity of organising ophthalmic conferences and cmes however we did kind of various WEBNARS to stay updated

International conferences brings ophthalmologists from all parts of world on one plateform which enablesnus to share the knowledge and research hence it is a key factor for updating and an eye opener for our young budding ophtmoligists

I would feel more than happy to be your host to visit most beautiful place kasmir india my homeland

In the end I wish this great international Ophthalmology 2003 a great success

Dr Gowhar Ahmad

Sr Consultant Ophthalmologist Florence Hospital, India

ABOUT
MAGNUS GROUP

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus Group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conferences and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

ABOUT
IOC 2023

Magnus Group is extending an exclusive invitation for your participation in the "**2nd Edition of International Ophthalmology Conference**" (IOC 2023), an online event scheduled to take place on October 19, 2023.

This conference will revolve around the theme "Envisioning future through the lens of ophthalmology innovations." Pioneering research in clinical ophthalmology, such as gene therapy for Leber's congenital amaurosis, utilization of pluripotent stem cells, immunomodulation, and the neuroprotective effects of ginkgo biloba extract in glaucoma therapy, along with pharmacological presbyopia treatment, represent some of the groundbreaking translational studies in this field. The pursuit of knowledge has been a timeless endeavor, but its true value lies in its dissemination and practical application for the betterment of humanity.

We are eager to transform IOC 2023 into a forum where you can acquaint yourself with the latest research and practices, engage with peers, and contribute to the conference's success. Esteemed ophthalmologists, medical practitioners, healthcare professionals, nurses, clinicians, academicians, medical experts, students from renowned medical institutions, researchers, professors, and esteemed experts in the field of ophthalmology will share their pioneering research findings, innovations, and experiences at our global platform.

Your presence is the driving force behind our event, and we look forward to meeting you at IOC 2023!

BOOK OF ABSTRACTS

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KEYNOTE FORUM

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(Un)avoidable errors in biometry – and some ideas how to overcome them

Purpose: Murphy´s Law, postulated in 1949, stated "If anything can go wrong, it will". This also holds true when calculating Intraocular Lenses (IOL) – and also here, were the options are manifold, partly systemic and pre-programmed.

Methods: Close cooperation with the Institute of Experimental Ophthalmology, University Homburg/Saar (Germany).

Results: Any incorrect measurement of biometry data inevitably will lead to incorrect calculations of the respective IOL, such as measurements of the axial length, anterior chamber depth and corneal curvature due to inappropriate instrument settings or outdated instrument calibrations.

Ideally, to calculate an IOL, the radii of the anterior and posterior corneal surfaces, central thickness and refractive index of the cornea, as well as the respective data from the IOL. Together with the values of the pseudophakic anterior chamber depth, the refractive index of the aqueous humor, the pseudophakic vitreous length and its refractive index, all information would be available to calculate the respective IOL individually. Since the values of the pseudophakic eye are not yet available at the time of the IOL calculation, various simplifications and model assumptions of the phakic eye are still used today.

Conclusions: Today, optical biometry is regarded as a standard diagnostic tool in cataract surgery and represents the basis for reliable IOL calculation before cataract surgery. It has become an indispensable part of ophthalmology and has revolutionized cataract surgery.

Note: Making the best calculation and using optimized constants cannot compensate for errors in biometry. Take time to check all measurements for consistency or contradictions.

Audience Take Away Notes

- The audience will made aware of the major errors which might occur in biometry before cataract surgery
- They will understand which of them they can influence and which not
- They will understand how important personal IOL constants are and where to find them
- Improved understand of biometry of the eye will lead to better IOL power calculation
- More exact IOL power calculation will lead to better post-OP refractive results and by this to more happy patients

Sibylle Scholtz*, Achim Langenbucher

Institute of Experimental Ophthalmology, Saarland University, 66424 Homburg/Saar, Germany

Biography

Dr. Sibylle Scholtz, Biologist, Chemist, Ph.D. in Ophthalmology, International Science Correspondent, Associated Senior Research Fellow (Institute of Experimental Ophthalmology, Saarland University Faculty of Medicine, Germany), longstanding experience in the ophthalmic medical device industry.

“Glaucoma tubes and their blebs. A personal reflection on the South African connection to the development of glaucoma tube shunts and their blebs”

The development of newer iterations of the tube shunt will show the link between the original scientist and the scientist involved with the development of a subsequent highly popular implant.

The original Molteno Shunt provided the basis for all the subsequent iterations of glaucoma implants that are used today.

Thus learning about the development of the original implant has led to the development of subsequent iterations of glaucoma implants, and their modifications.

The original glaucoma implant, the “Molteno Implant”, was developed in South Africa, by Dr. Anthony Molteno, during his ophthalmology residency. This implant provided the solution to the failures related to the original glaucoma surgeries, and has also resulted in newer iterations of subsequent glaucoma implants.

Dr. George Baerveldt, another South African Ophthalmologist, following Dr. Molteno’s discovery, developed his own larger implant the “Baerveldt Implant”, possibly the most popular glaucoma implant in use currently.

The reasons for bleb failure namely cytokines, was discovered by the presenter, thus another Ex-South African.

The final iteration of the original Molteno implant has been the Ahmed Implant, which is a modified implant with a valve. (Dr. Ahmed is not a South African).

Tube shunts, continue to remain the ultimate surgical treatment for uncontrolled glaucoma, and two of the glaucoma implants used in the surgical treatment for glaucoma, were developed in South Africa.

Audience Take Away Notes

- The reasons leading to the development of glaucoma tube shunts, and the scientists involved in their discovery
- The early problems involved with the implants and their solutions
- Newer iterations of implants, to overcome early problems associated with the original implants
- The physiological factors related to the efficacy of bleb formation

Jeffrey Freedman

Professor Emeritus, State University, New York, Brooklyn, USA

Biography

Dr. Freedman received his medical degree from The Medical School of the Witwatersrand University in Johannesburg South Africa. In 1964, and his PhD in Medicine from the same university in 1975. He received the degree of "Fellow of the College of Surgeons South Africa" in 1969, and "Fellow of the Royal College of Surgeons Edinburgh" in 1971 both degrees by written and practical examinations. He has published over 80 research articles, and is Professor (HS) T Emeritus at State University of New York, Downstate Medical Center.

Rare and interesting case of choroidal melanoma presenting as a case of a congestive glaucoma left eye in a 55 years old male patient

Choroidal melanomas are one of the commonest intraocular tumours which are kind of being malignant. Pigmented non pigmented more common in whites than blacks has got an early Tendency for liver meratasis however if diagnosed and treated in time one can prevent liver meratasis 6.5 per million in USA and 7 per million in Denmark and other scandenivian countries. Very difficult to diagnose due to the atypical manifestations however in most of cases present as solid or exudative retinal detachment on B scan ultrasound and indirect ophthalmoscopy malignant melanoma of c body yields poor results. Diagnostic modalities are direct ophthalmoscopy indirect ophthalmoscopy a scan ultrasound b scan ultrasound CT scan ultrasound bscan ultrasound FF angiography.

Case report: 55 years old male patient presented with a c glaucoma Left eye received anyi glaucoma medecation did not respond to rountine ant glaucoma medecation no b scan was done later on second ophthalmic consultation bscan revieled solid retinal detachment was refered for MRI scan braine for radiological confermation of melanoma however radiological report was inconclusive so it created a mistrust for the patient and he was left undiagnosed as a painful blind eye for 2b 2 years I saw patients in 2013 after 2 years of initial presentation. I did bscan picked up solid retinal detachment and did mnrbi braine and my radioigist confermed the radiological confermation of melanoma also MRI showed normal optic nerve chiasma radiation tract pit gland pit fossa and basal gangionnnormal so we're pons midbraine ventricles cerebral hemisphere were normal. I performed block resection.

Key words: Progressive and painless visual field loss blued vision paracentral scotoma a c glaucoma a a c glaucoma sec Glaucoma occular hypertension normal tension Glaucoma low tension Glaucoma vitrous floaters something Occular pain.

Audience Take Away Notes

- If a c glaucoma is not responding to usual a g medecation do bscan ultrasound
- Please do mri scan for the radiological confermation of melanoma
- Once we have melanoma confermation do enucleation
- If tumour is less than 22 treament observation
- If more than 22 mm other treaments

Gowhar Ahmad

Dept of Ophthalmology, Florence Hospital Multi-Speciality Center, India

Biography

Dr. Gowhar Ahmad sr consultant ophthalmologist Florence Hospital chanapora Srinagar Kashmir india Has more than 40 years of experience in the field of ophthalmology national and international speaker has many international publications on JOJO MSOR respectively posted more than 18000 and 1800 articles on Docpleux and linked in respectively infuencer on curofy icon curofy for the year 2021 editor in chief of international journal of scientific research member scientific committee of world congress of clinical pediatrics and Neonatology member scientific committee of world congress of D M and Pediatric Endocrinology Member International Journal Of Ophthalmology And Advanced research reviewer researcher and board member of many international journals has attended many international webnars as a speeker member KOS Kasmir Ophthalmic Society Member AIOS All India ophthalmic society.

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SPEAKERS

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Wei Han Ong[1]* Joanna Ashby[2], John Ellis[1]

[1]Department of Ophthalmology, Ninewells Hospital, NHS Tayside, Dundee
[2]School of Medicine, University of Glasgow, United Kingdom

Patients' perspective on an innovative use of QR code linked patient information video on cataract surgery

Introduction: This study aimed to explore (1) patients' subjective utility for a patient information video (PIV) on cataract surgery and (2) analyse the use of Quick Read (QR) code as a mode of delivery of the PIV.

