22nd

Dr E VAITHILINGAM

MEMORIAL

SCIENTIFIC SESSION

ABSTRACT BOOK

22nd Dr E VAILTHILINGAM MEMORIAL SCIENTIFIC SESSION 2024

March 9-10, 2024

Organized by

ELITE SCHOOL OF OPTOMETRY

(Unit of Medical Research Foundation)

Sponsors

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Venue:

Sri V.D. Swami Auditorium,
Sri T.S. Santhanam VII Floor, K.N. BIRVO Block,
Sankara Nethralaya,
18/41, College Road, Nungambakkam, Chennai - 600006
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Message from the Organizing Chair

Dear friends

Greetings from Elite School of Optometry!

I am very happy and honoured to invite you all for the 22nd Dr E Vaithilingam Memorial Scientific Session. This one of its kind scientific session is being conducted by ESO in fond memory of Late Dr E Vaithilingam (Dr EV), Principal of ESO. Dr EV was well known for his scientific acumen and sharp clinical skills, a remarkable combination that any optometrist would dream to achieve. He was much ahead of his times to integrate evidence based optometry into clinical practice. Aptly, Dr E Vaithilingam Memorial Scientific session has provided the first forum for scientific deliberations that would extend into clinical practice among the optometry fraternity across India since 2002.

This year the organizing committee has decided on **"Evidence based Optometry"** as the theme for the conference. The year 2024 also marks the completion of 97 years of optometry education in India, with a first course on refraction and dispensing started by the Indian College of Optics in 1927. Reaching close to the centennial year, ESO would love to shoulder the responsibility of sharing and disseminating such and prospective information on optometric education to the optometry fraternity. Therefore the year 2024 will be special for all those attending the 22nd Dr EVM scientific session in many ways.

Join us in the optometric scientific feast!

Best wishes and regards

Dr N Anuradha

Organizing Chair

Principal – Elite School of Optometry

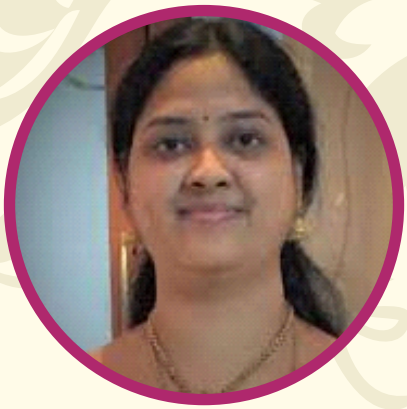
Program in charge- School children eye health- Sankara Nethralaya

Topics

About Dr. E Vaithilingam

Dr. E. Vaithilingam (fondly called Dr. EV) was a pioneer in the field of Optometry. He served as the Principal of Elite School of Optometry from February 1991-March 2001. Prior to his position as head of the school, he held a faculty position at the Department of Ophthalmology, Institute of Medical Science, Banaras Hindu University, Varanasi, India. He was the chief director of clinics, contact lens consultant and Head of the Low Vision Services at Sankara Nethralaya C.U. Shah Rural Eye Hospital, and exclusively attached to the Elite School of Optometry since 1991. Dr EV was the President of the Indian Optometric Association (Twice), an Executive Council Member of the Indian Contact Lens Society, the first person from India to become a Fellow of the International Association of Contact Lens Educators (1996) and the American Academy of Optometry (1998). He was an Executive Committee Member of the Indian Optometric Association and Member of the Editorial Board of the Indian Contact Lens Journal. In 1992, he started World Optometry Day, a yearly event aimed at increasing eye care awareness in India that continues to garner increased participation till today. Dr. EV was known for his technical expertise, innovations, and enthusiasm in the field of optometry. He was an ardent researcher with over 100 publications to his credit. He was the mainstay of the Elite School and it is to his credit that the Elite School of Optometry has obtained an international reputation. He was a dynamic Head of School until his demise. Dr. EV was highly respected by his colleagues both in India and all over the world, and deeply admired by his students, who will cherish his valuable guidance for many years. He is ever remembered as one of the pioneers of modern optometry in India. To bring his dream into reality, an annual scientific session was started in memory of Dr. EV in 2002. Management of Medical Research Foundation, Optometry staff and students of ESO created an endowment in his name and so far 18 successful sessions had been organized with innovations being added every year that has gained popularity among Indian optometrists and optometry students as a platform to showcase their scientific work. Elite School of Optometry (ESO) has been encouraging optometry research in India for the last few years in many ways. One of the main activities of ESO in this regard is the annual conference on vision science and optometry. In 2002, in memory of the late Principal Dr. E. Vaithilingam, ESO initiated a national scientific session to encourage optometrists and optometry students from all over India to present their research work. Every year, the quality and quantity of presentations have been increasing exponentially.

Organizing & Scientific Committee



Dr N Anuradha
Organizing Chair & Scientific Committee
Principal, Elite School of Optometry
Program in charge- School children eye health-
Sankara Nethralaya

Dr A Rashima
Head- Scientific Committee
Head- Occupational Optometry services and
Vision Enhancement Clinic,
Sankara Nethralaya

Organizing Committee

Ms S Swetha
Assistant Professor-
Elite School of Optometry

Ms Amirthaa M
Assistant Professor-
Elite School of Optometry

Ms Ambika C
Incharge - Clinical Community
Activities, Assistant professor
Elite School of Optometry

Ms Subhiksha R
Senior Community Optometrist,
Faculty – Elite School of Optometry

Ms Latha Albert D
Administrator-
Elite School of Optometry

Ms S Jayasri
Librarian-
Elite School of Optometry

Day 1: Theme: Myopia

Speakers

Dr Hema Radhakrishnan

Reader in Optometry

Faculty of Biology Medicine & Health, University of Manchester

Topic: Myopia development, progression and management

Dr Hema is a registered optometrists in the UK with research interest in Myopia, Accommodation and physiological optics. Hema has been an academic at University of Manchester since 2005. She is involved in teaching optometry students at Manchester and researches on various aspects of physiological optics and anterior eye. She has published nearly 100 peer-reviewed papers in leading optometry and ophthalmology journals and over 400 conference presentations have been made by her group. She is an Associate editor for Translational Vision Science and Technology and currently editing a special issue on Myopia. Hema has received various awards for her research in physiological optics including the Neil Charman Medal from the College of Optometrists, UK (2015) and inaugural Bernard Gilmartin OPO award (2011) and for her leadership at University of Manchester she has received the Making a Difference award (2016), Northern Power Women Award (2020) and McJannet Prize for Global Citizenship (2021).

Panel Discussion

Dr Aditya Goyal

Principal – Sankara College of Optometry, Bangalore

Indian Optometry over the century – A panel discussion

Aditya Goyal graduated from Elite school of optometry in 1989. He completed M.S. In clinical optometry from Pennsylvania college of optometry, Salus University and PhD from Chitkara University. He has been practicing the Science and art of optometry since 1989. He is also a fellow of COVD and is pursuing fellowship of NORA at present. Along with the clinical practice, he followed his interest in academics and was instrumental in establishing colleges of optometry in Chennai, Bangalore, and Ludhiana along with Sankara eye care group of hospitals. These colleges are running optometry programs at bachelors and masters levels.

Presently, he is the principal of Sankara College of optometry, Bangalore and is also the head and mentor Optometry in the Sankara eye care group. Aditya Goyal is also an adjunct faculty at Pennsylvania College of optometry, Salus University, USA. Being interested in optometric education, he is on the board of the association of schools and colleges of optometry, India and serves as the President on the board of ASCO, India. Aditya was a member of the team which wrote the common minimum optometry curriculum (CMOC) and Indian entry level optometry competencies (IELOCS). He is one of the authors of the curriculum followed for bachelors and master's program in Optometry in India. He is also a member of the task force created by the Government of India to work on standardizing the curriculum and practice of optometry in India.

Aditya lectures widely on the topics related to vision therapy, Neuro vision, visual perception, behavioral and developmental optometry, pediatric optometry, and low vision rehabilitation. He has several presentations and publications both in India and abroad to his credit and is on the editorial review boards of two prestigious international journals - OVP and JOEHR. He was awarded the prestigious "Making Vision Therapy Visible" award by College of Optometrists in Vision Development (COVD), USA in 2019 and Asia outstanding optometrist award by Asia Optometry Congress in 2022. He is also a recipient of Australian leadership award fellowship, awarded by the Australian government. Aditya Goyal is ophthalmic sciences representative nominated by the government of India on National Commission of Allied and Healthcare Professionals. This aims at legislating the profession and creating a council to govern the practice of optometry in India. Aditya is also the member of academic council of CT University, Ludhiana and represents India on the board of Asia Optometry Congress.

Panel Discussion

Dr. N. Anuradha

Principal – Elite School of Optometry

Program in charge- School children eye health- Sankara Nethralaya

Indian Optometry over the century – A panel discussion

How ("NOT") to submit an abstract?

Dr Anuradha is currently the Principal of Elite School of Optometry, Sankara Nethralaya, Chennai, India. She is also the Head of the School children eye health and Special Community Optometry projects run by Sankara Nethralaya.

Dr Anuradha Narayanan obtained her graduation from Elite School of Optometry, and doctorate in the field of Community Optometry. Her doctorate work was on improving the school children's eye health. She is a Diplomate from the Public Health and Environmental Vision section of the American Academy of Optometry (AAO) and obtained her PG Dip in Health Economics from the Public Health Foundation of India and Fellowship in Dispensing from the Association of British Dispensing, UK. Dr Anuradha also holds a Master's degree in Psychology.

Prior to taking up teaching and community activities at Sankara Nethralaya, Dr Narayanan was the Optometrist-in- charge of the LASIK clinic at Sankara Nethralaya, India and has served the organization in various capacities since 1998. . She has a vast teaching experience since 2000 spanning 23 years. She has supervised many masters level optometry students and is also a supervisor for doctoral scholars. She was the Course Director for continuing Education Programmes on Optometry since 2012. She is the Head of the School eye health Programmes at Sankara Nethralaya for the last 13 years. She is also an adjunct faculty at Deakin University, Australia.

In the past years she has been awarded 15 major grants to fund the large-scale screening of vision outcome and status in school aged children in South India. These grants have led to a number of research publications plus book chapters and enabled the development of international collaborations in the US, UK and Australia. She is part of the task force of the Government of India that upgraded the model optometry curriculum for the undergraduates and postgraduates. She is a member of the Executive board of the AAO India Chapter, founder member and current President of the Elite School of Optometry Alumni Association. She is also the founder member of the Optometric Association of Tamil Nanbargal (Tamil Nadu).

She is a key resource person and partner in the national school eye health project REACH (Refractive Error Among Children) that screened 1.8 million children funded by Qatar Fund for Development with Orbis India. She is the Principal Investigator for the “Experience Vision” project aiming at providing comprehensive school eye health across India by the Optometry Council of India. She was instrumental in Elite School of Optometry establishing collaborations for doctoral programmes with the national and International Universities.

She was instrumental in Sankara Nethralaya receiving the ‘SN Shah Vision 2020 award’ for her services towards woman and child eye health. She is the recipient of the “Best Researcher in Optometry” – Dr Narasimhan Memorial Award and “Best Researcher – Clinical Science in Ophthalmology” – Ruby Banik Award 2016-17. She is also the awardee of the ”Woman of the Year-2019”, ‘Outstanding Optometrist of the year award, Best Junior Faculty 2009-10 and Best Senior Faculty Award 2015-16 from the Medical Research Foundation. Apart, she is also the recipient of various community service awards and maximum eye donation pledges. She was instrumental in Sankara Nethralaya-Elite School of Optometry creating a Limca national record for screening and testing 8469 children in one day. She is the recipient of the “Optometry Contribution to public health Award”, 2021 instituted by the Optometry Council of India and Essilor. She is the Nehru-Fulbright Indo-US Science and Technology Forum (IUSSTF) awardee for the year 2014. She has various publications to her credit and is also a reviewer.

Panel Discussion

Dr R Dharani
Professor – Optometry, Department of Ophthalmology
SRM Medical College Hospital & Research Centre
SRM Institute of Science & Technology
Indian Optometry over the century – A panel discussion

Dr Dharani Ramamurthy is a Professor of Optometry at the SRM Medical College and Research Centre. She completed her PhD from the Anglia Ruskin University, Cambridge, London for her work titled 'Effect of family history of myopia and other known risk factors on myopia progression. She worked as a Senior Optometrist and Faculty at Elite School of Optometry and Sankara Nethralaya between April 2003 and August 2010. Following which, she was a Post-Doctoral Research Associate at the Saw Swee Hock School of Public Health, National University of Singapore, Singapore. She then joined as Assistant Professor at SRM University, Chennai. She has received OPO Bernard Gilmartin Award, College of Optometry, UK for the publication titled 'Worldwide prevalence and risk factors for myopia'. She has also received the International Myopia Institute's Travel Grant in September 2023. She has been the reviewer for many international, peer-reviewed journals like Plos ONE, IOVS, OVS and Scientific Reports. She also has various publications to her credit.

Panel Discussion

Dr. Rashima Asokan

Head – Occupational Optometry Services and Vision Enhancement Clinic, Sankara Nethralaya

Indian Optometry over the century – A panel discussion

How ("NOT") to submit an abstract?

Dr Rashima Asokan currently leads the occupational optometry services and also the vision enhancement clinic of Sankara Nethralaya, a pioneer tertiary eye hospital in India. She along with her team provides eye care to employees at industries and workers in the unorganized sector. Their strength is on providing preventive eye care and safety / protective spectacles for the industrial needs. She is primarily involved in occupational eye care for the deserving group of workers among the unorganized sector through the CSR support by various NGO's. She is engaged in estimating the vision standards for various occupations.

She is also an active researcher and has presented her research works at various national and international conferences and received awards; To name a few: Young scientist award from the Indian Association of Occupational Health (2018), Golden Jubilee award from the Indian Association of Occupational Health (2018) and the best case report award from Optometry Council of India (2020), Dr CK Ramchandar Centenary Award for Best Scientific Presentation from Indian Association of Occupational Health (2024). She is also a proud recipient of Endeavor Executive Fellowship (Australia) and a competitive grant from the Glaucoma Foundation (The US). Her area of research includes environmental effects on the eye, Glaucoma, Occupational ocular disorders, Innovative education models in Optometry, Visual Impairment and coping strategies at work.

Day 2: Theme: Geriatric eye care

Speakers

Dr Srinivas Marmamula

Network Associate Director – Public Health Research and Training
Prof. Brien Holden Eye Research Centre
Gullapalli Pratibha Rao International Centre for Advancement of Rural Eye care, L V Prasad Eye Institute
Topic: Vision loss among the elderly populations

Dr Srinivas Marmamula received his initial optometry training at L V Prasad Eye Institute and then did his Masters in Community Eye Health from the London School of Hygiene and Tropical Medicine, University of London, with joint sponsorship from the Department for International Development (DFID - UK), British Council for Prevention of Blindness (Boulter Award), and LVPEI. In 2011, he completed his PhD from the School of Optometry and Vision Science, UNSW, Sydney with support from Vision CRC, Australia. Dr Marmamula did his post-doctoral research fellowship during 2012-2013 with Dr David Friedman at Wilmer Eye Institute, Johns Hopkins School of Medicine, Johns Hopkins University, Baltimore, MD, USA. He was also trained briefly in Massachusetts Eye and Ear at Harvard Medical School's Department of Ophthalmology in Boston, USA (2019) and completed a short-term fellowship with Dr. David Bloom at Harvard T. H. Chan School of Public Health at Harvard University (2023). Dr Marmamula was the chief optometrist for LVPEI's landmark studies including Andhra Pradesh Eye Disease Study I (APEDS I, 1996 – 2000), Refractive Error Study in Children (2000) supported by the National Eye Institute and World Health Organization and APEDS III. He is the principal investigator for 'The Hyderabad Ocular Morbidity in Elderly Study (HOMES)' (2017-2020). He is also a faculty member at Brien Holden School of Optometry and Vision Science. Dr. Marmamula is rated among the top 200 Optometry researchers globally and ranked first in India in 2023. Dr Marmamula is the recipient of the prestigious Wellcome Trust / DBT India Alliance Early Career Fellowship - 2015. This is for a research project on visual impairment in elderly populations. He has also received many international travel grants and has participated as faculty in many workshops in India and abroad. He has over 100 publications to his credit in peer-reviewed journals and is on the editorial board of reputed journals. Dr Marmamula was recently awarded a Wellcome Trust / DBT India Alliance Intermediate to conduct a longitudinal research study on elderly populations. His areas of interest are epidemiology of visual impairment, uncorrected refractive errors, presbyopia, eye health in the elderly and other vulnerable populations and training personnel for community eye care.

Day 2: Theme: Geriatric eye care

Speakers

Dr B Hari Shankar

Geriatric Physician, BHS Geriatrics & Diabetes Centre

Topic: Integrating Geriatric Care into Optometric Practice

Dr B Hari Shankar completed his MBBS degree at Chengalpattu Medical College in 2011 where he passed the University Anatomy Examination with honors. In 2009, he received Distinction in Community Medicine and Obstetrics & Gynecology. Since 2011, he has provided care for over 10000 patients at home as part of the Padmashri Prof. Dr. V. S. Natarajan House Call Project. Additionally, he serves as a trustee in the Padmashri Prof. Dr. V. S. Natarajan Geriatric Foundation. Dr Hari Shankar has been a Visiting Faculty at the Elite School of Optometry, Sankara Nethralaya for the course 'Geriatric Optometry' since 2013.

Day 2: Theme: Geriatric eye care

Speakers

Dr R Krishna Kumar

Optometry Advisor – Sankara Nethralaya

Topic: Need for Geriatric optometry services: SNDEED Experiences and Learnings

Currently Dr Krishna Kumar is working as advisor, general optometry services, Sankara Nethralaya, Chennai, and visiting faculty of Sri Jayendra Saraswathi Institute of Optometry as well as Elite school of Optometry. In addition, offering free eye care services at two old age homes on a regular basis. He has undergraduate, M.Phil. and Ph.D. degrees from Elite school of optometry. Previously, he served as the head of optometry department of Sankara Nethralaya for 7 years and as the principal of Elite school of optometry for 16 years.

Day 2: Theme: Geriatric eye care

Speakers

Ms S Ramya

Doctoral Scholar, Senior Optometrist – Sankara Nethralaya

Topic: "I am inside my house like in a prison due to frequent falls":
Role of Optometrists in reducing falls among people with Visual Impairmen

Ms. Ramya S, is Associate Professor at Elite School of Optometry, Senior Optometrist at Sankara Nethralaya, Medical Research Foundation, Chennai and Doctoral Researcher at SASTRA Deemed University, Thanjavur. She has completed her undergraduate and postgraduate degrees at Elite School of Optometry affiliated to BITS Pilani, Rajasthan. As an Optometrist, she has a clinical experience of about 15 years in diagnostic techniques such as Ocular Electrophysiology and Optical Coherence Tomography and had seen more than 15,000 patients. Apart from routine optometric examination, she has a year's experience in low vision care clinic. She has about 13 years of teaching experience and handled/handles various courses such as Ocular Diseases, Low vision care, Research Methodology, Optometric Instrumentation, Ocular Anatomy and Physiology, Geriatric Optometry and few Optics related topics for undergraduate and postgraduate Optometry students. She is also a part of book chapters and had given guest lectures in the field of Ocular Electro diagnostics and Low vision care. She also guides undergraduate and postgraduate students in various clinical projects apart from training optometrists in electro diagnostics clinic. She has published around 12 articles in national and international journals.

Program Schedule

Day 1 March 9, 2023
Keynote lectures, Workshop and free paper/poster sessions

Time	Programme Details
08:30 AM	Registration
09:00 AM	Inauguration ceremony
09:30 AM	**Myopia development, progression and Management** ***Dr Hema Radhakrishnan***
10:15 AM	Original Research Presentation - Students
11:30 AM	**Break**
12:00 PM	Sponsor Session - Essilor
12:15 PM	OCI Myopia Task Force - Video release
12:45 PM	Sponsor Session - Hoya
01:00 PM	**Lunch**
02:00 PM	**Indian Optometry over the century - A Panel discussion** **Panelists:** ***Dr R Dharani, Dr N Anuradha, Dr Aditya Goyal*** **Moderator:** ***Dr Rashima A***
03:00 PM	**How ("NOT") to submit an abstract?** ***- Dr N Anuradha, Dr A Rashima***
03:30 PM	Original Research Presentation - Regular
03:45 PM	About Day 2 and closing remarks

Day 2 March 10, 2023
Keynote lectures, Workshop and free paper/poster sessions

Time	Programme Details
09:00 AM	Recap Day 1
09:15 AM	Original Research Presentation - Regular
10:15 AM	**Geriatric Care - Answers from Clinical Experience and Current Evidence**
	1. Vision loss among the elderly populations ***- Dr Srinivas Marmamula***
	2. Role of Optometrist beyond Optometry in a holistic health establishment ***- Dr Hari Shankar***
11:00 AM	**Break**
11:30 AM	**Geriatric Care - Answers from Clinical Experience and Current Evidence**
	1. Need for Geriatric optometry services: SNDEED Experiences and Learnings ***- Dr R Krishna Kumar***
	2. “I am inside my house like in a prison due to frequent falls”: Role of Optometrists in reducing falls among people with Visual Impairment ***- Ms S Ramya***
12.00 PM	Case Report Presentations
01:45 PM	**Lunch**
02:45 PM	Award Ceremony and closing remarks

ABSTRACTS

Scientific Session Oral

Original Research – Student

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1131

TITLE: Knowledge about eye care professionals among the general public: a cross-sectional survey

PRESENTING AUTHOR /AFFILIATIONS:

Mr Dhamotharan K / Acchutha Eye Care & Institute of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose:

The study aimed to assess the general public's knowledge of eye care professionals in South India and whether it varied by educational qualification, occupation, and previous eye care experiences.

Methodology

A cross-sectional structured questionnaire, approved by institutional research committee, was administered to the general public in Erode, Tamil Nadu, South India. An anonymous questionnaire collected participants' demographics and knowledge of ECPs, including the different ECPs and services. The data was coded in Microsoft Excel 2013 and analyzed in SPSS version 25 using descriptive statistics and chi-square tests to identify significant relationships ($p < 0.05$).

Results

A survey of 497 individuals (young adults-63.8% and males-65.4%) with graduate degrees (59.7%) revealed gaps in eye care knowledge. While 59.4% recognized ophthalmologists as eye specialists, only 25.8% had heard of optometrists, and 55.9% did not know who opticians are. Misconceptions were prevalent, with 67.4% believing optometrists are doctor assistants, 48.3% unsure who checks vision, and 46.9% unaware if optometrists test eyes. Knowledge was lacking even regarding who prescribes glasses (65.6%) and fits them (56.9%). Despite 46.3% correctly identifying ophthalmologists for surgery/laser treatment, only 56.5% had eye tests at eye hospitals, compared to 13.5% at opticians. Education and occupation influenced awareness, with healthcare, academics, and graduate degrees showing a better understanding of eye care professionals ($p<0.05$).

Conclusion

Public knowledge about ECPs was generally poor. Young adults and people in healthcare and academic occupations had better knowledge than those in the engineering sector/unemployed and those with less education. More education is needed to improve awareness and ensure necessary eye care.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1150

TITLE: Understanding the general and ocular sun protective behaviour among outdoor workers

PRESENTING AUTHOR /AFFILIATIONS:

Ms Tamilazhahi N / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Outdoor workers are exposed to various radiations, including harmful UV rays from the sun which lead to occupational hazards. The current study aims to understand sun protective behaviour among outdoor workers.

Methods

Subjects from the occupational optometry services, engaged in unorganized outdoor work for at least two years were included. The survey was developed through the Delphi technique to evaluate UV protection knowledge, attitudes, and practices among outdoor workers.

Results

The study encompassed 314 outdoor workers, with an average age of 45 (±9) years. Among them, 62.7% were male, 51.5% from rural areas. Predominantly, 36.3% were drivers, followed by 23.6% of salt pan workers. The majority 225 (72%) workers engaged in 8 hours daily work, and 194 (61.8%) experienced direct sun exposure. A notable 207 (65.9%) believed sun exposure affected their health, with 168(53.5%) reported to be related with medical issues. Around 97.1% had prior eye care experience. Also 94.2% believed it will not affect their eyes, while a few related that with cataract (3.8%) and pterygium (3.1%). Protective practices varied, with turban use (49%) being prevalent and 31.8% had never used any sun protective measures. Regarding effective methods, turbans/hats (65.6%), followed by sunglasses (1.9%) and skin creams (1.5%).

Conclusion

The awareness level of the sun protective behaviour is less among the outdoor workers indicating the need for promotion and education of individuals about the benefits and necessity of sun protective measures.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1160

TITLE: Effect of high temperature on the tear film stability in bakers

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Molishha Calvin Klifee / Lotus College of Optometry, Maharashtra.

ABSTRACT BODY:

Purpose

To evaluate the effect of high temperature on the tear film stability in bakers.

Methods

The cross-sectional study was conducted in various bakeries within the city, targeting individuals aged 20 years and above. The study involved the administration of the OSDI (Ocular Surface Disease Index) in both English and Hindi, based on participants' language proficiency. Subsequently, NITBUT (non-invasive tear break-up time) was assessed using the BTT (Blinking Tolerance Time). This comprehensive approach aimed to evaluate ocular health and dry eye symptoms among bakery workers, considering factors such as age, medical history, medication usage, and other ocular conditions. The OSDI and NITBUT assessments served as measures to gauge the impact of these factors on participants' ocular surface health and dry eye symptoms.

Results

The study enrolled 96 participants, predominantly male (93 males, 3 females), with a mean age of 32 ± 6.8 years. Spearman correlation analysis was employed, revealing a moderate negative correlation between age and the number of years working as a baker (-0.818 and -0.755, respectively) in relation to Blinking Tolerance Time (BTT). These findings suggest that as both age and the duration of working as a baker increase, there is a moderate decrease in BTT. This implies a potential association between these variables and ocular health within the scope of the study.

Conclusion

The study results suggest that the tear film stability in Mumbai is not significantly influenced by temperature.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1174

TITLE: The Grip of Nomophobia: Fear of Phonelessness

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sameena Siddiqah / MN College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

In the era of digitalized technologies, mobile-phone has become one of the most common addictions among modern-generation. The term NOMOPHOBIA is used to describe a psychological-condition when people have fear of feeling disconnected from digital-world. The purpose of our study is to assess prevalence of Nomophobia among general-population.

Methodology

The research was conducted at M.N College of optometry in Chennai from November2023 to January2024.A cross-sectional-study was conducted among the general-population. The validated Nomophobia-questionnaire (NMP-Q20) was used to assess Nomophobia using 7 point-Likert-scale. Demographic-data, ocular symptoms and phone-usage were added along with NMP-Q. Smartphone users above 10years were included. Google form was circulated among public via social-media platforms. We used MS-Excel, Chi-Square and descriptive statistics to analyse data.

Results

The study involved 415people who met inclusion and exclusion criteria. Within the participant pool, 42.65% were male (177/415) and 57.35% were female (238/415). Our subjects had 22.41%-mild, 60.24%-moderate and 17.11%-severe Nomophobia. Only 0.56% had absence of Nomophobia. The chi-square-test revealed, that there is significant difference in severity of Nomophobia scores among different occupations such as student, employee, housewife, teacher, business $\chi(20)=429.52$, $p<0.001$, with teachers having the highest-score. The severity did not significantly differ among different age-groups with $\chi(9)=7.14$, $p=0.622$, however, the mean Nomophobia-scores were highest(mean=80±20) among 10-20 age-group.

Conclusion

Nomophobia, with its staggering 99.76% prevalence, underscores the widespread impact of smartphone dependency on modern-society, indicating the need for intervention and digital wellness programs. Thus, it's time to unplug and redefine our connection with technology for healthier future.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1222

TITLE: Factors influencing eye care seeking behavior from a large scale school screening – A retrospective study

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sneha P / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

To retrospectively assess the eye care seeking behavior of referred children from the School Eye Screening (SES).

Methods

Through the REACH (Refractive Error Among CHildren) programme, 245,565 children were screened between 2016 and 2019 Tamil Nadu (Kanchipuram district). Among those, 16151(6.57%) children were given spectacles and 4071(1.67%) children were referred. The data of those reported to the hospital were retrieved and matched with the referral list maintained during the program through 'Reachsoft' application. The clinical and demographic details were analyzed.

Results

Among the referred children, 479(11.6%) visited the hospital with the average age of 9.82±3.26years and 251(52.4%) were males. Median days between referral and the hospital visit was found to be 37days. The mean distance (in km) between the school and the base hospital of those children who visited was 45.58 ± 25.72. Children from rural regions 177(OR:1.748,95%CI(1.421-2.150),P=0.0001), children who had visible ocular signs 160(OR:1.530,95%CI(1.250-1.874),P=0.0001) and have had previous treatment 168(OR:3.242, 95%CI(2.600-4.044),P=0.0001) were most likely to visit the hospital. Children with mild (407(85%)) to moderate (32(6.70%)) Visual Impairment (VI) came to the hospital compared to children with severe VI (22(4.60%).