Methods: A total of 500 patients were included. All patients were given a paper form of patient information leaflet as the standard of care (SoC) in addition to a digital QR code to access a supplementary PIV. The questionnaire explored the patients' understanding of cataract, risk and benefits of cataract surgery as well as experience accessing and using the QR code.

Results: A total of 321 responses were collected (64% response rate). The majority were female (55%) with mean age 75 years. 69% (n=222/321) managed to watch the video. Statistically significant association was reported between prior experience with QR code and ability to watch the video ($p<0.001$). The most common reasons for not watching the video were no device (n=54/99, 54%). 91% of patients who managed to watch the video would like to have more healthcare videos in the future.

Using the Likert scale, 89% (n=199/222) patient agreed or strongly agreed the video was clear and easy to understand. 84% (n=187/222) reported they understood the treatment options along with the risk and benefits. Importantly, 87% (n=194/222) agreed that they felt free to choose not to have surgery if they did not want to. Overall, most of our patients (n=170/222, 76%) acknowledged PIV easier to understand as compared with paper format information, with merely any patient reporting the video missing information the paper covered (n=2/222).

Conclusion: The provision of patient information video supplementation as a part of the cataract surgery referral pathway is an innovative method of providing patient information in a more interactive way, with positive feedback from patients.

Audience Take Away Notes

- Cataract surgery is the most performed surgery in the UK. Although highly successful in technical and perceived value terms, no surgery is risk free and all elective surgery requires comprehensive informed consent. This enables shared decision making. We piloted an innovative approach of proposing a service adaptation to the cataract referral pathway locally by streamlining direct-optometrist referral to listing for cataract operation with the use of patient information video (PIV) accessed via QR code
- To our knowledge, most studies to date examine the efficacy of digital healthcare services in enhancing clinical outcomes without focusing on patient engagement in its specificity. Our study aimed to explore the patients' perspective on the use of the PIV to enhance the consent process for cataract operations and subordinate to that to analyse the ease of use of QR code as a mode of delivery of that PIV, being conscious of the potential for digital inequity or other forms of discriminative disutility of this chosen medium and form of delivery

- Our work presented a humble but dramatic change that has revolutionized our practice in NHS Tayside. Since papers are "written by scientists, but read by clinicians" we think this simple report would be of interest and could lead to rapid and fairly cost-free improvement around the UK

Biography

Dr. WeiHan Ong graduated from University of Glasgow MBChB (Hons) in 2022. She started as a Foundation Doctor in Ninewells Hospital NHS Tayisde, UK. She aspires to pursue a career in ophthalmology and has published and presented in national and international conferences.

Nachika Ibekwe[1]*, Carl Mulholland[2], Ruth Hamilton[2], Eoghan Millar[2]

[1]University of Glasgow, Glasgow, Scotland
[2]Royal Hospital for Children, Glasgow, Scotland

Chemodenervation of comitant paediatric strabismus with botulinum toxin: A longitudinal retrospective study in a tertiary referral centre

Introduction: Strabismus is a common presentation within paediatric ophthalmology, affecting approximately 2-3% of the population. An alternative to extraocular muscle surgery is the use of therapeutic botulinum toxin. Recent evidence has supported the role of Botulinum in chemodenervation in correcting small to moderate deviations, although the results can be variable when compared to surgery. We aimed to examine how long patients could retain a reduced squint angle as the botulinum toxin wanes as well as any adverse outcomes.

Methods: We retrospectively collected pre- and post-operative squint data from children undergoing botulinum toxin chemodenervation for strabismus at a tertiary referral centre (Royal Hospital for Children, Glasgow) between 2018-2022. Their orthoptic follow-up allowed us to compare the angle of deviation before surgery and how this had changed at 1, 3, 6, and 12 months post-operatively (markedly affected by COVID-19 pandemic). Surgical details were taken from operation notes and all patients received Botox® (Allergan) in one or two rectus muscles.

Results: We included a total of 100 patients, of which 70 were esotropic and 30 were exotropic. The mean age was 8.5 years (range 6 months to 15 years) including 40 males and 60 females. For exotropic patients measured at distance; at 1 month the mean difference in prism dioptres was 10.5 with 95% CI of (5.3 to 15.7) and at 12 months was 4.9 with 95% CI (0.9 to 8.9). This was less pronounced for near measurements at 1 month the mean difference in prism dioptres was 3.9 (95% CI -4.4 to 12.2) and at 12 months was 3.4 (95% CI -0.7 to 7.6). For esotropic patients measured at distance; at 1 month the mean difference in prism dioptres was 20.4 with 95% CI of (12.4 to 28.4) and at 12 months was 14.4 with 95% CI (3.4 to 25.2). With a greater effect for near, at 1 month the mean difference in prism dioptres was 24.2 with 95% CI of (17.0 to 31.3) and at 12 months was 13.5 with 95% CI (1.5 to 25.4). The rate of pre-operative diplopia was 29.6% (29/98 patients) and 36% (9/25 patients) of those who had pre-operative diplopia had resolution. The rate of ptosis was 34.8% (23/66 patients) all resolved. There were no recorded adverse effects such as permanent loss of vision or globe perforation. Overall, thirty BTXA injections were performed in 2018; twenty-one in 2019; eight in 2020; twenty in 2021 and twenty-nine in 2022. Data gaps were due to COVID-19 Pandemic.

Conclusion: Our results indicate that chemodenervation using Botox is a useful tool in managing squint, with evidence some patients maintain a lasting benefit beyond the expected 6 months. The injections were also associated with infrequent side effects, which were commonly transient in nature. The use of Botox is much less labour-intensive than muscle surgery and can be facilitated on already fully booked theatre lists especially when dealing with the current waiting times fall out from the COVID-19 pandemic.

Audience Take Away Notes

- Botox is a useful tool in managing squint, with evidence some patients maintain a lasting benefit beyond the expected 6 months
- The injections were also associated with infrequent side effects, which were commonly transient in nature

- The use of Botox is much less labour-intensive than muscle surgery and can be facilitated on already fully booked theatre lists especially when dealing with the current waiting times fall out from the COVID-19 pandemic
- Whilst the findings are promising there is need for more research in this area, especially given the limited number of exotropes in this study

Biography

Nachika Ibekwe is pursuing a Bachelor of Medicine and Bachelor of Surgery (MBChB) degree at the University of Glasgow, Scotland. He previously graduated with an iBSc Public Health Degree in 2020. Whilst in medical school, he has actively engaged in research; conducting a systematic review; participating in publishing papers; and presenting at various conferences. As the incoming President of the University of Glasgow Ophthalmology Society 2023/24 he plans to expand undergraduate exposure to Ophthalmology. In addition to his academic pursuits, he will captain the University of Glasgow Seconds Golf Team and has won numerous local tennis competitions.

Wei Han Ong[1]*, Joanna Ashby[2], John Ellis[1]

[1]Department of Ophthalmology, Ninewells Hospital, NHS Tayside, Dundee
[2]School of Medicine, University of Glasgow, United Kingdom

Optometrist-to-operation: A proposed redesign of elective cataract services

Objective: A pilot project has been streamlined at NHS Tayside enabling direct-optometrist referral and listing to cataract operation. This study aimed to determine the suitability of this model and target areas for refinement.

Methods: 50 patients were invited to this study conducted from December 2022 to February 2023. A package which included 1) Cataract surgery consent form 2) Cataract surgery information leaflet 3) QR code linked to a supplementary patient information video on cataract surgery made by the local cataract team and 4) Questionnaire was mailed to all patients. Patients were then given the options to phone the local ophthalmology department regarding their decisions: 1) Get listed directly for surgery 2) Scheduled for an appointment 3) Refused cataract surgery. Data were also collected on the day of surgery assessing suitability of cataract surgery, accuracy of diagnosis and intraoperative complication rates.

Results: A total of 46 responses were collected (92% response rate). Of these patients, 89% were listed directly on the cataract operation service (n=41/46); 4% (n=2/46) chose to have a telephone appointment prior to surgery and 7% (n=3/46) decided to opt out of the cataract surgery. The predominant reason for not listing was due to patient opted for private healthcare (n=2/3, 67%). The mean waiting times from referral to surgery is 8 weeks (range). X% of patients had cataract surgery on the day of appointment with a X% rate of diagnostic accuracy. All patients were discharged on the same day of surgery with routine optometrist follow up. No intraoperative complications were reported.

Conclusion: Fulfillment of cataract surgery provision remains a continuous challenge within NHS Scotland. Our study shows that with minimal investment, collaborative working with primary care services, and smart redesign process, local provision and access can be possible.

Audience Take Away Notes

- The demand for cataract surgery in Scotland has steadily increased due to demographic changes, and the impact of COVID-19 has further exacerbated the cataract workflow and waiting list
- A new pathway is being proposed to redesign our local community referral and listing services while retaining a patient-centred service
- Direct optometrist-listing for cataract surgeries (“Optometrist to Operation”) through a streamlined pathway is feasible and benefits patient satisfaction, autonomy, beneficence, and fairness. Optometrists can accurately predict the need for cataract surgery and refer directly to the cataract operation without the need for ophthalmologist involvement, eliminating the need for pre-assessment consultations and streamlining care delivery within the cataract team

Biography

Dr. WeiHan Ong graduated from University of Glasgow MBChB (Hons) in 2022. She started as a Foundation Doctor in Ninewells Hospital NHS Tayisde, UK. She aspires to pursue a career in ophthalmology and has published and presented in national and international conferences.