Conclusion

This study concludes that the children from rural areas, who had treatment before, who exhibit visible ocular conditions are likely to visit the hospital.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1226

TITLE: Effectiveness of Early Intervention among children with Visual Impairment and Multiple Disabilities

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Rajavarshini K / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

This study aimed to understand the early intervention strategies and to evaluate its effectiveness among children with visual impairment and multiple disabilities.

Methods

A retrospective study with two phases was done in a tertiary eye care hospital. In phase 1, the EMR was screened from January 2019 to December 2020 for patients with the diagnosis of visual impairment and multiple disabilities and referred to a rehabilitation center for further management. In phase 2, in order to evaluate the effectiveness of the interventions provided, we sorted the children with 1 year of follow-up and outcomes after each therapy was recorded.

Results

EMR was screened from January 2019 to December 2022 and a total of 98 patients under the age of 18 were referred for rehabilitation services. Out of those 98, 57 (58.16%) were male and 41 (41.83%) female with a median age 5 (IQR, 4.75) years. Age, diagnosis and developmental milestones influence the determination of interventions provided. Nearly 98 children with Neuro-developmental delay and visual impairment had delayed milestones which had an impact on their visual and social skills. As the intensity of therapy increases, there is a significant improvement noted ($p = 0.009$).

Conclusion

Effectiveness of the rehabilitation services rely on multiple factors including intensity of interventions, and type of diagnosis. Children with visual impairment and Neuro-developmental disorders will have delayed milestones and multiple areas affected which demands a multidisciplinary approach as early as possible.

Scientific Session Oral abstracts
Original Research – Student

ABSTRACT ID: 1276

TITLE: Colorimetric properties of the in-built color correction mode in different operating systems

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Elakiya A / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Recently, the in-built smartphone modifications for Colour Vision Deficiency (CVD) have gained popularity among the CVD group. There was a visible difference noted in the appearance of these modifications between the Android and IOS systems. Hence, this study aimed to understand the calorimetric properties of the inbuilt color correction mode between the two operating systems.

Methods

This experimental study was conducted between June-Dec 2023 at Elite School of optometry. Two smartphones 1 Android (VivoA57) and 1 iPhone (iPhone 13Pro) equipped with the in-built features were selected. A set of dots were selected by pre-existing literature criteria from the online version of Ishihara plates using the Eye Hand Book application. The chromaticity value (l*,u*,v*) of the selected dots were determined using Color Grab, a validated colorimetric application for each color correction mode. The obtained values were compared with printed Ishihara plates to know the chromaticity difference.

Results

It was found that both the Android and iPhone smartphones showed deviation from the chromaticity values of printed Ishihara plates. While implementing the deutran filter, the colorimetric shift was evident towards the red-green axis in the chromaticity diagram, which supports the deutran deficient to appreciate the green color. In the protan filter, the chromaticity values were shifted towards red in the chromaticity diagram, supporting the protan deficient. In the tritan filter, the values fairly shifted towards the blue-yellow axis in the chromaticity diagram.

Conclusion

This study concludes that, since there is an evident shift in colorimetric values while implementing color filters, it leaves a clue for the CVD to appreciate the deficient color.

ABSTRACTS

Scientific Session Oral

Original Research – Regular

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1114

TITLE: Diagnostic accuracy of a modularized, virtual-reality-based automated pupillometer for detection of relative afferent pupillary defect in unilateral optic neuropathies

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Rahul Negi / L V Prasad Eye Institute, Telangana.

ABSTRACT BODY:

Purpose

To describe the construction and diagnostic accuracy of a modularized, virtual reality (VR)-based, automated pupillometer for detecting relative afferent pupillary defect (RAPD) in patients with unilateral optic neuropathies, vis-à-vis, judgments of experienced neuro-ophthalmologists.

Methods

Protocols for the swinging flashlight test and pupillary light response analysis used in a previous stand-alone pupillometer was integrated into the hardware of a Pico Neo 2 Eye® VR headset with built-in eye tracker. Each eye of 77 cases (mean±1SD age: 39.1±14.9yrs) and 77 age-similar controls were stimulated independently each eye thrice for 1sec at 125lux light intensity, followed by 3sec of darkness. RAPD was quantified as the ratio of the direct response of the stronger to the weaker eye. The device performance was evaluated using standard ROC analysis.

Results

The median (25th – 75th quartiles) pupil constriction of the affected eye of cases was 38% (17 – 23%) smaller than their fellow eye ($p<0.001$), compared to an interocular difference of 6% (3 – 15%) in controls. The sensitivity of RAPD detection was 78.5% for the entire dataset. Sensitivity was lower for mild (68%) than severe RAPD (89.1%) and it improved significantly when accounting for the physiological asymmetries in the bilateral pupillary miosis (85.1%). Specificity and the area under ROC curve remained between 81 – 96.3% across all analyses.

Conclusion

RAPD may be successfully quantified in unilateral Neuro-ophthalmic pathology using a VR technology-based modularized pupillometer. Such an objective estimation of RAPD provides immunity against biases and variability in the clinical grading, overall enhancing its value for clinical decision making.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1155

TITLE: Peripheral hyperopic defocus (HD) trend in progressing myopic patients in the Indian pediatric population

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Aarya Shekar V B / Narayana Nethralaya, Karnataka.

ABSTRACT BODY:

Purpose

Study trend of peripheral hyperopic defocus in progressing myopic patients and effect of myopia control strategy.

Methods

137 pediatric patients with progressive myopia were included in study. Peripheral refractive error was measured using open field auto refractor WAM-5500 in central 60* of retina in 10* steps. Patients with significant HD were advised spectacles with defocus lenslets or orthokeratology contact lenses (OKCL). Patients with no significant HD or myopic defocus (MD) were treated with low dose atropine 0.01% eye drop (LDA).

Results

Of the 137 patients, 80 (58.39%) had MD and 57 (41.60%) had HD. Average HD and MD were 1.35D (0.50-6.38) and 1.30D (0.60-4.62). Out of these 57 patients, 40 (29.19%) opted defocus glasses, 3 (2.2%) chose OKCL, 12 (8.75%) opted LDA whereas 2 parents were unsure of any modality. Out of 80 having myopic defocus, 78 (56.93%) were started on LDA.

Conclusion

The main etiology for myopia progression being claimed in today's world is of peripheral hyperopic defocus. Indian pediatric population shows lesser prevalence of HD than MD. Clinical implication-This lesser prevalence of HD in myopia patients gives rise to suspicion whether it is the cause or consequence of myopia progression.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1158

TITLE: Accommodation and pupil changes during near task with auditory demand

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Chethana N / SRM Medical College Hospital & Research Centre, Tamil Nadu.

ABSTRACT BODY:

Purpose

In today's world many young adults have been engaged in listening to music as a routine especially while doing near task like reading. In earlier studies music is shown to affect pupil size. There is a lack of knowledge about accommodation and music, since there is an inter-relationship between pupil size and music, accommodative response and pupil size. In current study we aimed to investigate accommodative and pupillary responses during near task with and without auditory stimulus.

Methods

In this prospective experimental study, participants with age between 18 to 22 years were recruited. After consent form obtained from subjects, all the participants undergone comprehensive eye examination, Binocular vision assessment and Hearing test in initial phase. Included participants performed near task from a smart phone placed at 40cm distance. Measurement of accommodative and pupillary responses was performed with open field autro refractor while the subjects performed one of the 3 tasks: near task without music, near task with sedative music and stimulative music for 5 min, only the right eye data was collected while subject reading a short story. The music was played with a head phone.

Results

The median pupil size and accommodative response estimated at baseline for near task without music was 2.8mm (IQR: 2.72-3.25mm) and -2.00D (IQR: -1.95 to -2.12D) respectively. Near task with sedative music had larger pupil size (Median 3.03mm) (IQR:2.77-3.39mm) and an accommodative response of (Median -1.98D) (IQR: -1.91 to -2.10D) compared to near task with stimulative music (Median 2.9mm) (IQR: 2.82-3.42mm) and an accommodative response of (Median -1.95D) (IQR: -1.90 to -1.99D) respectively.

Conclusion

Hence we conclude that accommodation and pupillary response are influenced by the type of music. Our preliminary results could lay the foundation for accommodative training through music intervention.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1169

TITLE: Options of various types of prism glasses prescribed from Neuro optometry department of a tertiary eye care centre- a retrospective observation

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Diksha Rathi / The Sankara Nethralaya Academy, Tamil Nadu.

ABSTRACT BODY:

Purpose

To report the different types of prisms glasses prescribed from Neuro optometry clinic.

Methods

A retrospective observation was made between January and June 2023 for total number of prism glasses prescription. This report included the various types of prism glass prescription after referrals. Dataset included the category, types, onset of diplopia, magnitude of deviation and prism orientation.

Results

Of 398 data, 314(78.9%) were male. Mean(SD) age was 36.1 (± 20.4) years. Dataset was sub classified into neurological 167 (41.9%) patients and non-neurological 231 (58.04%) patients category based on onset of diplopia. Stick on Fresnel prisms were prescribed the most (37.6%), followed by grounded prisms glasses (31.6%) and yoked prism configuration (29.1%). Sectoral prism sticker was prescribed the least (0.25%). One dataset was documented as bangerter filter to eliminate diplopia. A follow up visit data was documented by 21.1 %.

Conclusion

Having wide range of dioptric strength Fresnel stick on prisms was a maximum choice of dispensing among clinicians. Comfort level and quality of life with prisms can be explored prospectively.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1190

TITLE: Vision for a Cause- An effort to standardize school eye screenings.

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Paula Mukherjee / Optometry Council of India, Karnataka.

ABSTRACT BODY:

Purpose

The project is aimed at implementing a standardized eye screening using the REACH Protocol across various schools in India.

Methods

Vision for a Cause is a 2-year ongoing project focused on providing eye care using a standard protocol. Each optometry institution had adopted 4 schools for 2 years to provide eye care services. Training sessions on the protocol and the data collection were done for the optometry colleges. A free starter kit comprising of required equipment was provided. The screening comprises a brief history, refraction, torch light examination, colour Vision test and binocular vision assessment. The spectacles are provided free of cost and referrals were done if required. The compliance was assessed post six months of spectacle delivery. The compliance of spectacle wear was evaluated based on a validated questionnaire.

Results

A total of 29,806 children were screened by 13 institutions. About 7.69% were found to have refractive error. Out of the total 5262 eyes analyzed, simple myopia was found in 37% and 38% in the right and left eyes respectively, simple Hypermetropia in 3% and 4.5% and simple astigmatism in 2.9% and 2.92 % respectively. Out of 15947 children tested for colour vision, 1.68% of children had abnormal colour vision. About 4.33% were referred. Spectacle compliance was profoundly positive among 62.2% of the children.

Conclusion

Though a lot of school eye screenings are done across the country, there is no standard protocol followed. Vision for a Cause is unique wherein the uniform protocol was implemented for screening school children. The visionary VFC project marks a pivotal milestone in crafting comprehensive strategies for the well-being of young eyes.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1193

TITLE: Assessment of OCI's Unsung Heroes Initiative- Empowering Young Optometrists through Rural Entrepreneurial Opportunities"

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Paula Mukherjee / Optometry Council of India, Karnataka.

ABSTRACT BODY:

Purpose

To bring to the limelight those optometrists in India who are offering outstanding services to the community in rural India.

Methods

OCI a self-regulatory body in India came up with a unique initiative during the COVID-19 lockdown by tracing those members who are offering services to the community far from the cities and often unknown to the rest of the optometry community in India. Post COVID-19 Lockdown, every month, three optometrists were invited for a session to share their journeys and the eye care services offered by them to the community. A Validated questionnaire was sent to these participants and responses were analyzed. Questionnaire was for the analysis of the practice done by these unsung heroes and their opinions and experiences about the challenges and perks of practicing in smaller cities.

Results

15 episodes of 'Unsung Heroes' have been conducted by OCI ever since it was started in the year 2021. 30 of the unsung heroes responded to the questionnaire among which 9 were females and 21 were males. 43.3 % responded on Challenges private practitioners face in tier 2-3 cities are lack of health care facilities, lack of infrastructure, and less eye care awareness. 76.7% responded that "unsung heroes' series" have motivated them to do more community work. About 67% mentioned that they need support from OCI in upgrading their optometry knowledge and support in patient education material. 80% of optometrist responded that even if they get an opportunity to move to larger cities, they would like to stay back and serve their community.

Conclusion

With the 'Unsung Heroes' series OCI hopes to inspire the young optometrists in India to start independent optometry practices and give back to the community. The journey so far has been very inspiring and OCI hopes to continue this series and bring many such unsung heroes to the forefront.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1202

TITLE: Cost Analysis of Specialty Contact Lenses (CLs) for Irregular Cornea and Ocular Surface Diseases (OSD) from Patients' Perspective

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Janani B / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Vision-benefits of specialty CLs are established but the decision of procurement of the device depends on the cost. Apart from the cost of CLs, there are other associated costs. Also, the benefits on vision or productivity cannot be comprehended by the patients similar to the costs. Therefore, the study aims to perform a cost analysis of the specialty CLs for irregular cornea and OSD from the patients' perspective.

Methods

Patients aged 18 and above who order specialty CLs (Corneal or Scleral) between August 2023 and January 2024 were included prospectively. Direct-costs (consultations, diagnostics, and CL) and vision were taken from electronic medical records. Operational-costs (food, travel, accommodation during consultation), and indirect-costs (only loss of wages) were assessed via semi-structured survey. Cost-per-patient and Benefit-Cost-ratio (BCR) were determined.

Results

A total of 153 patients were included with median (IQR) age of 28 (37-22) years. Total median (IQR) cost per patient for availing the specialty CLs was ₹58,393 (68,565), range: ₹6,300 to ₹298,500. Stand-alone cost of CL was ₹46,500 compared to cost spent on diagnosis (₹6,290), and operational cost (₹5,500). Total median (IQR) cost spent for availing corneal CL and scleral CL was ₹19,790 (22,559) and ₹92,215 (64,132) respectively. BCR was found to be 66:1.

Conclusion

The overall cost of availing specialty CL is nearly 3 times greater than the average monthly income of an Indian. Despite CL costs being predominant, diagnostic procedures and operational costs accounted nearly 20% of the total cost but the benefits of availing the CLs outweigh the cost spent by patients.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1250

TITLE: Comparison of Scleral Lens-Induced Corneal Oedema Post Transplantation with Different Dk Materials and Ventilation Systems after 4 Hours of Lens Wear

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Manikanda Prabhu D / L V Prasad Eye Institute, Telangana.

ABSTRACT BODY:

Purpose

This study aims to compare the magnitude of corneal oedema post-scleral lens wear with low and high-Dk materials and also to compare corneal oedema between fluid- and air-ventilated scleral lenses (SL).

Methods

Ten post-grafted eyes (ten participants; median [IQR] age, 29.5 [19] years) were fitted with low and high-Dk material fluid-ventilated SLs in which 4 eyes were fitted with air-ventilated SLs. Overall corneal thickness and epithelial thickness across different zones was measured using Cirrus® 6000 HD-OCT (Carl Zeiss. Meditec, Inc.) before and after 4 hours of SL wear. Central fluid reservoir thickness (FRT) was measured using an in-built OCT software caliper tool. Visual acuity was recorded before and after 4 hours of scleral lens wear.

Results

The overall central corneal oedema with high-Dk material (median [IQR] - 4.13% [3.99%]) showed significant reduction compared to low-Dk material (5.72% [5.98%]) ($p = 0.03$). The difference in visual acuity after 4 hours of scleral lens wear showed significant change between low-Dk and high-Dk material ($p = 0.01$). FRT was not statistically different between low-Dk and high-Dk lenses ($p>0.05$). No correlation was found between endothelial cell density/cell count and corneal oedema after scleral lens wear. Post hoc Wilcoxon signed rank test showed significant reduction in corneal oedema compared to low and high-Dk materials.

Conclusion

Scleral lens-induced corneal oedema is greater in grafted eyes with low-Dk material and varies based on the choice of higher Dk material and ventilation system.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1270

TITLE: Visual Rehabilitation using Gabor patch technique (RevitalVision) in patients with Stargardt disease-Interim Report

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Suvetha K / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

To assess the effect of Gabor patch stimulation on visual acuity and contrast sensitivity in patients with Stargardt's disease.

Methods

A prospective interventional study included patients diagnosed with Stargardt's disease, aged 12-30 years, with stable visual acuity (VA) 6/18-6/60 in last 6 months. After a comprehensive ophthalmic examination, participants underwent basic binocular vision assessment, contrast sensitivity and Quality of life (QoL) questionnaires using (LV Prasad-Functional Vision Questionnaire/National Eye Institute Visual Functioning Questionnaire-25). Vision rehabilitation therapy was given using Gabor patch based software (RevitalVision) for 60 sessions, with follow-up assessments conducted after every 20 sessions.

Results

Twelve participants were included in the study, (mean(SD) age: 18.91±4.85 years), of whom 8(66.67%) were females. Out of 12, 5 participants completed all 60 sessions. Mean(SD) distance VA improved from 0.70±0.18 and 0.73±0.15 to 0.59±0.18 and 0.59±0.15 log MAR in the right and left eye. Near VA improved from 0.26±0.09 and 0.24±0.05 to 0.20±0.12 and 0.18±0.08 log MAR in the right and left eye. Mean reading speed improved from 56.91±49.90 to 65.75±36.44 words per minute. Mean contrast sensitivity, measured at 6 cycles per minute, improved from 0.91±0.30 and 1.10±0.51 to 1.32±0.38 and 1.41±0.46 log units in the right and left eye. The mean QoL score improved from 54.80±13.03 to 50.33±17.90. The mean stereopsis, measured using Wirt circles, improved from 1314±1544.95 to 91±76.79 arc seconds. The near point of convergence and accommodation, measured with an accommodative target, remained stable in both pre- and post-assessment (p=0.655).

Conclusion

Gabor patch technology could benefit Stargardt's disease patients as visual rehabilitation tool.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1272

TITLE: Quality of life assessment of subjects with colour vision deficiency and Construction of Questionnaire to assess the impact of colour vision deficiency at work

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Pavithra P / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

This study aim at assessing the Quality of Life of colour vision defective subjects at various occupational set up.

Methods

A cross-sectional study included subjects who visited Sankara Nethralaya occupational optometry services or occupational optometry camp. Colour vision defective subjects were screened using Ishihara followed by which pre validated CVD-QOL (Colour Vision Deficiency- Quality of Life) questionnaire was administered along with subject's consent. The responses were entered into Microsoft Excel, and scores were assigned to the Likert scale responses, ranging from 1 (severe problem) to 6 (no problem). The option "not applicable" was not assigned any score. Overall QOL scores and QOL scores for each domain of the questionnaire were then calculated.

Results

The number of colour vision defective subjects included in the study was 53 (4 protan (7.5%), 49 deutran (92.4%)). The subjects were from various occupations, such as drivers (5, 9.43%), engineers (7, 13.2%), IT/software employees (3, 5.6%), management/administrative workers (10, 18.8%), optometrists/ophthalmologists (5, 9.2%), sculptors/fine artists (2, 3.7%), and other occupations (17, 32%) including mechanics, housekeeping, hairdressers, and labour. No significant difference was noted in the QOL scores among subjects with protan and deutran defects (P = 0.57). The overall QOL score was found to be 5.49±0.06. The mean QOL scores for all three domains were 5.48±0.27 (lifestyle), 5.39±0.17 (emotions), and 5.55±0.161 (work).

Conclusion

QOL scores indicate that colour vision deficiency has a less impact on Quality of life of these subjects in all three domains lifestyle, emotions and work.

Scientific Session Oral abstracts
Original Research – Regular

ABSTRACT ID: 1277

TITLE: Comparison of ocular wavefront aberrations obtained from a custom-designed binocular adaptive optics vision simulator with commercially available aberrometers

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ketakee Jain / L V Prasad Eye Institute, Telangana.

ABSTRACT BODY:

Purpose

To compare the magnitude of wavefront aberrations obtained from a custom-designed binocular adaptive optics vision simulator (BAOVS) based on Hartmann-Shack principle with two commercial wavefront aberrometers (iTrace®; Tracey Technologies, USA; ray tracing principle and irx3TM; Imagine Eyes, France; Hartmann-Shack principle).

Methods

The wavefront aberrations of both eyes of 10 visually healthy controls (mean±1-SD age: 26.7±2.31yrs) and 10 mild to moderate keratoconic cases (25.1±6.17yrs) was obtained thrice on each aberrometer following pupillary dilation, in random order. The wavefronts, scaled to a constant pupil diameter for each subject (3.81-6.5mm across participants), were quantified as the root mean squared deviation of lower plus higher-order (till 5th order) (RMStotal) and only higher-order Zernike coefficients (RMShoa).

Results

The mean difference (±95% limits of agreement) of RMStotal in controls and cases was 0.03µm (-0.82 to 0.87µm; p=0.95) and 0.61µm (-2.29 to 3.52µm; p=0.31), respectively, between BAOVS and iTrace and -0.51µm (-1.44 to 0.43µm; p=0.28) and -0.90µm (-3.89 to 2.09µm; p=0.21), respectively, between BAOCS and irx3. The equivalent values for RMShoa were -0.12µm (-0.34 to 0.10; µm; p=0.01) and -0.07µm (-0.71 to 0.57µm; p=0.70), respectively, between BAOVS and iTrace and -0.08µm (-0.27 to 0.11µm; p=0.09) and -0.24µm (-1.01 to 0.52µm; p=0.25), respectively, between BAOVS and irx3. The mean difference showed no systematic change with the average RMS deviation in any comparison.

Conclusion

Estimates of wavefront aberrations become variable when compared across different instruments, especially in eyes with increased optical distortions. Thus, care should be exercised when comparing such measurements across instruments in clinical/research settings.

ABSTRACTS

Scientific Session Oral Case Report – Student

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1135

TITLE: Vascular intricacies: unraveling the impact of carotid cavernous fistula on vision

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Saba Fathima / Dr Agarwal's Institute of Optometry, Tamil Nadu.

ABSTRACT BODY:

Background

Carotid-cavernous fistula (CCF) results from an abnormal vascular connection between the internal or external carotid artery and venous channels of the cavernous sinus, impacting eye.

Case Presentation

A 11-year-old female presented with redness, pain, watering, and swelling in her Left eye (LE) for 1 day. Her history was unremarkable; she had uncorrected visual acuity (UCVA) of 6/6 in RE and 6/12 in LE. Examination revealed lid puffiness, conjunctival chemosis, and clear cornea in the LE. Allergic conjunctivitis was diagnosed and prescribed antibiotics and lubricants. She reported with tinnitus in the left ear after 2 days. UCVA dropped to 6/9 in RE and 3/60 in LE, IOP RE 14 mmHg, and color vision (17/17 in RE and 4/17 in LE). In LE there is proptosis accompanied by an audible bruit, tense periorbital oedema, lagophthalmos, conjunctival congestion, chemosis, corneal exposure, quiet AC with RAPD, restricted EOM in all gazes without diplopia. MRI confirmed CCF in LE and underwent conventional cerebral angiogram under GA and endovascular coiling. At 1 month review, she reported occasional tinnitus. Hertel's exophthalmometer showed 14-91-18 mm; BCVA was 6/6 (RE) & 6/18 (LE). LE revealed proptosis, complete ptosis, reduced corneal sensation, 3rd and 6th nerve palsy with fixed pupil (LE). Post 2 months of surgery, pupil responded sluggishly, partial 3rd nerve palsy, reduced proptosis and improved ocular motility in LE. With co-management with the neurologist, she is advised regular follow-ups.

Conclusion

The case reports impact of CCF on vision, mitigate risk of complications, prevent further consequences on timely intervention.

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1170

TITLE: Irvan Syndrome: Decoding a neurological mystery

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sameena Siddiqah / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

During the process of aging, it is normal to notice changes in vision. Some problems are often easily corrected with Glasses and Contact-lenses. However, there are variety of eye diseases that increases as we grow older which can become more serious. Here is an example of such rare condition,that can save sight when diagnosed effectively.

Observation

This is a case of 50years-old female, with C/O blurred vision for distance and near in OD for past-15days.The patient had history of Polyarthritis and was under-medication for 3months. During her 1st-visit, her distance VA in OD:2/60(PH:NIP), OS:6/6 and near VA in OD:NAR OS:N12. Fundus-examination revealed, Oedematous optic-disc with blurred margins, dilated and tortuous vessels presenting vasculitis and hard exudates were observed. The patient was advised to take OCT and CFP in OD. She was diagnosed with Irvan syndrome in OD, a very rare ocular condition. She was advised to take Steroids as the signs represented stage-1of Irvan syndrome. To reduce Macular-oedema, Anti-VEGF injection was advised in OD. When patient came for review post-operatively, OCT(OD) was repeated, the disc oedema was remarkably reduced and her VA was improved to 6/12. The patient was highly satisfied and comfortable with the visual-outcomes.

Conclusion

Geriatric patients should be advised to consider for Irvan syndrome as differential diagnosis for sudden loss of vision by performing OCT and CFP in addition to cataract-evaluation. Considering the prevalence of geriatric-diseases, a routine eye-examination must be made necessary. EARLIER THE DETECTION, BETTER THE OUTCOMES.

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1172

TITLE: Cough-Induced Retinal haemorrhage: Unveiling the Ocular manifestation of Forceful Coughing

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Siva Sakthi S / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Retinal hemorrhage or bleeding in the retina, can be associated with various systemic illnesses. However a general illness can also explores the scenario of retinal haemorrhages.

Observation

This is a case of a 18-year-old female who came to our OP with a C/O unilateral blurring of vision in her OS with her glasses associated with a complaint of feeling a moving object in front of her OS. Past ocular history shows that she has been using a spectacle for 10 years. Her UAVA during the visit was OD:6/36,OS:6/60 at distance, and OD:N6,OS:N6 at near, with pinhole improvements of OD:6/6,OS:6/12. Her VA with previous glasses in OD is 6/6 and 6/12 in OS. She had an episode of severe cough and fever, and had medications for the noted illness. On slit lamp examination, her anterior segments in OU remain normal, and fundus examination shows retinal hemorrhages. The first-line treatment was planned to observe for one week. On her second visit, the patient had a complaint of red spots in front of her eyes, and the hemorrhages remained the same. Then this case was discussed with a vitreo-retinal surgeon and a plan for anti-VEGF(RAZHUMAB).On her third visit, she came for a post anti-VEGF injection where her BCVA was OU:6/6 at distance and OU:N6 at near. Fundus examination shows reduced hemorrhages.

Conclusion

While the relationship between coughing and retinal hemorrhages is uncommon, healthcare professionals should consider the possibility, particularly in patients with predisposing systemic conditions. Timely diagnosis and management are crucial for preserving visual function and preventing further complications.

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1187

TITLE: Soccer sight: Battling pigmentary glaucoma

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Lingeshwaran A / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Pigment dispersion glaucoma, also known as pigmentary glaucoma (PG), is classified as a form of secondary open-angle glaucoma. In PG, there is an increase in intraocular pressure (IOP), accompanied by visual field abnormalities and damage to the optic nerve.

Observation

A case of 24 years old male who came to us with the C/O defective distance and near vision since 6 months (OU). He C/O rainbow-colored haloes around lights with pressure sensation in OU for several months. The symptoms lasts once every few weeks and they were sometimes provoked by playing soccer. He was using Timolol e/d in OU since 1 month. His UAVA in OD is 1/60 with NIP and OS is 6/36 with PH 6/6. For near OD NAR and in OS N12. IOP values in OD: 45, 46, 50mmHg and in OS: 45,44mmHg and with GAT OD: 42mmHg and OS: 38mmHg. Angle evaluation revealed OD: TM 4+, no PAS and OS TM 4+, no PAS. Anterior segment evaluation resulted in Krukenberg Spindle in Cornea (OU). Fundus examination revealed 0.8 CDR in OU. The above signs confirmed the diagnosis of pigmentary glaucoma. The patient was advised to take AGM. On his next visit, his BCVA OD:6/18 and OS:6/9, for near OD: N18 and OS: N6. His GAT values in OD: 20mmHg and OS 12mmHg. Further surgical management was advised for better visual outcomes.

Conclusion

The case report suggests that vigorous physical activity may increase pigment release, leading to temporary blockage of the trabecular meshwork and consequently raising intraocular pressure and its related symptoms.