David Gallagher*, Sarah Powell
Ophthalmology department, Royal Victoria Eye and Ear Hospital, Dublin, Ireland

Review of choroidal osteoma in the royal victoria eye and ear hospital, Dublin

Choroidal osteomas are rare benign ossifying tumours with predominantly a female preponderance. They present as elevated, irregular yellow-white, irregular and well-defined lesions most commonly in a juxtapapillary location. They can result in vision loss in a number of ways: 1) Choroidal Neovascular Membrane (CNVM), 2) Atrophy of the retinal pigment epithelium overlying the osteoma, 3) Serous retinal detachment.

Objective: To provide follow-up information on a series of patients with choroidal osteoma.

Methods: Review of patients with a diagnosis of choroidal osteoma at the Royal Victoria Eye and Ear Hospital (RVEEH), Dublin, Ireland. Information was obtained from hospital records. We examined visual outcomes, development of complications and treatment provided.

Results: We followed 11 patients, all female, mean age 28 (11-51) over a 12-year period. Growth was observed in 2 (18%). The probability of developing CNVM was 27% at 12 years and loss of visual acuity to 6/18 or worse was 36% by 12 years. Photodynamic Therapy (PDT) was utilized in 1 patient while Anti-VEGF treatment was given to 2 patients.

Conclusions: The majority of patients with choroidal osteomas maintain good vision, but do have a significant risk of developing CNVM. When this occurs, the current first line treatment is Anti-VEGF or PDT laser.

Audience Take Away Notes

- Be able to diagnose and propose different treatment modalities for choroidal osteomas
- Know the natural history of the condition
- Know the risk of developing serious co-morbidities as a result of the condition
- Audits can be conducted in other ophthalmology units problem

Biography

Dr. David Gallagher studied a BSc in Optometry in Dublin institute of technology, Dublin, and graduated in 2005. Subsequently, he studied medicine in the Royal College of Surgeons, Dublin, and qualified in 2014. He undertook an MSc in Vision Science in the University of Ulster and graduated in 2017. He is currently working as a Specialist Registrar in ophthalmology at the Royal Victoria Eye and Ear Hospital (RVEEH). He will be undergoing a fellowship in cornea and ocular inflammatory diseases from January 2024 at RVEEH. He has published numerous case reports and has three research articles currently submitted for publication.

Arun Sondkar[1]*, Bina Parma[2]

[1]Trust Grade Doctor, Milton Keynes University Hospital NHS Foundation Trust, Milton Keynes, NHS England, United Kingdom

[2]Consultant Ophthalmologist and Ophthalmic surgeon, Milton Keynes University Hospital NHS Foundation Trust, Milton Keynes, NHS England, United Kingdom

Role of wide field imaging in early detection of asymptomatic coat's disease

Coats's disease, first described by George Coats in 1908, is an idiopathic retinal vascular disease historically associated with poor outcome, with 44% of eyes blind at diagnosis according to a recent population-based study in the United Kingdom. A few of the major hurdles in diagnosing and treating this condition are the subtle signs and symptoms of the early stage of the disease, the incidence of the disease in relatively young patients who are unable to report the symptoms, predominant unilateral presentation of the symptoms, no associated systemic abnormalities and no hereditary and racial predilection of the disease. Detection of the disease in advanced stages has been proven to be associated with poor final visual acuity and enucleation with a less frequent resolution of disease, subretinal fluid and exudation. On the other hand, detection of the disease in Stage 1 has shown to be associated with poor visual outcome (20/200 or worse) in close to 0% of the cases according to a 2000 study.

Advances in retinal imaging in recent years, especially Wide Field imaging, have the potential of overcoming these hurdles by detecting the disease in its early asymptomatic stage. This presents a favorable opportunity to start early treatment, which can lead to a drastic improvement in the overall prognostic and visual acuity outcome of this condition in the general population.

In this presentation, we would like to discuss the case of an asymptomatic 11-year-old male child and the role played by wide-field imagining in the early detection of the condition at a routine review at the optician. We would also like to discuss the potential role and how can advancing Wide field Imaging be used in the treatment and prognosis of Coat's disease in our clinical practice.

Audience Take Away Notes

- The presentation will help the audience with detecting and diagnosing Coat's disease in its early asymptomatic stage
- The presentation will promote increased vigilance in the audience while using Wide Field Imaging to detect the condition in asymptomatic patients
- Promote the audience to have a low threshold for using Wide Field Imaging while investigating patients

Biography

Dr. Arun Sondkar graduated with a MBBS degree from the Maharashtra University of Health Sciences, India in 2021. He is currently working as a Trust Grade doctor for the Milton Keynes University Hospital NHS Foundation Trust and aspires to specialise as a doctor in Ophthalmology.

Cheuk Lam Ho[1]*, Zachariah Koshy, Kaleena Bulan Michael[2]

[1]University Hospital Wishaw, Wishaw, Scotland, United Kingdom,
[2]Day Surgery Unit, University Hospital Ayr, Scotland, United Kingdom

Blood pressure changes in patients undergoing 23G vitrectomy under local anaesthesia.

The effect of elevated blood pressure (BP) during ophthalmic surgery, is associated with significant visually threatening complications. Elevated blood pressure prior to surgery can result in cancellation and postponement of surgeries and further add to the strain of limited staff and resources. Vitreoretinal surgery is technically complex and time consuming compared to cataract surgery and is often carried out under local anaesthesia. Blood pressure changes in patients undergoing vitreoretinal surgery under local anaesthesia is still poorly studied. This study aims to investigate blood pressure changes during a patient's admission for 23G vitrectomy under local anaesthesia.

Observational prospective study. 117 consecutive patients are included. Blood pressure measurements were taken on the day of admission at various points; on arrival at the day surgery unit, preoperative, intraoperative and 30 minutes postoperative stages. Demographic and co-morbidities of patients were collected from patient electronic record. Changes in blood pressure is correlated to various patient factors such as hypertension, diabetes, previous cardiovascular and cerebrovascular events, chronic kidney disease, smokers' status and anxiety. Correlation to surgical factors such as surgical duration and number of staff duration the operation is also investigated using statistical methods.

2/117 patients were cancelled due to SBP exceeding 200mmHg at the preoperative stage.

18% of patients had SBP of ≥160mmHg on arrival. 27% experienced ≥ 20mmHg of SBP increase at preoperative, where 34% and 20% had SBP of ≥ 160mmHg and ≥180mmHg respectively. Intraoperatively, 28% and 13% experienced SBP of ≥160mmHg and ≥180mmHg respectively. Postoperatively, 24% and 5% sustained SBP of ≥ 160mmHg and ≥180mmHg respectively. The changes in BP are not correlated with patient comorbidities. However, it did demonstrate change according to the surgical stages; mean value of +11mmHg from arrival to preoperative, -5mmHg from preoperative to intraoperative and a further -5mmHg from intraoperative to postoperative.

Our study demonstrates a pattern for patient's blood pressure during their admission for vitrectomy. While it is reassuring to note that most patients experience the expected change of blood pressure within the safe levels, those with very high recorded BP at various points are not only exposed to the risk of developing systemic events, but also serious surgical complications such as heavy intraoperative bleeding and choroidal haemorrhage.

Audience Take Away Notes

- Explain how the audience will be able to use what they learn?
- How will this help the audience in their job?
- Is this research that other faculty could use to expand their research or teaching?
- Does this provide a practical solution to a problem that could simplify or make a designer's job more efficient?

- Will it improve the accuracy of a design, or provide new information to assist in a design problem?

List all other benefits.

Intra-operative rise in blood pressure is associated with ocular complications, resulting in cancellation or postponement of surgeries, leading to a waste of theatre availability, instruments and staff resources. While there are few studies focussed on the effect of blood pressure in cataract surgery, blood pressure changes in patient undergoing vitreoretinal surgeries remain poorly studied.

As patients with extremely high blood pressures are more at risk at severe intra-operative or post-operative complications, it is key to ensure blood pressures achieve adequate blood pressure control.

By understanding the general trend of patient's blood pressure changes, it acts as the foundation for formulating actions to optimise patient's blood pressure before, during and after the procedure.

Biography

Dr Cheuk Lam (Vivian) Ho studied University of Glasgow and graduated as MBChB in 2023 after obtaining a BSc Medicinal Chemistry (Hons) degree in University of Edinburgh in 2018. She developed interest in ophthalmology in medical school and took an active role in quality improvement project supervised by Dr Michael in University Hospital Ayr. Vivian also went to Hong Kong Eye Hospital for shadowing experience supervised by Dr Chan and gained an appreciation in the difference of practice in ophthalmology between United Kingdom and Hong Kong. Vivian is currently a foundation year doctor in University Hospital Wishaw and is looking to pursue a career in ophthalmology.

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Obstructive sleep apnoea in Idiopathic Intracranial hypertension: Systematic review and meta-analysis

Aim: To determine the association between obstructive sleep apnea (OSA) and idiopathic intracranial hypertension (IIH).

Methods: A systematic review and meta-analysis were performed per the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. A search of electronic information through MEDLINE, EMBASE, and Cochrane Library was conducted to identify all studies reporting the association between OSA and IIH. The primary outcome was the prevalence of OSA. A random effects model was used for the analysis.

Results: Of 1467 studies identified, six studies enrolling 241 patients were included. The pooled estimate of the proportion of OSA in patients with IIH was 0.46 (95% CI = 0.40 – 0.52, P < 0.05), suggesting a higher prevalence of OSA in the studied population. The heterogeneity among the studies was moderate (I2 = 66%, P = 0.01).