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1218

TITLE: Optimizing Visual Rehabilitation post-traumatic cataract surgery: An integrated approach with amblyopia therapy

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Aparna S / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Advancements in intraocular surgery have improved visual outcomes, but combining these techniques with amblyopia therapy for macular stimulation holds promise for further enhancement. The aim is to explore the potential synergies between surgical interventions and vision therapy for personalized vision rehabilitation.

Observation

A 13 years old male came with a C/O cracker's injury in OS. He had no history of systemic illness and no ocular history of surgery. His UADVA in OD:6/6 and OS:CFCF and his UANVA OD:N6 & OS NAR. The slit lamp exam for OD was within normal limits and OS had conjunctival congestion, corneal hazy, DM fold, punctate epithelial erosion, anterior chamber hyphema, pupil is mid dilated and traumatic cataract. The B-scan reports indicated vitreous opacity in OS. Fundus examination OD is normal and there is no view in OS. He was prescribed with medication such as Predplus e/d,soft visc e/d,homide e/d,Zobra e/d ,genfour e/d ,T acetab,T.Caline for 3 days and advised for review after 3 days for cataract surgery with vitrectomy for OS. After 3 weeks,Vitrectomy + cataract surgery was performed. Following the post-surgery review, there is positive improvement in vision OD 6/6 and OS 6/ 36 and unaided near vision OD N6 and OS N12. We recommended a 10day course of amblyopia therapy. After amblyopia therapy, the BCVA improved to 6/ 12 in OS. The patient was satisfied with the improvement in vision.

Conclusion

Useful vision can be regained with timely proper surgical intervention and posterior chamber intraocular lens implantation. Early treatment yields better results.

Scientific Session Oral abstracts
Case Report – Student

ABSTRACT ID: 1219

TITLE: A Visionary Conclusion to Myopia Progression

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Dhanasekar C B / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

The prevalence of myopia has been increasing globally, especially in younger populations, leading to a growing interest in finding ways to manage its progression. One such approach involves the use of HALT LENSES designed to address myopia progression.

Observation

A case of 5years old female who came for regular eye check-up. Her PG power in OD: -2.25/0.75×180, OS: 2.25/-0.50×180. After subjective correction OD: -2.25ds/0.50dc×180, OS:-2.25ds/0.75dc×170 with BCVA of 6/9 (OU). On her next visit, the patient was comfortable with her old glasses and she was advised to do exercises with cherioscope. On her next visit, power gradually increased OD: -4.50/-1.00×180, OS:-4.75/-1.00×160. The BCVA was 6/9(p) (OU). After a year, when the patient came for review her power increased to OD -5.50/-0.50×10, OS: -5.25/-0.75×180 OU:6/9(p). Fundus examination revealed normal. Patient was advised with Myopin e/d (OU).On her next visit, amblyopia therapy was suggested. Two years later, the patient revisited with complaint of blurred vision since two days (OU).The subjective refraction in OD: -5.75/-1.00×180 OS: -6.25/-1.00×170 with 6/6 (OU). Myopia work-up was done along every visit and prescribed with halt lenses. After an year patient acceptance power was OD: -6.25/-0.75×10 vision (6/6) and OS: -6.00/-1.00×170 (6/6) and myopia progression was halted.

Conclusion

Highly aspherical lenslets Target (HALT) have indeed shown promise in delaying the progression of myopia. These lenses are designed to provide more peripheral defocus, which may help slow down the elongation of the eye that leads to myopia. Myopia tends to develop and progress during childhood, its important to identify interventions earlier.

ABSTRACTS

Scientific Session Oral

Case Report – Regular

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1119

TITLE: Visual snow symptoms following COVID-19 illness.

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Sathishkumar S / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

To report occurrence of peculiar visual symptoms of visual snow syndrome in patients following COVID-19 disease.

Methods

We report 5 patients who suffered from mild form of COVID-19 disease who after recovery presented with peculiar visual symptoms. These patients underwent detailed history taking with complete ophthalmic and neurologic checkup and investigations.

Results

Five patients with age ranging from 10- 54 years were seen 4-24 months after a self-reported mild attack of COVID-19 disease. The diagnosis was confirmed on an RT-PCR test for SARS- CoV -2 virus. The peculiar symptoms reported were seeing constant static like visual snow, palinopsia, light sensitivity and dizziness in bright light. The visual acuity was 20/20. One patient was known to have sectoral retinitis pigmentosa and another had undergone scleral buckle surgery for retinal detachment 25 years ago. The ocular examination was normal in the other 3 patients. None had any neurologic abnormality or history of migraine. Patients were explained about the benign nature of these symptoms and were counseled.

Conclusions

COVID-19 disease can act as a precipitating cause for visual snow syndrome. Awareness of this syndrome can help the eye care professional counsel these bewildered patients.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1167

TITLE: Eye the window to the heart

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Sanjay H Mehta / Tower Optics, Tamil Nadu.

ABSTRACT BODY:

The role of an Optometrist is evolving from just being a Vision Specialist to a Human Health Specialist. Arteriolosclerosis is a type of vascular disease wherein the Arteries carrying oxygen away from the heart becomes damaged from factors such as high blood pressure, diabetes, high cholesterol and certain genetic influences.

The retina is a unique and fascinating anatomical structure. It's the only part of the central nervous system we can observe noninvasively, along with its associated retinal, systemic and cerebrovascular pathologies. When Viewed through Direct ophthalmoscopy, Indirect bio microscopic ophthalmoscopy, Ocular photography, Optical coherence tomography (OCT), fluorescein angiography or OCT angiography, qualitative and quantitative retinal observations can reveal unfolding, worsening or impending retinal, systemic, neurologic or cerebrovascular disease,

A 54 Year Old Male patient came to my Optometric clinic with chief complaint being blurred vision with his 6 months spectacles. After doing the regular checking procedures was examined through Non Mydriatic Fundus Camera & Direct Ophthalmoscope found to have Arteriosclerotic changes in his left retina and after collecting his systemic complaints was advised an Cardiologist's opinion, who diagnosed a heart condition known as "WIDOW MAKER" in my patient.

His heart had 75% blockage its biggest artery the Left Anterior Descending Artery which sends oxygen-rich blood to heart's left ventricle, which in turn pumps it to aorta which sends it to the entire body, indicative of an impending sudden non revivable cardiovascular fatal attack and thus A HUMAN LIFE WAS SAVED.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1191

TITLE: Scleral lens: A New Paradigm - Cosmesis! –A Case Series

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Ronit Dutta / Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Significance

The case report enlightens the importance of scleral lenses for improving cosmesis in eyes with ptosis.

Purpose

Ptosis is drooping of the upper eyelid which can be neurological, myogenic, traumatic, mechanical, or progressive exopthalmoplegia. Ptosis correction is sometimes challenging possibly due to its progressive nature. This case report emphasizes the other dimension of Scleral fitting the patient.

Case

This case series reports 3 cases of ptosis managed with scleral lenses. Firstly, a 50-year-old male complained of drooping of the right eye and poor visual quality for distant objects. The patient's previous ocular history reports that he underwent Laser vision correction in both eyes and ptosis correction in the right eye. The palpebral fissure height with scleral lenses increased to 11mm with scleral lenses which was 10mm at baseline measurement. Similarly, the second case is of a patient was 65 years old lady who had unilateral ptosis which was managed with a scleral lens. The palpebral fissure height increased to 7mm with scleral lenses which was 0mm previously. Lastly, a 35-year-old male patient was diagnosed with Steven Johnson syndrome and has blepharoptosis in the right eye. Scleral lenses were tried with which the PFH improved to 8mm from 4mm.

Conclusion

The case report underscores the potential utility of scleral lens as a noninvasive option for ptosis management particularly in cases where surgical intervention may not be desirable or feasible. The scleral lens offers an innovative approach to address both the aesthetic and functional aspects and ultimately improve the quality of life.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1254

TITLE: Transforming Lives: Scleral Contact Lenses as a Game-Changer for Post-Keratoconus Patients

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ushiya Paulni.C/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Scleral lenses are large diameter lenses which rest over the sclera, unlike the conventional contact lenses which rest on the cornea. Scleral contact lenses are used for high irregular astigmatism as seen in various corneal ectatic diseases such as Keratoconus, Pellucid marginal degeneration, or/and as liquid bandage in ocular surface disorders. The goal is to show that ScCL are viable option in achieving excellent vision and comfort for post keratoconus patients.

Observation

A 17 year old male came with the complaint of blurred distance and near vision in OS>OD since 2 months. He had a normal birth history and no history of systemic illness and drug allergies. No previous ocular history and family history were noted. Preliminary eye exam was done to him and his UAVA was 6/9 in OD and 6/24 in OS with pinhole improvement of 6/6 in OD and 6/12P in OS. Meanwhile his near UAVA was N6 in both eyes. The Auto refractometer showed high cylinder and advised for corneal topography.

The patient was diagnosed as Keratoconus in OS and advised for C3R + TREK. After surgery the vision in OS was 6/24 and 6/12 with pinhole. He was advised for Rose K lens trial and was not comfortable with vision and fit, then suggested for ScCL trial with OS: -3.00Ds, BC: 7.67, TD:16.9, Sag: 4.57 and Optic Zone: 8.5mm Over refraction of +3.50Ds/-0.75Dcx110 (6/6-2st,N6) Final Power of ScCL in OS: +0.50Ds/-0.75Dcx110 The patient was very much satisfied and comfortable with the fit and binocular vision.

Conclusion

As a valuable tool in the postoperative phase, these lenses offer not only visual rehabilitation but also contribute to the overall satisfaction and quality of life for individuals who have undergone keratoconus surgery.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1263

TITLE: Treatment approaches for bitemporal hemianopia

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Shakthi Keshini/ The Sankara Nethralaya Academy, Tamil Nadu.

ABSTRACT BODY:

Aim

To present the management strategies used for a patient with Bitemporal hemianopia and Hemislide phenomena.

Observation

A 36-year-old male presented to a Neuro-optometry clinic with complaints of binocular horizontal diplopia while reading and blurring of vision since 1 year due to left optic nerve injury. His Humphrey Visual Field reports showed bitemporal hemianopia in both eyes with macular involvement in the left eye. His best corrected visual acuity (BCVA) was 6/6 and 6/24 in the right and left eye respectively, cover test showed left exotropia with 20Δ Base in (BI) with 8Δ Right hypertropia for distance and 25Δ BI with 10Δ Right hypertropia for near. A developmental eye movement test revealed type II behavior, reduced saccades and pursuits, and normal reading speed. He was prescribed with sectoral stick-on prism in the right temporal region. During follow up he had difficulty in tracking letters in the laptop while working. Eye movement therapy includes Michigan tracking and pyramid saccades were prescribed. He was reviewed after 3 months and showed much improvement in eye movement function and tracking.

Conclusion

Patients with Bi-temporal hemianopia with exotropia experience crossed diplopia due to the lack of retinal correspondence in the nasal fields of the eye. Sectoral prism benefits non-homonymous hemianopia by expanding the field of view when gazing into the prism. It also aids in improving saccades and pursuits during therapy.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1271

TITLE: Comprehensive approach to chronic progressive external ophthalmoplegia with suspected Kearns-Sayre Syndrome - A rare mitochondrial abnormality

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Varsa Harinya/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Introduction

Kearns-Sayre syndrome (KSS), a subtype of chronic progressive external ophthalmoplegia (CPEO), typically manifests before the age of 20. This case report outlines the clinical presentation and underscores the importance of interdisciplinary approach for comprehensive examination and management.

Case details

A 25-year-old female presented with a long-term history of droopy eyelids and diminished vision. The ocular history involved frontal slings in both eyes, with prior suspicion of KSS. No systemic complications were present. Best corrected visual acuity(BCVA) was -12.00/-2.00*20 (6/60) and -11.50/-2.00*170 (6/60) for the right and left eyes. Severe ptosis, extraocular motility restrictions, sluggish reactive pupils and color vision defects were noted. Fundus examination showed myopic discs with temporal pallor. Evaluations, including MRI, ERG, Retinal imaging and neurologist consultation, confirmed the diagnosis and assessed the extent of ocular damage. Consequently, the patient was referred to contact lens and low vision department for further management.

Management

Supportive care is crucial in managing KSS. Necessitating referrals to departments like contact lenses, binocular vision, low vision aids, specialists, and potential surgical interventions based on disease presentation. Given the patient's high myopia and diminished BCVA, PHEMA contact lenses were tried, resulting in vision of 6/36+1. The patient was motivated to use contact lens by improved visual clarity and self-confidence over spectacles. In the low vision department, a monocular telescope and contrast enhancement measures were prescribed, promoting self-confidence and employability.

Conclusion

Comprehensive care, addressing both ocular and systemic aspects is important. Despite the absence of systemic issues, referrals to cardiologists, neurologists, and genetic counselors are crucial for a holistic evaluation.

Scientific Session Oral abstracts
Case Report – Regular

ABSTRACT ID: 1273

TITLE: Dual functionality of Bandage contact Lens

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Akshaya C Balakrishnan/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Introduction

A bandage contact lens (BCL) is a therapeutic lens used to promote healing and provide comfort in conditions like epithelial defect, post-surgical healing, corneal ulcers, dry eye treatment. Ideally, BCLs have plano power and are not meant for vision correction. But this case report demonstrates the possibility of BCL with refractive correction to maintain comfort and also provide vision.

Case details

A 59 year old female presented with a complaint of diminution of vision in both eyes and dryness of eyes since 3 months. Her past ocular history reported Steven Johnson syndrome since 3 months. There was no history of any surgery or injury. The presenting unaided visual acuity was 6/18, 6/24 for distance in right eye and left eye respectively and N24@20cm for near in both eyes. The slit lamp examination revealed keratinization of lids, symbhlepharon and opacities in both eyes. The patient underwent mucous membrane graft surgery during the follow ups. The patient was on BCL for continuous follow-ups. After 6 months, the vision dropped to CF @1m and with medications it improvedto6/15with +16.00 DS in right eye. Left eye was stable after Penetrating Keratoplasty. The patient was advised for BCL with refractive correction as less vision hampered her daily life. A BCL with 8.6 base curve, 14mmdiameter and +8.00D power of hydrogel material was dispensed with a vision of 6/18 with effort.

Conclusion

The patient was highly satisfied with the BCL as it served dual role by combining the therapeutic benefits with the ability to correct vision.

ABSTRACTS

Scientific Session Oral

Poster

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 107

TITLE: Impact of optical blur and audio-visual interaction on visual function

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Srilakshmi R/ Sri Jayendra Saraswathi Institute of Optometry, Tamil Nadu

ABSTRACT BODY:

Aim

To evaluate the impact of Audio-visual interaction on visual cognitive function among subjects with normal and simulated visual impairment

Methods

Fifty normal subjects participated and underwent preliminary evaluation. Only subjects who read 6/6 in the Snellen chart were considered. Cognitive measure likes SRT, CRT, VA and VSI were measured in normally illuminated room, on a calibrated monitor and with Traffic sound annoyance. The measures were recorded for normal and simulated visual impairment subjects with and without audio distractions.

Result

Of the fifty samples, (16 males and 34 females), the age mean and SD were ±20.76 and ±2.04 years. The two-way ANOVA results displayed SRT F value at $F(1,196) = 0.66$ $p = 0.41$, CRT $F(1,196) = 1.34$ $p = 0.24$, VA $F(1,196) = 0.04$ $p = 0.83$, VSI for valid cue $F(1,196) = 0.06$ $p = 0.79$ and VSI for invalid cue as $F(1,196) = 0.10$ $p = 0.74$. Additionally “means” in these conditions are same. The p value was > 0.05 therefore inferring there was no statistically significant impact on cognitive measures due to blur or audio annoyances.

Conclusion

Audio visual interaction does not significantly impact the reaction time, attention or Visuo-Spatial Integration in subjects with vision impairment in younger population.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 108

TITLE: Pre-Corneal Tear Film Evaluation Among Eye Cosmetic Users

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Nikhita R Bhat/ Nethradhama School of Optometry, Karnataka

ABSTRACT BODY:

Background

The use of eye cosmetics to enhance the appearance of the eyes has become a common practice for many people. However, the effect that these cosmetics can have on ocular health, particularly the pre-corneal tear film, is of concern and clinical importance. The purpose of this study was to compare the differences in tear film parameters among eye cosmetic users and non-users.

Objectives

• Evaluation of tear film quality and quantity among eye cosmetic users and non-users pre and post-15 days.

• Comparison of tear film parameters among eye cosmetic users and non-users.

• To assess the upper and lower meibomian gland loss pre-usage of eye cosmetics and post-usage of eye cosmetics.

Methods

A total of 90 subjects were enrolled in this study with ages between 18 to 30 years. A comprehensive eye examination was performed on all subjects. Study groups included Group M (Makeup Group) and Group NM (Non-Makeup Group). Group M was instructed to use eye makeup for a period of 6-8 hours daily for 15 days and Group NM was instructed to not use any eye cosmetic product for 15 days. Assessment of tear film parameters was conducted pre and post-15 days. The parameters that were assessed using Tearscope included NITBUT (Non-Invasive Tear Break-Up Time), TMH (Tear Meniscus Height), and Meibography.

Results

A total of 90 subjects were enrolled in our study who were equally divided into two groups of 45 subjects each, Group M being the makeup group and Group NM being the non-makeup group. The mean age of 21.59 ± 2.848 years was enrolled. A statistically significant drop was seen in the NITBUT ($p<0.001^*$) and TMH ($p<0.001^*$) in the Makeup Group (Group M) post-usage of eye cosmetics for 15 days. The post-15 days TMH for the non-makeup group (Group NM) also showed a statistically significant increase with a p-value $p<0.001^*$. The study also showed that the NITBUT and TMH were significantly lower in Group M when compared to Group NM with p-values: $p<0.001^*$ and $p<0.001^*$ respectively. There were no significant differences in the meibomian gland loss percentage in Group M ($p = 0.847$ in OD and $p = 0.669$ in OS) and Group NM ($p = 0.296$ in OD and $p = 0.213$ in OS).

Conclusion

The findings of this study indicate that regular use of eye cosmetics is associated with alterations in tear film parameters. These changes suggest potential implications for ocular surface health and may increase the risk of dry eye disease and other ocular surface disorders among regular users. Further research is needed to investigate the specific ingredients and formulations of eye cosmetics that may

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1108

TITLE: DoaaS (Digital optometry as a Service), the future of optometry service delivery.

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kousar Sidiq/ Forus Health Pvt Ltd, Karnataka

ABSTRACT BODY:

Introduction

Traditional optometry service delivery faces challenges due to the physical accessibility of skilled optometrists in remote locations and increased expectations from subjects for a quick eye checkup at their place of convenience, prompting the exploration of innovative solutions. Digital optometry as Service (DoaaS) emerges as a potential solution, offering comprehensive remote subjective refraction utilizing the capability of the cloud and AI. This study investigates the feasibility and effectiveness of delivering core optometry as a service over cloud infrastructure on the Internet, especially in generating accurate prescriptions and AI assistance for tailoring eyewear choices for improved patient experience.

Methods

The infrastructure involved:

• State-of-the-art digital wearable tunable lens-based subjective refractor controlled by a mobile app for near and far vision tests.

• Cloud based Digital Health Platform for Patient data management, onboarding remote Optometrists, facilitating remote tests, and generating optometrist-approved prescriptions through Audio/Video/Chat based conferencing.

• AI assisted vision chart generation for remote control of chart patterns by optometrists.

• AI assisted augmented reality based user spectacle frame selection and spectacle measurements from just a selfie camera.

The research involved 25 participants. Initial unaided visual acuity measurements for each eye were obtained using a digital chart displayed on a laptop. A qualified optometrist remotely conducted subjective refraction, encompassing spherical, cylindrical, near vision, and binocular testing. Subsequently, participants utilized the AI-powered app for personalized spectacle selection based on facial measurements, inter-pupillary distance, and prescription requirements.

Results

The DoaaS platform facilitated remote optometrists to generate accurate prescriptions by allowing remote control of subjective refractor device and Digital charts. AI-powered spectacle selection provided personalized recommendations based on objective facial analysis and subjective preferences. Over 95% of participants found the AI recommendations to be "very helpful" in choosing suitable frames, and many expressed increased satisfaction with both the aesthetics and comfort of their chosen eyewear.

Conclusion

DoaaS demonstrates the potential for revolutionizing optometry service delivery by overcoming geographical barriers, promoting patient convenience, and enhancing eyewear personalization through AI integration. Further research is warranted to optimize DoaaS protocols and ensure widespread accessibility, paving the way for a future of convenient, personalized, and proven clinical practices.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1109

TITLE: Advancements, challenges, and future directions in the development of comprehensive dry eye assessment tools.

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Aleena saifi/Chitkara School of Health Science, Chitkara University, Punjab

ABSTRACT BODY:

The current landscape of dry eye diagnosis aids is analyzed in this research to summarize and analyze achievements, challenges, and possible future trends. Due to the high incidence of dry eye syndrome with multifactorial causes, exact and standardized examination is critical for successful diagnosis and treatment. This is a comprehensive review of various assessment measures, including conventional clinical approaches, imaging modalities, and alternative digital systems. This study critically assesses the strengths and shortfalls of each tool by looking at their sensitivity, specificity, availability, and scope in different clinical situations. This research also analyzes the new AI technologies aimed at increasing diagnostic accuracy and predictive capacity. The problems related to standardization, variability among different operators, and patient-reported outcomes are highlighted and a substantial approach to the dry eye assessment is required. Finally, this review identifies promising areas for future studies including the discovery of new biomarkers, incorporation of wearable technologies, and formulation of international standards to achieve uniform performance measures. The goal of this review is to serve as an informative reference for clinicians, researchers, and industry professionals involved in current attempts aimed at enhancing the accuracy and effectiveness of dry eye assessment tests.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1110

TITLE: A Review of NITM Characteristics in Children and Young Adults- an evidence-based update

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Swetha Sellapandiyan/ SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Introduction

Near-induced transient myopia (NITM) is a temporary myopic shift in the far point of the eye following a period of sustained near work. This review aims to provide an evidence-based update on NITM characteristics in children & young adults.

Methodology

Research question was framed using the PEO model. Cross-sectional, cohort, and experimental studies were included. Studies that did not report NITM magnitude, decay time, nature of near task, and viewing distance were excluded. Literature search was conducted in PubMed, Science direct, and Cochrane database of systematic review. Title and abstract screening were performed using the PRISMA checklist. Nature of the near task, near task distance and task duration, NITM magnitude and decay time were reviewed. Fifteen studies were selected and evaluated for Risk of Bias assessment using the Mixed methods appraisal tool (MMAT).

Results

A total of 1366 participants aged between 6-34 years (children and adults) were included. The near task distance varied from 10cm to 40cm across different studies. Task duration ranged from 5 minutes to 2 hours. NITM magnitudes ranged between 0.02D to 0.75D and decay times from 6 seconds to 166 seconds, for different near tasks, Higher NITM magnitude (0.75D) and slower decay time (166s) was noted in Whites, whilst Indian young adults had a faster decay time (6s).

Conclusion

Near task distance and task duration did not show any influence on NITM characteristics. Higher NITM magnitude and delayed decay time was noted for near task with cognitive demand.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1112

TITLE: Cyclodamia in Differential diagnosis of Binocular vision Anomalies

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Devanshi Dalal/ Bapubhai Desaibhai Patel Institute of Paramedical Sciences, Charotar University of Science & Technology, CHARUSAT

ABSTRACT BODY:

Background

Young population frequently experiences non-strabismic binocular vision problems. These defects could significantly hinder children's reading efficiency, disrupting their day-to-day lives, as the prevalence rises with age and near visual demands. The best way to diagnose accommodative spasms is still cycloplegia but, a number of non-cycloplegic methods have been developed to assist in many situations in revealing accommodative spasms.

Aim

The study is aimed to identify the utility of cyclodamia fogging technique in diagnosing binocular vision anomalies.

Method

Cross-sectional observational study was conducted. 30 subjects with the age range of 13 to 30 years were included. All subjects with asthenopic symptoms, near vision issues, and frontal headaches were included. Cyclodamia fogging technique was used in all the subjects. Non strabismic binocular vision evaluation was done.

Results

Out of 18 females, 5 were found to have low myopia, 4 with mild hyperopia and others were emmetropic. The subjective refraction with cyclodamia and post-mydriatic tests was statistically non-significant. Among the symptomatic population, pseudo-convergence insufficiency (34%) was found to be the most prevalent. Accommodative insufficiency (20%) was found to be the second-highest prevalent binocular vision anomaly. It was followed by accommodative excess (14%) and convergence insufficiency (13%).

Conclusion

Thus in routine practice, use a questionnaire to differentiate asthenopia, using cyclodamia fogging over the classic fogging technique. The minimum test battery includes the monocular accommodating facility, the difference between distant and close phoria, and the near point of convergence with a penlight and red

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1113

TITLE: Investigating fixation stability in a patient with amblyopia: A case report

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Shakthi Pradheepa P/ L V Prasad Eye Institute, Telangana

ABSTRACT BODY:

Background

Amblyopia is a neurodevelopmental disorder that arises as a consequence of binocularly decorrelated visual experience during the critical period of visual development. Fixation instability is known to be more pronounced in the amblyopic eye. Therefore, one could hypothesize that the fixation stability should improve in the amblyopic eye with treatment. We investigated this hypothesis.

Case description

A 28-year-old male, previously operated for congenital esotropia reported to our clinic with asthenopic symptoms when reading. Patient was also motivated to improve the vision in his right eye. His right and left eye acuity were 20/60 and 20/20 respectively. He had 4-prism diopters eso deviation for near. Patient had a suppression scotoma of size 5.2°, measured using VTS4 with simultaneous macular perception target. His stereoacuity was worse than 400". Fixation stability was measured using Eyelink 1000 eye tracker (500Hz) when the patient viewed a fixation target for 1-minute. Recorded were analyzed fitting a bivariate contour ellipse area (BCEA). This measure was done pre-, during, and post-vision therapy exercises.

Outcome

BCEA measure of fixation reduced in the post-therapy visit (0.73 deg2) when compared to the pre-therapy visit (1.56 deg2) in the amblyopic eye. Visual acuity improved by one line (20/50) in this eye. Suppression scotoma size reduced to 0.5°. No improvement in stereoacuity was observed.

Conclusion

Fixation instability as measured with BCEA can be an additional marker to monitor the progress of the amblyopic eye with vision therapy. An eye tracker can be used to assess this fixation instability.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1116

TITLE: Beyond Braille: Exploring the Potential of Virtual Reality in Education for Corneal Anaesthesia Syndrome - A Case Study

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Khadija Asgarbhai Dudhiyawala/ Bapubhai Desaibhai Patel Institute of Paramedical Sciences, Charotar University of Science & Technology, CHARUSAT

ABSTRACT BODY:

Congenital Corneal Anesthesia syndrome (CCA) is an extremely rare condition where it causes numbness of the cornea. The parents of a 13-year-old male child present with a complaint about difficulties in learning. The child has a history of Corneal Anaesthesia Syndrome with Visual Impairment. History of using RSM books in education. When it comes to schooling, parents who want to provide their child a conventional education over Braille. Home schooling is the child's only option as no regular school accepts him due to his vision impairment. Parents who desired to see their child become independent rejected feedback via Audio and tactile techniques. Considering that he was thirteen, he was still in sixth grade and struggled with his studies. Thus implemented a Virtual Reality Technology to enhance a child's learning experience by using his potential visual acuity. As the child only knew the English alphabet verbally and was unable to identify and write it in a book, he was trained to identify letters and associated things beginning with a specific letter by displaying him a random alphabet rather than in sequence. After VR technology-based education sessions, a child was able to differentiate letters and objects and understand concepts more clearly than before. Thus we can conclude that virtual Reality (VR) technology can be a solution for children with low vision, as it offers a revolutionary approach to low vision rehabilitation.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1117

TITLE: The impact of degraded binocularity on functional depth vision in keratoconus

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Christa Mahima Bhengra/ L V Prasad Eye Institute, Telangana

ABSTRACT BODY:

Purpose

To investigate, 1) the impact of degraded binocularity in keratoconus on a depth-related visuomotor task that emulates complex activities of daily living and, 2) the change in task performance with contact lens (CL) wear, commensurate with their stereoacuity.

Methods

24 keratoconic cases (17–34 yrs) and 26 age-similar controls passed a metal hoop through three variants of a buzz wire convoluted in depth under binocular and monocular viewing conditions, in random order. Task accuracy and speed were calculated from the frequency of contact between the hoop and wire (signaled by audio buzzes) and from the total task duration (adjusted for the time spent in error), respectively. Random-dot stereoacuity was determined using standard psychophysics.