Conclusions: The authors identified a 46% prevalence of OSA in patients with IIH. Neuro-ophthalmologists should rule out OSA in patients with newly diagnosed IIH.

Keywords: Obstructive Sleep Apnoea; Idiopathic Intracranial Hypertension; Prevalence.

Audience Take Away Notes

- Few studies have assessed the association between OSA and IIH. This is the first systematic review and meta-analysis to determine the association between OSA and IIH.
- OSA has been associated with various ophthalmic conditions, such as

  Diabetic retinopathy

  Central serous retinopathy (CSR)

  Non-arteritic anterior ischemic optic neuropathy (NAION)
- Although the included evidence is limited to six studies assessing the association between OSA and IIH, the pooled results suggest that there is a 46% prevalence of OSA among the IIH population. Neuro-ophthalmologists should rule out OSA in newly diagnosed patients with IIH.

Biography

Dr. Alkandari obtained his Bachelor Degree in Doctor of Medicine from the Jordan University of Science and Technology in 2021. He then worked as a junior doctor in Kuwait and focused on research in the field of ophthalmology.

Mohammad Karam[1,2], Abdulmalik Alsaif[3], Alhanoof Almekhlef[2], Khaldon Abbas[4], Khaled Alkandari[2], Dalal Al Roumi[2]*, Abdulrahman Alotaibi[1,2], Siddharth Nath[1], Samir Jabbour[1,5,6]

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Eye-bank precut versus surgeon-cut tissue graft for Descemet Stripping Automated Endothelial Keratoplasty (DSAEK): A systematic review and meta-analysis

Objective: To compare the outcomes of eye-bank precut versus surgeon-cut tissue graft for patients undergoing Descemet Stripping Automated Endothelial Keratoplasty (DSAEK).

Methods: A systematic review and meta-analysis were performed as per the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) Guidelines. A search of electronic information was conducted to identify all comparative studies of eye-bank precut versus surgeon-cut tissue graft for DSAEK. Endothelial cell loss (cells/mm^2), rebubbling rate and best corrected visual acuity (BCVA) were primary outcome measures. Secondary outcome measures included postoperative corneal thickness (μm), complications and cost analysis. Fixed effects modelling was used for the analysis.

Results: Six studies enrolling 548 grafts patients for DSAEK were identified. Although endothelial cell loss was not significantly different between both groups at 6 months postoperatively (Mean Difference [MD] = -0.29, P = 0.97), there was a significant difference in endothelial cell loss at 1 year (MD = -4.53, P = 0.02) favouring the eye-bank group. Similarly, there was a statistically significant difference in the post-operative BCVA (MD = -0.01, P = 0.007) favouring the eye-bank precut group. There was no significant difference between eye-bank precut and surgeon-cut graft groups in terms of rebubbling rate (Odds Ratio [OR] = 1.70, P = 0.25) and graft failure rate (OR = 1.04, P = 0.97). Similarly, no statistically significant difference was noted regarding postoperative corneal thickness and complications, including increased intraocular pressure and the development of Irvine-Gass Syndrome. Cost analysis demonstrated that lower surgical expenses for the surgeon-cut tissue grafts.

Conclusions: Eye-bank is an excellent alternative to surgeon-cut tissue graft for patients undergoing Dsaek as it yields a similar rebubbling rate and improved endothelial cell loss.

Audience take away

- Several comparative studies have assessed the outcomes of EBP and SC tissue graft for patients undergoing DSAEK. This is the first systematic review and meta-analysis in the literature to evaluate which preparation is more effective
- There was no statistically significant difference was noted regarding postoperative corneal thickness and complications between the two methods
- Eye-bank is an alternative to surgeon-cut tissue graft for patients undergoing DSAEK

Biography

Dr. Dalal Al Roumi obtained her Medical Degree (M.D) from faculty of medicine, Kuwait university in 2021. Then worked as junior doctor in Kuwait ophthalmology department Jaber al-Ahmad hospital.

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Vanishing bone disease: A rare case report of a high flow periorbital venous malformation

Gorham Stout Disease, or Vanishing bone disease, is a rare entity characterized by progressive resorption of bone and replacement of osseous matrix by proliferative non-neoplastic vascular or lymphatic tissue. The cause of the disease is of unknown etiology, with multiple theories being proposed so far.

Although case reports are documented in the literature, only occasional case reports describe orbital involvement. Clinical presentation of Gorham-Stout Disease can vary depending on the primary site of origin, but most patients describe an insidious onset of painless, bony or overlying soft tissue deformity. In the case of orbital bony involvement, it can present with proptosis or enophthalmos, pulsation of the eyelids or diplopia. The Authors present a 35-year-old female with an 18-month history of pulsating right eye with intermittent chronic cervicogenic headaches. Her examination revealed mild proptosis, fasciculations of the right orbital muscles. Imaging revealed an abnormal lesion that extended across the floor of the right skull base. These findings led to her diagnosis of high-flow periorbital venous malformation with subsequent loss of bone in the overlying area, consistent with Gorham Stout Disease.

The authors highlight several difficulties associated with diagnosing Vanishing Bone Disease. It is a self-limiting disease with unpredictable rates of bone destruction, which has resulted in various approaches in management. Current treatment options explore the use of pharmacological, radiotherapy and surgical interventions, although at present there are no current treatment guidelines. Surgery is often considered in the presence of debilitating symptoms, with the removal of affected bone expected to alleviate symptoms.

Audience Take Away Notes

- Highlights to audience to consider Vanishing Bone Disease as a diagnosis of exclusion in the absence of infection, trauma and malignancy.
- Difficulties of diagnosing Vanishing Bone Disease is highlighted with proposed methods to overcome such difficulties.
- Factors which lead to poorer outcomes in patients who have orbital involvement is discussed.
- There are currently no treatment guidelines in place for managing Vanishing Bone Disease therefore, clinical awareness of the disease plays an important role in identifying the disease and deciding an appropriate treatment plan.

Biography

Dr. Sivanthi Kanagasundaram studied Neuroscience at Queen May University of London and graduated with First Class Honors in 2018. Following her graduation, she went on to study Medicine at Poznan University of Medical Sciences and graduated in 2022. She is currently working as a Foundation Trainee Doctor in East Sussex Healthcare. She is profoundly interested in Research especially having a background in Neuroscience and is keen in a career in Ophthalmology.

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Holistic treatment of glaucoma: Glaucoma patient support group

Glaucoma, the leading cause of irreversible blindness in the world, affects over half a million people in the UK. 10% of all the patients who go blind in the UK, do so due to Glaucoma. Given the enormous impact of the condition on the physical health and the Quality of Life of the patient, the mental impact of the condition is usually underestimated and overlooked. Research studies focused on this have proven that patients with Glaucoma are statistically more prone to experience poorer Quality of Life and are more prone to depression with a 10% -12% prevalence of depressive symptomatology in subjects with Glaucoma.

Within its constitution, WHO defines health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. As clinicians, we aim to not only treat the condition but the patient. A few of the major hurdles during a clinical consultation with Glaucoma patients which may prevent us from delivering this care include the time constriction for each consultation, prioritization of the explanation and discussion of the best individual treatment option, and the initial shock of the diagnosis which can make the patient unresponsive to any attempts for a holistic consultation.

To address this problem, the Glaucoma team at Milton Keynes University Hospital have been conducting Patient Support Group sessions to support and educate patients diagnosed with Glaucoma. These meetings were unfunded, and the team set it up and performed it in their own time. The team audited the understanding and outlook of the patients before and after the session and the analyzed data showed a significant improvement in the parameters assessed. We believe such meetings should be routinely held in all Glaucoma units given the patient benefits, improved compliance and patient confidence, and contribution to reduced disease progression.

In this presentation, we would like to present our approach and data to encourage other clinicians/ Trusts to set up such meetings formally. We would like to discuss the benefits, how to set it up and tips for successfully conducting the meetings. We believe that this holistic approach to treating glaucoma will benefit both patients and the clinical staff, and we hope we can encourage hospitals to adopt these meetings in the future.

Audience Take Away Notes

- The presentation will help the audience deliver a complete holistic treatment of Glaucoma and improve patient confidence and compliance with the treatment
- The presentation will equip the audience with the knowledge and tips to successfully conduct such meetings
- Encourage the doctors/hospital representatives in the audience to formally arrange such meetings in Glaucoma units

Biography

Dr. Arun Sondkar graduated with a MBBS degree from the Maharashtra University of Health Sciences, India in 2021. He is currently working as a Trust Grade doctor for the Milton Keynes University Hospital NHS Foundation Trust and aspires to specialise as a doctor in Ophthalmology.

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Ocular manifestations of children with atopic dermatitis in Saudi Arabia

Aim: Atopic Dermatitis (AD) is known to cause ophthalmic abnormalities in patients, but there is no information about the incidence of these abnormalities in children with AD in Saudi Arabia. Therefore, this study examined the incidence of ocular abnormalities in children with AD in Saudi Arabia and its association with the severity of AD.

Methods: This is a cross-sectional study on 50 children with AD who were between 5 and 16 years of age. The severity of AD was evaluated using the SCORing Atopic Dermatitis (SCORAD) index. All the children underwent slit lamp exams, visual acuity assessment, intraocular pressure measurement, and corneal topography. The children were considered to have an ophthalmic abnormality if one or more of the following signs were present: glaucoma; keratoconus suspicion; in addition to lid, conjunctival, corneal, lenticular, or retinal abnormalities.