Results

The binocular superiority of task accuracy in cases, relative to monocular viewing [binocular advantage: 1.59 (1.08 – 2.78)], was only half of what was observed in controls [2.68 (1.67 – 5.54)]($p=0.01$). Task accuracy improved with CL wear ($p<0.01$), but did not reach the level of controls. All these measures were poorly correlated with the participant's stereoacuity and disease severity ($r\leq0.33$; $p\leq0.41$, for both). Unlike controls who slowed down when inaccurate ($p=0.001$), cases moved at similar speeds irrespective of their accuracy ($p=0.72$).

Conclusions

Functional depth vision is deficient in keratoconus, with the degraded binocularity offering lesser advantage to binocular task performance than in controls. While task performance improves with binocularity, it may not be predicted from standard measures of stereoacuity.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1118

TITLE: Combined Cataract Surgery with Anti-VEGF Injection Vs Dexamethasone Implant for Diabetic Macular Edema - A Comparative Study

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Sathishkumar S/ Sankara Nethralaya, Tamil Nadu

ABSTRACT BODY:

Purpose

This study aimed to compare visual and anatomical outcomes of combined cataract surgery with Anti-VEGF therapy or Dexamethasone Implant in patients with Diabetic Macular Edema (DME).

Methods

This was a retrospective comparative study conducted at tertiary eye care hospital between January 2022 and June 2023. We analyzed Electronic Medical Records of patients with pre-existing DME who underwent combined cataract surgery with Anti-VEGF or Dexamethasone Implant. 62 and 22 eyes underwent combined cataract surgery with Anti-VEGF (n=62) or Dexamethasone Implant (n=22). Best Corrected Visual Acuity (BCVA) and Central Foveal Thickness (CFT) were measured at baseline, and 1, 3 and 6 months postoperatively.

Results

Both groups showed significant improvement in BCVA at 1 month, but only the anti-VEGF group maintained stable improvement at 3 and 6 months (p=0.044). At 1 month, dexamethasone showed greater CMT reduction (p=0.016), but long-term outcomes were similar between groups. There was no significant difference or rise in intraocular pressure between the groups.

Conclusions

For DME patients with cataract requiring surgery, both Anti-VEGF and Dexamethasone offer good visual and anatomical outcomes in the short term. Anti-VEGF provides better long term visual outcome compared with Dexamethasone for patients with DME undergoing combined cataract surgery. However, Dexamethasone might be a suitable option for patients with initial, severe edema.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1122

TITLE: Agreement and correlation between corrected intraocular pressure and corneal biomechanical intraocular pressure in keratoconic eyes

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Reshma S Suresh/ Sankara Nethralaya Academy, Tamil Nadu

ABSTRACT BODY:

Purpose

To analyse the agreement and correlation of intraocular pressure (IOP) corrected with central corneal thickness (CCT), minimum corneal thickness (MCT) values between the corneal biomechanical IOP (Corvis IOP).

Methods

In this retrospective analysis subjects with keratoconus (KC), who underwent IOP by Goldmann applanation tonometer (GAT), investigations Corvis ST (Oculus, Wetzlar, Germany) and anterior segment optical coherence tomography (CSO, MS-39) were enrolled. GAT IOP is corrected with CCT (IOPCCT) and MCT (IOPMCT) and compared with Corvis IOP values. The agreement analysis of was performed by Bland–Altman plots for all IOPs.

Results

Forty-one eyes (mean age: 26.85 ± 11.85, Gender ratio of M:F 78:22) were included in the final analysis. The mean differences in IOP values between GAT IOP and Corvis IOP (1.64 ± 3.22 mmHg), IOPCCT and Corvis IOP (-5.23 ± 4.12 mmHg) and IOPMCT and Corvis IOP (-4.68 ± 4.07 mmHg) were statistically significant ($p<0.001$). Both the IOPCCT and IOPMCT showed insignificant correlation with the Corvis IOP ($r= 0.117$, $p= 0.468$).

Conclusions

The calculated IOP based on CCT and MCT does not show good agreement with the biomechanically corrected IOP by Corvis ST. The calculated IOP methods show a significant overestimation, while GAT IOP significantly underestimates. This could be due to the altered biomechanical properties in the cornea in KC eyes. Hence, clinicians should carefully consider the mechanical properties of eyes with KC during IOP measurement and management.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1124

TITLE: An unusual case of Rhegmatogenous Retinal Detachment in association with systemic comorbidities in a patient with albinism

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Tayabunissa S/ Dr. Agarwals Institute of Optometry, Tamil Nadu

ABSTRACT BODY:

Introduction

This case presents an uncommon association of immune thrombocytopenia and Scrub typhus due to hepatitis leading to Rhegmatogenous Retinal Detachment (RRD).

Case Report

A 10 year old child reported with a complaint of blurred diminished vision in both eyes. Antenatal, natal, postnatal history was normal. His glass prescription since 2 years was +1.50DS/-2.00DC*180 in right eye (RE) and - 0.75DS/-2.00DC*180 in left eye (LE). BCVA was 6/9, N6 in both eyes (BE). Anterior segment was normal in BE; A cup-disc ratio of 0.3, foveal hypoplasia, tessellated and albinotic fundus was noted in BE. Photochromics were advised to reduce photophobia. After 6 years, the child reported again with same visual complaints and watering. At this time patient he gave a history of scrub typhus 1.5 months back and admitted for treatment for 1 week, thrombocytopenia and hepatitis positive; recently treated for gluteal pus drainage. Post cycloplegia, a PMT refraction showed +3.00DS/-2.00*180 in RE, VA was 6/12 and N6 and -2.00DS/-1.00DC*180, 6/9 and N6 in LE. W4DT showed no diplopia or suppression. Anterior segment was normal, EOM were full in BE, B Scan revealed RRD and horseshoe tear in RE and superior preretinal hemorrhage in LE. The patient was advised for the surgical treatment (scleral buckling+cryo+drainage/BB PPV EL) under 70% anatomically guarded visual prognosis in RE.

Conclusions

The patient is yet to undergo surgery, but from the above case, we conclude the degree of association of systemic comorbidities with ocular complications requiring a thorough history, clinical examination and multidisciplinary approach needs emphasizing.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1126

TITLE: Benefit of Fresnel prism over diplopia

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Rajavarshini K/ Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Aim

To understand the benefit of Fresnel prism over diplopia

Observation

A 34 year old male visited clinic with the complaint of an uniocular, vertical diplopia at right gaze every time with ptosis; elsewhere diagnosed to have 3rd nerve palsy following RTA was kept in ICU and LOC, had right hemiparesis, abnormal MRI, HRSC reports. CT distance: RXT, RXT-AXT with depression, elevation limitation in abduction, W4DT: crossed diplopia. In Diplopia charting: crossed diplopia with L/R images in all gazes except left gaze, only vertical diplopia with L/R images in left gazes, maximum horizontal separation in levo-depression, vertical separation in depression; torsional diplopia. In PBCT D: 25BI/ 9L/R, N: 35BI/ 5L/R. Final prescription- OD: +0.00/-1.00x90 with 25@30PD, OS: +0.00/-1.00x90, no diplopia; but blurred vision while reading due to Fresnel prism. He had inverse Duane's, pseudo Von Graefe signs with right homonymous hemianopia field defect. On 4 months review; had no diplopia, comfortable with old glasses, but to reduce L/R on reading OD: +0.00/-1.00x90 with 15 BI and BU @30 deg, OS: +0.00/-1.00x90- prescribed. Right hemianopia, partial traumatic 3rd nerve palsy showed signs of getting resolved

Conclusion

Traumatic 3rd nerve palsy causing diplopia; can be under observation for 6 months by using patching/prism glasses; if still persistent- can go ahead with Sx for alignment and drooping if possible. Fresnel prisms are useful over temporary/acquired nerve palsies diplopia.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1127

TITLE: Short Term Effect on Accommodation among Microscope Using Students

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Divya Priya A/ Manipal College of Health Professions, Karnataka

ABSTRACT BODY:

Aim

Accommodation helps to maintain the precision and singularity of the object or image we see. Microscope users need additional accommodation. This study aimed to observe the impact of short term exposure to microscope on accommodative functions and refractive error among microscope using students.

Objective

To observe the changes on accommodative functions due to short term effect on a continuous 30minutes use of microscope.

Methods

61 subjects underwent comprehensive eye examination for the selection of participants. The assessments performed were: Objective refraction, Accommodative convergence/Accommodation ratio (AC/A), Accommodative Response (AR) and Accommodative Facility (AF). The included subjects were asked to perform a 30minutes microscopy task. Immediately after the task the assessments mentioned above were carried out. Later a discussion session was conducted. This session was 30minutes long to maintain the accommodation at rest. Following this session the assessments were repeated. The three measurements, pre and post microscope use and post discussion session were statistically analyzed.

Results

AC/A ratio with Friedman test ($p<0.05$) and AF with Repeated measures of ANOVA ($p <0.001$) showed statistically significant differences on pre and post microscope use. Refraction and AR had no statistically significant difference on pre and post microscope use.

Conclusion

Microscopy as near vision task, it induces unnecessary accommodation. The excessive accommodation may cause myopia progression in microscopists involved in intense microscope use. It has to be borne in mind that disorders caused by microscopes are likely to have slow but sustained deleterious effects.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1128

TITLE: Structural and functional changes in eye during menstruation; a comparison between women with and without PCOD

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sai Geetha G/ Manipal College of Health Professions, Karnataka

ABSTRACT BODY:

Aim

To compare the structural and functional changes in eye in women with and without PCOD

Methods

This is an Observational study of women with and without Participants detailed ocular and menstrual history were evaluated for inclusion criteria. Those who met the inclusion criteria underwent Structural and functional vision assessment including a visual acuity test (distance and near) objective refraction, subjective refraction, central corneal thickness (CCT), Intraocular pressure (IOP) is measured, corneal curvature is measured using keratometry during 2nd and 14th day of menstruation.

Results

76 women (38 healthy and 38 PCOD) with a mean age group of 22.9+ 2.56. Mean IOP shows statistically significant difference during 2nd day of menstruation among healthy and PCOD group (p=0.006 in right eye and p=<0.001) Significant difference in mean intraocular pressure were not observed during 14th day of menstruation among healthy and PCOD group (p=0.003 in right eye and p=0.131 in left eye).There is no statistically significant difference noted in the mean central corneal thickness, corneal curvature and refractive changes were observed during 2nd and 14th day of menstruation among the two groups.

Conclusion

The study discovers there is no much of difference among structural and functional changes in eye during 2nd and 14th day of menstruation, but during 2nd day of menstruation healthy and PCOD group shows raised intraocular pressure due to increased level of estrogen.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1129

TITLE: Functional vision assessment in Individuals with Parkinson's Disease- A Hospital-Based Study

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sushma/ Manipal College of Health Professions, Karnataka

ABSTRACT BODY:

Background

Functional vision alterations have an impact on the quality of life in Parkinson's disease (PD). Studies suggest that some parameters such as stereopsis can be used as biomarkers in predicting the progression of PD. This study investigates functional vision abnormalities in individuals with PD.

Objective

To assess the functional vision parameters in individuals with Parkinson's disease

Methods

This cross-sectional study included 26 participants diagnosed with PD. A comprehensive eye examination and detailed history were taken to confirm the eligibility criteria. Those who met the inclusion criteria underwent functional vision assessment including a visual acuity test (distance & near), contrast sensitivity (CS), color vision (CV), stereopsis, Amsler grid, confrontation, ocular motility, and pupillary examination.

Results

A total of 15(57.7%) males and 11(42.3%) females aged between 30-70 years (mean: 56.6±7.71 years) with an average duration of 2.29 (1.19, 4) years of PD were studied. Among the parameters measured, CV and stereopsis affected 12 (46.15 %) and 22(84.6%) of the participants, respectively. Changes in CS, visual field & ocular motility were affected in 3(11.5%), 4(15.38%), and 7(26.9%) of the participants with reduced V/A respectively.

Conclusion

Functional vision parameters such as CV and stereopsis are found to be significantly affected in patients with PD. Routine clinical assessment of these patients should also include testing protocols for functional vision evaluation through which the problems can be detected early and help in improving their quality of life.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1130

TITLE: Effect of Refractive Errors on the Central Corneal Thickness of the Eye - A Review of Literature

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kristi Sharma/ The Sankara Nethralaya Academy, Tamil Nadu

ABSTRACT BODY:

Central corneal thickness (CCT) is a critical metric in ocular health, particularly in conditions such as glaucoma and corneal ectasia. The clinical and research knowledge regarding the impact of these ocular conditions on CCT is well-established. Concurrently, refractive errors, comprising myopia, hypermetropia, and astigmatism, account for a substantial proportion of global ocular conditions, prompting extensive numerical investigations into their effects on various ocular structures.

This study systematically reviews a diverse range of peer-reviewed literature to quantitatively analyze the relationship between CCT and refractive errors. Specifically, the focus is on myopia, hypermetropia, and astigmatism. An analysis of reported findings reveals that individuals with myopia and hypermetropia do not exhibit statistically significant differences in CCT when compared to emmetropic individuals.

In contrast, statistical analysis demonstrates that patients with astigmatism consistently exhibit lower CCT values compared to those with myopia and hypermetropia. This numeric differentiation underscores the importance of considering astigmatism as a distinct factor in the evaluation of CCT.

Furthermore, the study explores the statistical correlation between age and CCT, synthesizing data from various studies. While some studies report no significant correlation, others reveal a negative correlation between age and CCT values. The numerical insights derived from this comprehensive review contribute to a nuanced understanding of the intricate interplay between central corneal thickness and refractive errors, offering valuable quantitative data for clinical considerations and further research in ophthalmology.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1132

TITLE: Unmasking the connection: Congenital Myopathy, Facial Features, and Ocular Findings- A Case report

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Pranesh M/ Acchutha Eye Care & Institute of Optometry, Tamil Nadu

ABSTRACT BODY:

Background

This case report highlights the significant impact of a collaborative and multidisciplinary approach in addressing complex pediatric ophthalmic challenges. By working together, healthcare professionals can provide comprehensive care and support that can help transform the lives of young patients and their families.

Case details

A 3-year-old male child was referred to our clinic for an ophthalmologist's opinion due to complaints of motor delay, feeding and swallowing difficulties, and distinctive facial features. The child was diagnosed with congenital myopathy, clubfoot, and other related conditions and was advised to seek medical opinions from different specialists, including ophthalmologists, otolaryngologists, and pediatric cardiologists. During the initial ophthalmic consultation (August 2022), a family history of congenital deafness was reported. The assessment revealed eye fixing, following light with chin down, and objective refraction of +1.00DS, both eyes (BE) abduction limitation and left esotropia. A follow-up visit in January 2024 revealed best-corrected visual acuity of 6/18 (right eye) and 6/24 (left eye) with refractive error of +0.25DS/-1.25DCx180 and +0.75DS/-1.50DCx180, respectively, allowing occlusion with the chin up. The child was diagnosed with congenital myopathy and congenital talipes equinovarus (clubfoot), and the possibility of Freeman-Sheldon syndrome or Mobius syndrome was raised. A follow-up appointment after six months was scheduled for a strabismus evaluation to monitor the progress and address any potential ophthalmological concerns.