Results: Based on the SCORAD severity index, 14% of children had mild AD (7/50), 38% had moderate AD (19/50), and nearly half had severe AD. More than half the children exhibited facial involvement, and half had peri-orbital signs. The mean SCORAD index was 35.75. The mean age was 10.48 ± 3.6 years, and the cohort showed a slight male predominance (54% males). Both eyes of the 50 children in the cohort were studied. Based on the ocular examinations, 92% of the patients showed ocular abnormalities: lid abnormalities (27/50) followed by keratitis (22/50). Four patients had moderate risk for keratoconus in one eye and eight patients were suspected to have keratoconus. However, SCORAD severity index was not associated with age, sex, or the number or presence of ophthalmic abnormalities.

Conclusion: This is the first study in Saudi Arabia to evaluate the prevalence of ocular manifestations in children with AD. The results indicate that the majority of children with AD had ocular abnormalities that mainly included lid abnormalities. Based on these findings, larger scale studies are needed to affirm whether regular screening for ophthalmic abnormalities would be beneficial for children with AD in terms of early intervention and prevention of sight-threatening complications.

Keywords: Atopic Dermatitis, Children, Eczema, Keratoconus, Ocular Disease, Ophthalmic Abnormalities, Prevalence, SCORAD.

Audience Take Away Notes

- The audience will learn about the presence of certain ophthalmic conditions among children with atopic dermatitis
- The audience will learn about the higher incidence of ophthalmic conditions among atopic dermatitis patients
- The audience will use what they'll learn by carefully screening atopic dermatitis children for ophthalmic manifestations
- The audience will utilize what they'll learn by becoming more aware when examining atopic dermatitis patients as some ophthalmic conditions occur in atopic dermatitis patients

- This research can be conducted on a larger number of subjects to confirm whether regular screening for ophthalmic abnormalities would be beneficial among atopic dermatitis patients

Biography

Miss. Tala Roblah is a senior medical student at King Abdulaziz University, Jeddah, Saudi Arabia. She is strongly interested in ophthalmology, and she aspires to become an ophthalmologist one day. She has two other published ophthalmology researches. Moreover, she presented a research as a poster in a conference in 2022 (Red Sea Ophthalmology Symposium Jeddah).

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Intraocular pilocytic astrocytoma- a histopathological surprise

Purpose: Intraocular masses are often difficult to diagnose in setting of retinal detachment and vitreous hemorrhage. Imaging is often characteristic but at times a diagnostic dilemma is there. One can think of enucleation for diagnostic purpose if the visual prognosis is poor and malignancy cannot be ruled out. One such enucleation in a 25-year-old led to a surprising finding of intraocular pilocytic astrocytoma.

Methods: A 25-year-old male presented to a tertiary care center with complaint of diminution of vision in the left eye for six months. On examination his right eye visual acuity was 6/6 but the left eye had perception of light vision and inaccurate projection of the rays in two quadrants. The anterior segment was normal in the right eye but the left eye had shallow anterior chamber, posterior synechiae and cataractous lens. Right eye fundus had healed choroiditis patches. Left eye fundus could not be visualized due to vitreous hemorrhage. Ultrasound revealed a mass lesion with retinal detachment. The mass was not typical of choroidal melanoma with no acoustic hollowness. A contrast enhanced MRI was ordered and a mass lesion was seen in the left eye, however it was not a typical mushroom shaped mass. PET-CT did not reveal any metastasis. The visualization was not adequate enough for diagnostic biopsy. Given the poor visual prognosis an enucleation was planned.

Results: Histopathology revealed an astrocytic neoplasm with piloid processes, occasional Rosenthal fibres and eosinophilic granular bodies suggestive of pilocytic astrocytoma. In immunohistochemistry it was GFAP (Glial Fibrillary Acidic Protein) and VIM (Vimentin) positive.

Conclusions: This is probably first reported case of intraocular pilocytic astrocytoma.

Audience Take Away Notes

- Intraocular malignancies often do not have textbook picture on imaging and ultrasound
- This particular patient was in mid-twenties and no specific diagnosis could be made on imaging
- There is dilemma whether to go ahead with biopsy to establish diagnosis. Biopsy might increase risk of tumor spread. The visibility for biopsy in this case was an issue
- One can consider enucleation for diagnostic purposes also if malignancy cannot be ruled out and diagnosis cannot be made, after informed consent
- Pathologist have a very important role in ocular oncology. Intraocular Pilocytic astrocytoma has never been reported previously

Biography

Dr. Abhijeet Beniwal did his MBBS from prestigious AIIMS New Delhi in 2015 and MD ophthalmology from the same institute in 2021. He is currently senior resident in Dr. Rajendra Prasad Centre for Ophthalmic Sciences AIIMS New Delhi. He has published over 15 articles and book chapters.

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Post operative central corneal thickness changes in phacoemulsification with pciol

Blindness is the major concern globally which leads to poor quality of life and various other problems. Cataract surgery is the commonest type of eye surgery performed throughout the world. Phacoemulsification with an intraocular lens is the most commonly performed surgery used to treat the cataract and restore vision. The present study was undertaken to evaluate the post operative central corneal thickness changes after phacoemulsification with PCIOL in different grades of cataract using anterior segment OCT. The present cross-sectional observational study was conducted in the Kapoor Eye Care Jammu w.e.f November, 2020 to December, 2022. A total number of 150 patients were categorized into 3 categories according to WHO classification, i.e. Group A NS1+/NS2+/PSC, Group B NS 3+ and Group C NS4+ and evaluated postoperatively.

The mean CCT as measured one day before the surgery was found to be 539.84±5.83 microns, in Group-B mean CCT was found to be 542.86±7.67 microns, and in Group-C the mean was found to be 542.52±6.22 microns.

The highest average increase of 7.47% and 40.32 microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the pre-operative level by day 7 in Group A. The highest average increase of 12.85% and 69.8 microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the pre-operative level by day 14 in Group B. The highest average increase of 18.03% and 97.84 microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the approximate pre-operative level by day 28 in Group C. The Effective Phacotime (EPT) was found to be :-

- EPT of Group A = 171.12±42.39 seconds
- EPT of Group B = 208±44.84 seconds
- EPT of Group C = 314.32±48.97 seconds

Keywords: Blindness, Cataract, Postoperative outcomes, CCT and Vision loss.

Introduction: Visual impairments and blindness is the major concern globally which leads to poor quality of life and various other problems. It was observed that the cataract is the most common cause of blindness and the blindness due to cataract is about 15% among all the eye diseases in developed countries and 50% in developing countries. In India, 50% of the cases cause of blindness or severe visual impairment is cataract.

Early cataract and refractory errors are treated with lenses/glasses and Advanced cataract requires surgical interventions. Cataract surgery is the commonest type of eye surgery performed throughout the world. Annually about 5 million cataract surgeries are performed in India. In cataract surgery the clouded lens is replaced with a clear and artificial lens and vision is restored.

Cataract surgery is a safe and cost-effective treatment. Phacoemulsification with an intraocular lens is the most commonly performed surgery used to treat the cataract and restore vision. The affected lens is emulsified with ultrasonic waves by making a 2-3mm small incision and replaced with artificial lens.6

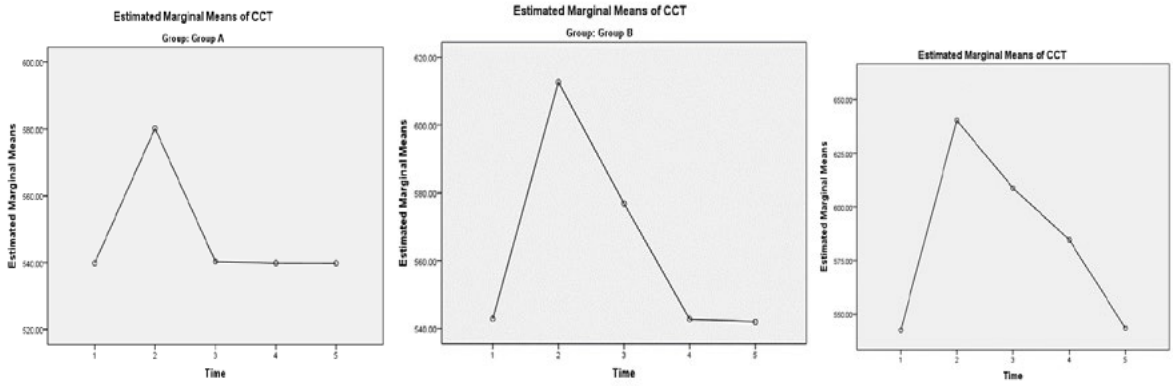
Various studies reported that damage to endothelial cells, alteration in corneal thickness and corneal endothelial cell density during cataract surgery, resulting in prolonged corneal edema after phacoemulsification and sometimes corneal decompensation may often occur associated with decreased vision and may lead to corneal transplantation.

Thus, the present study was undertaken to evaluate the post operative central corneal thickness changes after phacoemulsification with PCIOL in different grades of cataract using anterior segment OCT.

Aims and Objectives: To study postoperative central corneal thickness changes following phacoemulsification in soft cataracts. (NS1+/NS2+/ Posterior Subcapsular Cataract). To study postoperative central corneal thickness changes following phacoemulsification in NS3+ Cataracts.

Table 1. Mean CCT Table 1. depicted that there was a statistically significant difference in CCT measured at various time intervals (P<0.001) group A, group B and group C.

		Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
Pre-op CCT	Group A	539.8400	5.83571	538.1815	541.4985	530.00	554.00
	Group B	542.8600	7.67719	540.6782	545.0418	531.00	584.00
	Group C	542.5200	6.22779	540.7501	544.2899	530.00	553.00
	Total	541.7400	6.72113	540.6556	542.8244	530.00	584.00
Day 1 Post-op CCT	Group A	580.1600	5.92249	578.4768	581.8432	570.00	594.00
	Group B	612.6600	8.25267	610.3146	615.0054	573.00	637.00
	Group C	640.3400	14.05762	636.3449	644.3351	576.00	653.00
	Total	611.0533	26.60595	606.7607	615.3460	570.00	653.00
Day 7 Post-op CCT	Group A	540.3400	5.86449	538.6733	542.0067	530.00	554.00
	Group B	576.8600	8.74120	574.3758	579.3442	532.00	596.00
	Group C	608.8000	19.56256	603.2404	614.3596	536.00	630.00
	Total	575.3333	30.81938	570.3609	580.3058	530.00	630.00
Day 14 Post-op CCT	Group A	539.8800	5.84368	538.2192	541.5408	530.00	554.00
	Group B	542.7600	5.32825	541.2457	544.2743	531.00	557.00
	Group C	584.6400	17.76348	579.5917	589.6883	536.00	622.00
	Total	555.7600	23.35707	551.9916	559.5284	530.00	622.00
Day 28 Post-op CCT	Group A	539.8400	5.83571	538.1815	541.4985	530.00	554.00
	Group B	541.9800	4.99996	540.5590	543.4010	531.00	552.00
	Group C	543.4400	5.88377	541.7679	545.1121	531.00	553.00
	Total	541.7533	5.74507	540.8264	542.6802	530.00	554.00



Time: 1=Pre-operative, 2=24 hours, 3=Day 7, 4=Day 14, 5=Day 28

Figure 1. Multiple comparison of Estimated Marginal Means of CCT.

Phaco Power Parameters: Group A

- ower of PHACO1 = 58.40±2.93
- Power of PHACO2 = 59.40±1.92
- Average Phaco Power (P3) = 58.9

Group B

- Power of PHACO1 = 70.30±2.92
- Power of PHACO2 = 62.90±3.51
- Average Phaco Power (P3) = 66.6

Group C

- Power of PHACO1 = 83.40±2.35
- Power of PHACO2 = 72.30±3.38
- Average Phaco Power (P3) = 77.8

Effective Phaco Time (EPT)

- EPT of Group A = 171.12±42.39 seconds
- EPT of Group B = 208±44.84 seconds
- EPT of Group C = 314.32±48.97 seconds

FLOW RATE OF PHACO1 : 25ML/MINUTE

VACUUM OF PHACO1 : 60MMHG

FLOW RATE OF PHACO2 : 40ML/MINUTE

VACUUM OF PHACO2 : 450 MMHG.

Discussion: In our cross-sectional observational study the post operative central corneal thickness changes in phacoemulsification with PCIOL in different grades of cataract using anterior segment OCT were evaluated.

The study subjects ranged between 44-88 years, with a mean age of 64.93±9.87 years. In Group A, the average age was 67±9.12 years, in Group B, the average age was 63.6±8.71 years and in Group C, the average age was 64.2±11.41 years. There were 24 males and 26 females in Group A, 23 males and 27 females in Group B, and 29 males and 21 females in Group C. The findings of present study are correlated with the

study conducted by Patil S et al., (2014) involved 75 patients from age group 40-70 years. In another study conducted by Louis L et al., (2014) found that the mean age of the study participants was 72.09 years ± 8.87 (group 1) and 65.27 years ± 14.42 (group 2).

The present study showed that there was a statistically significant difference in CCT measured at various time intervals (P<0.001) among Group-A, Group-B and Group-C. The mean CCT as measured one day before the surgery was found to be 539.84±5.83 microns, ranged between 530 microns to 554 microns in Group- A, in Group-B mean CCT was found to be 542.86±7.67 microns, ranged between 531 microns to 584 microns and in Group-C the mean was found to be 542.52±6.22 microns, ranged between 530 microns to 553 microns. The highest average increase of 7.47% and 40.32 microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the pre-operative level by day 7 in Group A. In our study it was observed that the highest average increase of 12.85% and 69.8microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the pre-operative level by day 14 in Group B. In our study it was observed that the highest average increase of 18.03% and 97.84microns was observed at 24 hours after surgery which showed a gradual and constant fall with values reaching the approximate pre-operative level by day 28 in Group C. At Day 14 after surgery, Group B patients had a decline in CCT which stood at 542.76±5.32 microns. At day 14, the CCT values became similar to pre-operative values. At Day 28, CCT was recorded to be 541.98±4.99 microns. In Group-C at Day 7, this increase had come down, with an average value standing at 608.8±19.56 microns, indicating a rise of 12.21% over pre-operative value. This increase was statistically significant (P<0.001). At Day 14 after surgery, Group C patients had a decline in CCT which stood at 584.64±17.76 microns. At Day 28, CCT was recorded to be 543.44±5.88 microns. These findings are correlated with the study conducted by Hamza M et al., (2011) found that CCT before Surgery was 542.81±34.85. Day1 After Surgery it came to 595.27±43.78±. Day7 After Surgery 565.82±38.30. Day 28 After Surgery It was 544.2±28.95µ (nearly Reaching Preoperative values).

In another study carried out by Adenekan A et al., (2012) reported that the CCT before Surgery was 520.6±20.3µ. Day 1 Postoperative 597.9±30.4µ. 2weeks Postoperative 555.2±24.7µ 4 weeks Postoperative 533.7±19.4µ. 8 weeks Postoperative 525.1±19.5µ. 12 weeks Postoperative 525.1±19.7µ. There was trasnsient increase in Corneal Thickness Following Cataract Surgery with subsequent progressive decrease in CCT as Postoperative Day progresses till 12th week.

In our study the in Group-A power of PHACO1 was 58.40±2.93, Power of PHACO2 was 59.40±1.92 and P3 was 58.9, in Group-B power of PHACO1 was 70.30±2.92, Power of PHACO2 was 62.90±3.51and P3 was 66.6 and in Group-C power of PHACO1 was 83.40±2.35, Power of PHACO2 was 72.30±3.38 and P3 was 77.8. The effective phaco time of Group-A was 171.12±42.39 seconds, effective phaco time of Group-B was 208±44.84 seconds and effective phaco time of Group-C was 314.32±48.97 seconds; which was significantly increased in Group-C as compared to Group-A & B. The results are correlated with the study conducted by Patil S et al., (2014) reported that the mean Effective Phaco Time (EPT) used in Nuclear cataract grade 1 was 10s. Similarly, in nuclear cataract grade 2 & nuclear cataract grade 3 & mature cataract, average phaco time used was 14.3s, 23s and 25.75s. The EPT used for posterior subcapsular cataract was the least 9.1s.9

Conclusion: The present study concluded that in all the groups there was definite increase in CCT in the Postoperative Period indicating the operative endothelial damage. In all the Groups Maximum Postoperative Increase in CCT was recorded 24 hours after surgery. The Increase in Postoperative CCT as well as time taken to return to preoperative values was more in Hard Cataracts than Soft Cataracts. In harder cataracts there is usage of higher Phacoenergy which generates more heat & more of turbulence resulting in damage to endothelial cells which could possibly explain more of sustained rise in CCT. In Softer cataracts there is usage of less Phacoenergy which generates lesser heat & less amount of

turbulence which reduces damage to endothelial cells. Therefore, the CCT returns to preoperative value faster than harder cataracts. Effective Phacotime (EPT) = (Phacotime X Average Phacopower) was more in case of harder cataracts than the soft cataracts.

Farideh Doroodgar

Adjunct Professor, Translational Ophthalmology Research Center, Tehran University of Medical Sciences, Tehran, Iran;
Co-founder and Consultant, Negah Eye Hospital Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran
Anterior Segment Subspecialist, Surgeon, and Scientist

Ocular surface and keratoconus; a bench to bedside study

The association between innate and adaptive immune systems with ocular surface inflammation and dry eye has been approved. Similarly, the most notable changes observed in tear fluid of KC patients are the significantly higher levels of IL-1β and IL-6, and tumor necrosis factor (TNF)-α, which are the primary regulators of inflammation and apoptosis. This will trigger the release of various inflammatory molecules, including other cytokines and chemokines, and may play a role in the molecular pathological mechanisms of KC. These include the induction of oxidative stress and inflammation, along with ECM degradation. Alterations in some of these immuno-inflammatory parameters and proteins have been correlated with disease severity, allergy, eye rubbing, keratometry changes, and pachymetry measurements.

Biography

Prof. Farideh Doroodgar, MD is one of the Influential Iranian Ophthalmology Women with specialties in the cornea, anterior segment, and refractive surgery. Her 20 years of experience in research, teaching, and practice on this subject, as well as her very extensive and successful background in research for which she has published dozens of renowned papers and books could very much qualify her as the author. Also, the comprehensive knowledge of her and her team on this subject is a guarantee of the credibility of the book in question.

Dr Hiranmoyee Das
Nazareth Hospital, Shillong, India

Causes of papilledema in paediatric age group: A11-year hospital-based study in North-eastern India

Purpose: Eye is the window to the brain & papilledema is the most ominous neuro ophthalmic sign. Therefore, an attempt was made to study the various causes of papilledema.

Methods: 170 patients having papilledema from Jan 2011 to Dec 2021 were studied prospectively & followed up to 3 months.

Results: Cases were divided into 3 age groups: (0-3) years, (4-12) years & (13-18) years. 43.52% of cases were infection, 32.94% space occupying lesion (SOL), 10.59% otogenic intracranial complication, 8.23% pseudotumor cerebri & 4.70% hypertension. Among the infective group 56.76% tuberculosis,27.02% viral, 12.16% bacterial&4.05% of fungal etiology. Among SOL 30.35% tumors, 30.35% tuberculoma, 17.85% intracranial hematoma, 10.71% brain abscess &10.71% neurocysticercosis. While analyzing the incidence of various etiology in different age group it was seen that in 0-3yrs commonest etiology of papilledema was infection and in 4-12 yrs. Commonest etiology was space occupying lesion. In 13 -18yrs the incidence of various etiology was almost same. Earliest regression of papilledema was seen at the end of one month & it was maximum in cases with infective origin. 26 cases died during the study period due to disease. The mortality rate was highest in cases with tumors. The mortality rate in the infective cases was relatively less.

Conclusion: Important findings were

- Tuberculosis as the most common cause of papilledema either in the form of infection or space occupying lesion.
- Middle ear infection due high-altitude location of North east India.
- Neurocysticercosis as study population is tribal dominated.

This study will guild us in early management of papilledema cases in underdeveloped area.

Audience Take Away Notes

- At the end of this presentation the audience will learn the common causes papilledema in paediatric age group in an evidence-based manner.
- As papilledema is the most ominous neuro-ophthalmic sign, the diagnosis of papilledema carries with it a heavy responsibility. Knowledge of common causes of papilledema in a certain geographical area will guide the audience in early diagnosis & cost-effective management.
- This research shows while ascertain etiology of papilledema in certain under developed area special importance should be given to the geographical location of the area & life style of the study population.

Biography

Dr. Hiranmoyee Das did her medical schooling & post-graduation in ophthalmology from Gauhati Medical College. She passed MS Ophthalmology in 2007. Since then, she is working in a 420 bedded multi-specialty charitable hospital in North eastern part of India as a lone ophthalmologist.

Aksenova L.E.[1,2]*, Aksenov K.D. [1,2], Kozina E.V. [1], Myasnikova V.V. [1]

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Automated system for analysis of oct retina images development and testing

Neovascular age-related macular degeneration (n-AMD) is a form of AMD that is responsible for most cases of severe vision loss. Anti-VEGF therapy, which is the gold standard for the treatment of this pathology, is accompanied by OCT monitoring. However, this process is hampered by the lack of methods for accurately quantifying OCT images. The aim of this study is to develop and evaluate the accuracy of the automated calculation of the quantitative characteristics of PED, SRF and IRF biomarkers. The study material included OCT B-scans of patients with n-AMD and pigment epithelial detachment who underwent anti-VEGF therapy from 2014 to 2021. OCT B-scans obtained from a CirrusHD-OCT 5000 Carl Zeiss Meditech device. The neural network for OCT image segmentation was trained on a dataset including 251 and 385 images from Experiments 1 and 2, respectively. The images were annotated by experts highlighting PED, SRF and IRF biomarkers using Labelme software. Data preprocessing included image resizing, normalization, and conversion to grayscale format. The data set was divided into training and validation. To segment retinal structures, the UNET architecture with the Adam optimizer and the Categorical Cross-Entropy loss function was used. The algorithm for calculating quantitative biomarker characteristics was based on edge detection using the method of Satoshi Suzuki and Keiichi A be. Testing data set for access the efficiency of system that included algorithms for segmentation and calculation of quantitative characteristics of biomarkers, included 241 images for which the length and height of the PED were measured by a physician using built-in software. Also, the image data were marked with respect to 3 anatomical treatment outcomes: attached PED; non-attached PED; PED tear. The developed method for processing OCT images made it possible to segment the biomarkers PED, SRF and IRF with high accuracy. The segmentation model shows the best results for PED (0.9), but also shows good accuracy for SRF and IRF (0.72 and 0.69) with increasing number of training data in experiment 2. Automated algorithm for calculating quantitative characteristics of biomarkers on the test set data from patients with n-AMD showed no statistically significant difference when comparing measurements with a physician. The study also showed that the attached and non-attached PED groups were statistically significantly different regarding the height, extent and area of the PED. In addition, IRF area may also be a predictor of PED tear, since its values are statistically significantly different for groups 2 and 3. Thus, automated segmentation and calculation of biomarkers can achieve performance comparable to an ophthalmologist in assessing the quantitative characteristics of biomarkers in cases of neovascular macular degeneration.

Audience Take Away Notes

- Explain how the audience will be able to use what they learn?
- How will this help the audience in their job?
- Is this research that other faculty could use to expand their research or teaching?
- Does this provide a practical solution to a problem that could simplify or make a designer's job more efficient?

- Will it improve the accuracy of a design, or provide new information to assist in a design problem?

List all other benefits.

Transferring routine work from a doctor to a secondary medical office. Reduce research time by up to 50%. Help in interpreting OCT data, increasing confidence in diagnosis, adding second opinion. Additional data analysis tools for morphometry. Reducing the number of repeat studies.

Biography

Aksenova Lyubov is currently a junior researcher at the State Budget-Funded Health Care Institution of the City of Moscow “Research and Practical Clinical Center for Diagnostics and Telemedicine Technologies of the Moscow Health Care Department, as well as an engineer at the Federal State Institution “National Medical Research Center “MNTK” Eye Microsurgery " them. acad. S.N. Fedorov" of the Ministry of Health of the Russian Federation. Lyubov received a Master of Science degree from St. Petersburg State University. Main interests are medical technology (med tech), as well as research in the field of diagnostic automation using artificial intelligence (AI) technologies.

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Retinitis pigmentosa: Novel therapeutic targets and drug development

Retinitis Pigmentosa (RP) is a heterogeneous group of hereditary diseases characterized by progressive degeneration of retinal photoreceptors leading to progressive visual decline. It is the most common type of inherited retinal dystrophy and has a high burden on both patients and society. This condition causes gradual loss of vision, with its typical manifestations including nyctalopia, concentric visual field loss, and ultimately bilateral central vision loss. It is one of the leading causes of visual disability and blindness in people under 60 years old and affects over 1.5 million people worldwide. There is currently no curative treatment for people with RP, and only a small group of patients with confirmed RPE65 mutations are eligible to receive the only gene therapy on the market: voretigene neparvovec. The current therapeutic armamentarium is limited to retinoids, vitamin A supplements, protection from sunlight, visual aids, and medical and surgical interventions to treat ophthalmic comorbidities, which only aim to slow down the progression of the disease. Considering such a limited therapeutic landscape, there is an urgent need for developing new and individualized therapeutic modalities targeting retinal degeneration. Although the heterogeneity of gene mutations involved in RP makes its target treatment development difficult, recent fundamental studies showed promising progress in elucidation of the photoreceptor degeneration mechanism. The discovery of novel molecule therapeutics that can selectively target specific receptors or specific pathways will serve as a solid foundation for advanced drug development. This article is a review of recent progress in novel treatment of RP focusing on preclinical stage fundamental research on molecular targets, which will serve as a starting point for advanced drug development. We will review the alterations in the molecular pathways involved in the development of RP, mainly those regarding Endoplasmic Reticulum (ER) stress and apoptotic pathways, maintenance of the redox balance, and genomic stability. We will then discuss the therapeutic approaches under development, such as gene and cell therapy, as well as the recent literature identifying novel potential drug targets for RP.

Audience Take Away Notes

- An understanding of retinitis pigmentosa (RP), and a brief overview of its clinical aspects (clinical manifestation, imaging, prognosis, etc.)
- The current therapeutic options for RP
- The need for new and individualized therapeutic modalities
- The latest research developments in the treatment of RP
- The audience can use this knowledge to contribute to the development of new therapies, improve patient care, and potentially expand their own research in the field of ophthalmology and retinal diseases
- This information can help healthcare professionals, researchers, and scientists to better understand RP, improve their clinical practice, guide their research, and inform their educational activities
- Yes, the information presented can serve as a basis for further research and can be incorporated into teaching materials for healthcare professionals and students

- While it does not provide a practical solution per se, it presents the latest research developments and potential therapeutic targets which could guide future research and therapy design
- The information presented could potentially improve the design of new therapies for RP by providing insights into potential therapeutic targets

Biography

Dr. Kevin Y. Wu, a Canadian-licensed Medical Doctor and Doctor of Dental Medicine, specializes in ophthalmology. He leads a research team focused on ocular pharmacology and ophthalmic surgery and has contributed to numerous publications. In 2021, he received the Canadian Medical Association Award. Yet, his achievements represent a continuous journey, not endpoints. Dr. Wu's dedication to patient care and medical innovation is driven by humility and a genuine commitment to the field, rather than personal accolades. His work remains an essential contribution to both patients and the medical community.

Ali Esmaeil[1], Ali Ali[2], Salman Almutairi[3], Khaled Alkandari[3]*, Raed Behbehani[4], Alaa Alali[3,5,6]

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Optic disc pits and optic disc pit maculopathy: A review

Optic disc pits are a rare but significant anomaly of the optic nerve head that can lead to visual impairment and associated complications. These pits are characterized by a small, oval-shaped depression in the disc, which can cause fluid accumulation and subsequent damage to the adjacent retina. Although the etiology and pathogenesis of optic disc pits are not fully understood, several theories have been proposed, including abnormal embryonic development and degenerative changes. Diagnosis is typically made through a comprehensive eye examination, including a dilated fundus exam and optical coherence tomography. Management options vary depending on the severity of the condition and associated complications, ranging from observation to surgical intervention.

Key Words: Optic Disc Pit, Optic Disc Pit Maculopathy, Pars Plana Vitrectomy, Retinoschisis, Endolaser, Gas Tamponade.

Audience Take Away Notes

- Optic disc pits are a relatively uncommon but potentially vision-threatening condition that affects the optic nerve head
- The treatment options available include observation, laser therapy, and surgical intervention, with the choice otreatment dependent on the size, location, and number of pits as well as the degree of associated macular edema or sub retinal fluid
- The aim of treatment is to prevent progressive visual loss and to stabilize or improve vision
- Regular monitoring is essential for early detection of changes, and appropriate intervention to preserve vision. Further research is required to improve our understanding of the pathogenesis of optic disc pits and to optimize their management

Biography

Dr. Alkandari obtained his Bachelor Degree in Doctor of Medicine from the Jordan University of Science and Technology in 2021. He then worked as a junior doctor in Kuwait and focused on research in the field of ophthalmology.

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Zoha Mian[1]*, Anthony Mai[2], Craig Chaya[3]

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Iris prosthesis for uveitis related iris defects

Iris defects can cause glare and poor cosmesis that affects a patient's quality of life. These defects may be caused by congenital etiologies like aniridia or acquired ones like trauma and intraocular surgeries. Iris prostheses, like the CustomFlex ArtificialIris by HumanOptics, were created to address these symptoms. The CustomFlex device is a stand-alone thin and foldable silicone colored implant that could be placed in either the capsular bag or the sulcus. Because the majority of iris defects requiring prosthetic use was secondary to trauma, congenital aniridia, and intraocular surgeries, our case report aims to describe usage of the CustomFlex in a patient with iris defects secondary to uveitis. Our patient presented with photophobia caused by bilateral diffuse iris atrophy with a history of herpes zoster ophthalmicus and underwent simultaneous iris prosthesis and intraocular lens implantation. The procedure improved his vision while reducing photophobia and glare. This case report shows how endocapsular implantation of the CustomFlex Artificial iris, along with cataract surgery, is feasible for patients with uveitis related iris defects.

Audience Take Away Notes

- This case reports examines a practical and innovative solution to improve vison associated with uveitis caused iris defects and photophobia. This may expand the scope of use for iris prosthesis paving the path for utilization in other inflammatory ocular conditions

Biography

Zoha Mian is a third-year medical student at the University of Louisville School of Medicine. She attended the University of Cincinnati and graduated in 2020 with a Bachelor of Science in Medical Sciences and Minors in Political Science and Global Health Studies. Zoha completed this case report alongside Dr. Anthony Mai and Dr. Craig Chaya as a visiting medical student at Moran Eye Center in January 2023.

Shuchi Kohli

Foundation year 2 doctor, Barking, Havering and Redbridge University NHS Trust, London, England

Impact of COVID-19 on retinal screening, are patients still suffering?

Aims: To assess the effects post-covid-19 on retinal screening programmes across patients registered to a General Practice in East London.

Methods: A search was carried out to evaluate patients coded as 'diabetic retinopathy' registered to the GP surgery, on EMIS (patient data base used in General Practice). Data was collected to see how many of these patients were seen in years 2020, 2021 and 2022 both on a screening programme or separately by hospital eye services, hba1c levels (2020 compared to 2022) and retinopathy changes recorded in 2020 compared with 2022.

Results: Data showed that 53% of patients were seen on the retinal screening programme in 2022, compared with 53% in 2021 and just 33% in 2020. Of the 47% not seen on the screening programme in 2022, a large proportion were seen separately by HES (hospital eye services) mostly due to severity of condition. Our results show that although screening numbers have increased post-covid there is still almost 50% of patients who have not attended screening programmes. It is also important to note that 88 patients hba1c increased between 2020-2022. Interestingly, most retinopathy changes remained stable despite increasing hba1c and limited attendance to programmes between 2020-2022.

Conclusion: Although during the pandemic screening attendance was reduced – post-pandemic attendance of patients increased by just 20%. More work needs to be done to increase patient awareness of effects of diabetes on the eye and to remind them of importance of maintaining hba1c at low levels.

We aim to improve patient education by introducing patient education leaflets and organising educational seminars. We will then re-audit the data to assess if this has impacted the attendance to diabetic screening.

Audience Take Away Notes

- The audience will be educated on the impact of the pandemic on the national retinal screening programme
- This will help future practice by reminding health care professionals of the implications of missing national screening and that we must intervene to ensure attendance
- This research could be further expanded into looking at the reasons at to why compliance is still low and how we as health professionals can work together to improve overall outcomes. Questions arise such as are annual screening programmes needed, could we increase this to two-yearly?
- Interesting findings discussed such as – the severity of retinopathy did not increase as much as anticipated despite patients not being seen and the impact of hba1c on retinopathy.

Biography

Dr. Shuchi Kohli studied Medicine at Masaryk University, Czechia in 2021, graduating with MD. She then began her foundation training in London where she is heavily involved with research and teaching. Shuchi has many published peer review articles and has delivered numerous national and international presentations.

Rozan Abdulaziz AlGhamdi
KAUH, Saudi Arabia

Impact of platelets count on retinopathy of prematurity, at King Fahad Armed Forces Hospital, Jeddah, Saudi Arabia

Introduction: Retinopathy of Prematurity (ROP), Retinopathy of Prematurity (ROP) is a disease that mainly affects infants and has a potential to cause blindness and visual impairments. In addition, ROP happens when abnormal blood vessels grow in the retina. Our paper aims to assess the impact of platelet count in the development of ROP.

Methodology: This retrospective study included 240 infants with a gestational age up to 40 weeks who were screened for ROP in the NICU of king fahad armed forces hospital, Jeddah between February 2016 and December 2022. Infants were subdivided into 3 groups: no ROP (GroupA), mild ROP (Group B) and severe ROP who required laser treatment (Group C). Assessment of other potential risk factors including low platelets count were studied.

Results: Low Birthweight, low gestational age, thrombocytopenia at diagnosis and during the first week of ROP diagnosis were statistically significant in the development of ROP with a p value of <0.001 in each accordingly. Other factors for ROP development were assessed in table 3. Multivariate analysis of thrombocytopenia at ROP diagnosis and within first week postnatal in the subsequent ROP groups with its risk factors were involved as low birthweight and low gestational age which showed a significant p value of <0.001 in each significantly.

Conclusion: Low platelets count in the first week of ROP diagnosis and at ROP diagnosis counts as a risk factor for ROP development. Other leading causes were assessed and established as low birthweight, gestational age and neonatal Jaundice, respiratory distress syndrome and the usage of mechanical ventilation.

Table 3. Comparison of the demographic characteristics of infants with or without retinopathy of prematurity (N=240)

	Group A	Group B	Group C	P value
Number (240)	20 (8.33%)	126 (52.5%)	94 (39.16%)	-
Gender (Male\Female)	8\12	65\60	56\38	0.732
GA (Weeks)	23.4	25.3	25.6	**<0.001***
Respiratory distress syndrome?	5 (3.54%)	73 (51.77%)	63 (44.68%)	**<0.001***
Intraventricular hemorrhage	1 (2.77%)	19 (52.77%)	16 (44.44%)	0.171
Patent ductus arteriosus (PDA)	2 (5.12%)	16 (41.02%)	21 (53.84%)	**<0.001***
Presence of apnea	1 (11.11%)	6 (66.66%)	2 (22.22%)	**<0.001***
Presence of sepsis	1 (1.96%)	27 (52.94%)	23 (45.09%)	**<0.001***
Neonatal jaundice	1 (1.88%)	36 (67.92%)	16 (30.18%)	**<0.001***
Platelet count (first postnatal week)	313.98 +98.1	298.80 +-73	263.53 +- 63	**0.003***
Platelet count (at ROP diagnosis)	--	338.3 +- 182.1	351.9 +- 147.2	0.527
Surfactant	5 (3.54%)	73 (51.77%)	63 (44.68%)	**<0.001***
Mechanical Ventilation	9 (5.17%)	91 (52.29%)	74 (42.52%)	**<0.001***
Cesarean	11 (10.47%)	61 (58.09%)	33 (31.42%)	0.533
Necrotizing Enterocolitis (NEC)	3 (12.5%)	8 (33.33%)	13 (54.16%)	0.346
Required blood transfusion	0 (0.00%)	19 (65.51%)	10 (34.48%)	**<0.001***
Multiple pregnancy	3 (5.17%)	27 (46.55%)	28 (48.27%)	0.739
Birth weight (in grams)	1739 +-598.1	1439 +-352.3	1083 +-259.3	**<0.001***
Thrombocytopenia (In the first week)	8 (10.81%)	35 (47.29%)	31 (41.89%)	**<0.001***
Thrombocytopenia (at diagnosis)	9 (9.09%)	47 (47.47%)	43 (43.43%)	**<0.001***

Table 4. Multivariate analysis of the factors associated with low platelet count in the first postnatal week (N=74)
Variables

	Category	P value
Group A	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.002***
	Jaundice	0.32
Group B	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.001***
	Jaundice	0.832
Group C	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.001***
	Jaundice	0.132

Table 5. Multivariate analysis of the factors associated with low platelet count at diagnosis (N=99)
Variables

	Category	P value
Group A	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.001***
	Jaundice	0.32
Group B	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.001***
	Jaundice	0.832
Group C	*L Gestational Age*	**0.001***
	L Birth Weight	**0.001***
	Respiratory Distress Syndrome	**0.001***
	Jaundice	0.132

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"We wish to meet you again at our upcoming events next year..."

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