Conclusion

This case report underscores the importance of a multidisciplinary approach in addressing paediatric ophthalmic challenges. The consistent values and assessment measurements throughout this case enhance the reliability of the findings. Further research and long-term follow-up studies are warranted to understand better the intricate connections between congenital myopathy and associated syndromes.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1133

TITLE: Managing Presbyopia with Presbyopic Sclerals

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Daksha Jain Soni/ Soni Opticians, Tamil Nadu

ABSTRACT BODY:

Introduction

Monovision is the go-to fitting for presbyopes for decades but Presbyopic Sclerals (PS) are the new trend.

Case Report

A 43yr old male reported with difficulty and discomfort in near vision with monovision contact lens (CL) since 6 months. He gave a history of CL usage since 15 years with insignificant CL and general history. Vision with present glasses was 6/6 (OU) and unaided near vision was N6. Subjective refraction was same as old prescription: OD: -9.00DS/-1.50DC*40 (6/6) & OS: -7.50DS/-1.50DC*160 (6/6) with Add OU: +1.50DS, N6. Patient was very keen on his cosmetic appearance and clear near vision. His keratometry readings were OD: 7.92@22, 7.73@112, AVG K: 7.82; OS: 7.97@171, 7.70@81, AVG K: 7.84. The PS trial parameters were: OD: 7.8/4000/15.00/+0.00 & OS: 7.9/3880/15.00/+0.50. Slit lamp (BE) showed PS decentration < 1mm, optimal central corneal vault (180-200 microns), optimal limbal clearance (80-90 microns), no conjunctival blanching. Over refraction was OD: -10.00 (6/6), OS: -8.25 (6/6), Add OU: +1.50 N6. The final PS was ordered as: OD: 7.8/4000/15.00/-9.00; OS: 7.9/3880/15.00/-7.00; Add OU: +1.50D, Aspheric Centre Near Design. While dispensing, VA with PS was OD: 6/6p, N6 and OS: 6/9 with difficulty, N6. After a 2 week follow up, VA was same. Over refraction was OD: Plano (6/6p), N6; OS: -0.50 (6/6), N6 with difficulty. The dominant eye was left eye and its parameters alone were changed to 7.9/3880/15.00/-7.50. Patient was very comfortable.

Conclusion

PS is suitable for low to moderate astigmats who prioritize cosmesis and clear vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1136

TITLE: Is travel distance a factor in referral compliance in school eye screening program- A retrospective analysis

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Saravanan S/ Acchutha Eye Care & Institute of Optometry, Tamil Nadu

ABSTRACT BODY:

Background

This study aimed to assess the associations between dates of visits and the distance of residences for individuals referred from school for eye screening.

Methods

A retrospective study was conducted on individuals referred for further eye examinations from a school eye screening program in 2023. Demographic data, including the date of eye screening, visit dates, distance to the eye hospital, and type of refractive error, were analyzed using Microsoft Excel (2013) and SPSS V20. Chi-square tests and Spearman correlations were conducted with a statistical significance level of 0.05.

Results

19642 students were screened, of which 3501 (17.8%) were referred. Four hundred forty-one (12.5%) individuals came for follow-up; of these, 51.5% were female, with a mean (SD) age of 10.5 (3.7) years. Myopia (81.9%) was the most frequent diagnosis for referral, following hyperopia (2.0%), conjunctivitis (5.7%), amblyopia (5.7%), and other conditions (4.7%). The median date difference (time since initial visit) was 11 days (range=0-359), and the mean distance from home was 11.9 km (10.8) (range = 1-70 km). There was a statistically non-significant weak positive correlation between date difference and distance from home (Spearman's rho = 0.053, p = 0.266). There was no significant difference between the diagnosis and date difference (p = 0.096) or the diagnosis and distance from home (p = 0.990). Similarly, no significant difference was observed between gender and date difference (p = 0.484) or gender and distance from home (p = 0.286).

Conclusion

Geographical factors and individual demographics did not significantly influence visit patterns. Further research with larger samples and longer follow-up periods might be necessary to confirm these findings and explore potential underlying factors.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1143

TITLE: Understanding Virtual Autism: A case report on challenges and interventions on Autism Spectrum Disorder (ASD) in a digital age

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Subasree Rameshan/ Sankara Nethralaya, Tamil Nadu

ABSTRACT BODY:

Case report

A one and half year-old girl was referred to a special children vision assessment clinic with a diagnosis of Virtual autism. Her Mother reported the concerns about poor eye contact and lack of communication for the past 6 months Child had a history of normal development milestones except for speech. The child exhibited behaviors such as hand flapping and closing eyes for the last month. She showed dependency on her mother for personal hygiene and primarily communicated through crying to express needs. Advised to have zero screen time, she was recommended for speech therapy (ST) and occupational therapy (OT) elsewhere. During assessment, she fixated and followed toys and people up to 3 meters for distance and picked a 5mm bead for near vision. Cardiff cards were presented at 50cm, and binocularly she responded up to 6/96. Her ophthalmic findings were normal and she was advised to undergo MRI. External observation revealed that the child became irritated quickly, exhibited poor eye contact and attention span, and engaged in hand flapping and closing her eyes. Advised to start OT and ST.

Discussion

The child exhibits features commonly associated with ASD, potentially stemming from a lack of communication with society and excessive screen time.

Conclusion

Excessive screen time and lack of social communication may lead to ASD features. Early intervention and reduced screen time can lead to significant improvements.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1144

TITLE: Seeing Beyond: Role of Virtual Reality in Optimizing Management in a Patient with Myopic Macular Degeneration - A Case Report

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Karthika Dhatchanamoorthy/ The Sankara Nethralaya Academy, Tamil Nadu

ABSTRACT BODY:

Observation

A 51-year-old male, employed as a software engineer, was referred to Low vision care clinic. Having undergone LASIK surgery 30 years ago, he presented with the medical history including anxiety disorder, hypertension, hypercholesterolemia, and coronary angioplasty since eight years. Despite independently managing daily activities, he experienced decreased workplace productivity and difficulties in presentations even after using computer modifications. He was also complaining of difficulty in recognizing faces and persisting since 3 years. His Best Corrected Visual Acuity (BCVA) was 0.7 log MAR (6/60) for distance in the Bailey Lovie Chart, and unaided reading was 0.8 log MAR (N6@15-20cm) with the MN read chart in both eyes. Various Low vision devices were trialed given, with the NuEyes e2+, a VR device with Optical Character Recognition (OCR), showed significant improvement in distance visual acuity to 0.1 log MAR (6/15). The patient reported enhanced clarity and comfort during computer use and face recognition.

Discussion

This case highlights the efficacy of VR based Low vision technology in addressing specific challenges related to computer use and face recognition, promisingly improving the quality of life for individuals with low vision in professional settings. The device weighing 268 grams with a 101° field of view, is not intended for walking or driving.

Conclusion

Virtual Reality (VR) technology shows promise in enhancing residual vision for patient with low vision, thereby improving their overall performance.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1147

TITLE: A survey of contact lens care compliance among young adults

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Dharsan S/ Manipal College of Health Professions, Karnataka

ABSTRACT BODY:

Aim

This study aimed to assess the level of contact lens compliance and different habits in care and maintenance among contact lens users.

Methods

This was an observational, cross-sectional study in which a validated questionnaire addressing contact lens care and maintenance was used. 239 responses were collected. Of the study participants, 181 were females, and 58 were males. All the participants were university students between the ages of 18 and 25.

Results

The average compliance rate observed in this study was 78%. A high level of compliance was observed in the following aspects: not sharing lenses with others, not sleeping with the lenses, not showering or swimming with the lenses, not overusing the lenses than the recommended time, not keeping the old solution in the case, not using the expired lens solution, washing hands before lens insertion, and not using water to clean lenses. A moderate level of compliance was observed in adherence to instructions for lens cleaning, cleaning, and rinsing of lens case. A low level of compliance was observed in lens case replacement and adherence to the aftercare visits.

Conclusion

Moderate level of compliance was observed in most of the participants. However, a low level of compliance was observed in lens case replacement and adherence to aftercare visits. ECPs should emphasize the importance of care and maintenance during the dispensing to increase the level of compliance.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1153

TITLE: Knowledge, attitude, and practice of colour vision testing among optometry students and practitioners

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Krishna Priyaa M/ Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Background

Inadequate knowledge, and incorrect administration of the color vision test leads to misdiagnosis. The current study aims to study the knowledge, attitude and practices on colour vision tests among eye care practitioners and optometry students through a KAP survey.

Methods

A Knowledge, Attitude and Practice survey on colour vision was designed using Delphi technique. There were eleven questions on knowledge aspects, six on attitude and six on practice and response from knowledge and practice were scored for correct response. The survey was circulated to the practicing optometrist and optometry students through Google forms.

Results

About 254 responses were obtained, and among the respondent 104 (40.9%) Practicing Optometrists, 90 (35%) undergraduates, 30(11.8%) Postgraduates, 23 (9.5%) Researcher/ Academician and 7(2.7%) Fellows. Majority of the participants were females 183 (71.6%). All the participants have used Ishihara pseudo isochromatic (PIC) plate test and 120 (47.05%) were aware of its working principle. On the testing distance, 42 (16.47%) reported 70-75 cm and on testing time per plate as 3 seconds by 121 (47.63%) respondents. If the patient does not respond to the demo plate, 111 (43.70%) respondents reported that they would flip to the next plate and check and then induce a red filter. On the decision making, 39(15.8%) responded that they would refer to an ophthalmologist after documentation. The median knowledge score out of 10 was 2.46 ± 1.35 (24.6%) and practice score was -0.34 ± 2.04 (0%). The knowledge and practice scores showed weak positive correlation with R value of 0.18.

Conclusion

The survey outcomes showed potential misdiagnosis and misinterpretation due to inadequate knowledge on administering the Ishihara PIC and associated practice pattern. This gave us insight on the need for revisiting the technique to the optometrist for uniform testing procedure and interpretation.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1156

TITLE: Uncovering the mystery of APMPPE: A rare deadly disease

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kavya S/ M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

APMPPE is a rare asymptomatic condition occurring predominantly in young healthy adults with an equal incidences. The aim is to create an awareness about white dot syndrome in a community based population highlighting its clinical features and outcomes by regular periodic fundus examination. Recent advances in multimodal imaging plays an important role in diagnosing the pathophysiology of this condition.

Observation

A 17 year male came to our hospital with the C/O blurred distance Vision in OD x10 days. His UAVA in OD was 6/24 &NIP and in OS 6/6 & Nvn OD- N8 and OS – N6.PAM testing yielded 6/18+1@1meter OD. Color vision test using Ishiahara plates showed 5/25plates in OD. The BCVA in OD was 6/24 with no improvement and in OS 6/6.Anterior segment was normal in OU. Fundus examination, revealed multiple yellow- white lesions in posterior pole and OCT imaging showed hyper- reflectivity from outer plexiform layer to RPE with normal retinal thickness. The patient was diagnosed with ACUTE POSTERIOR MULTIFOCAL PLACOID PIGMENT EPITHELIOPATHY (APMPPE) prescribed with Nepatop eye drop for 30 days and Wysolone tablets (40 mg).Upon subsequent visits, VA improved 6/12 in OD and in OS was 6/6.The color vision in OD resulted with 18/25.The patient was advised to withdraw the medication and advised to come for a review after a month.

Conclusion

APMPPE (white-dot syndrome) is an uncommon, asymptomatic condition may lead to multiple sclerosis, posing diagnostic challenges. Multimodal imaging is crucial for managing it by identifying structural changes during acute phases and disease resolution by long-term follow- up. Hence, this report ensures the importance of proactive screening by “SWIFT DETECTION SAVES VISION”.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1157

TITLE: Clinical and imaging features in inherited retinal diseases with genetic insights

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Angelin Christina/ Aravind Eye Hospital, Tamil Nadu

ABSTRACT BODY:

Introduction

Inherited retinal diseases (IRD) are common in India, especially because of the prevalence of consanguinity. Many of these patients are unable to afford genetic testing. Here we present few cases where imaging give insights into the genetic mutation.

Methods

It was a retrospective analysis of patients with probable genetic retinal condition, who were presented between April and December 2023. Detailed history, clinical examination and Imaging included Optical coherence tomography (OCT), Widefield Fundus photo with Auto fluorescence's, were done. Electrophysiology, genetic counselling and testing were also advised.

Results

13 patients were grouped into 5 groups based on clinical and imaging features. Group 1(n=3) included patients with early onset of dystrophy with severe vision loss and macular atrophy/ macular coloboma. This could be due to RDH12/ CRX/PROM1/ RPE65 mutation. Group 2(n=2) included patients with dystrophy and well-defined areas of Chorioretinal atrophy possibly due to CERKL/ PROM1 mutation. Group 3(n=1) patients were dystrophy with hearing loss probably due to USH2 mutation. Group 4(n=3) included patients with flecks with ERG showing electronegative wave suggestive of fundus albipunctatus possibly due to RDH5/ PRPH2/ RLBP1 mutation(n=2). ERG was characteristic of Enhanced-S-cone syndrome suggestive of NR2E3 mutation (n=1). Group 5(n= 4) included patients with vitelliform lesion possible due to BEST 1/PRPH2/IMPG1/IMPG2 mutation.

Conclusion

Clinical and imaging features work together in classifying IRDs. They also provide rough genetics insights in patients where genetic testing is not affordable for the families, helping in prognosis, estimating the risk in siblings and progeny and segregating patients for future therapeutic ventures.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1161

TITLE: Profile of dry eye status among college students

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Jagadheswari V/ SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Dry eye is a disorder of tear film that can cause damage to ocular surface resulting in symptoms of ocular discomfort. Prolonged near work is one of the risk factors for dry eye. Typically academic activities require extended hours of near work and could cause dry eye. We studied the profile of dry eye status in students involved in routine academic activities.

This prospective, observational study was conducted in 150 eyes of 75 subjects with mean age (19.4 ± 1.77 years). All participants underwent comprehensive eye examination and dry eye assessment. The quantity and quality of tear film was assessed using objective tests like Non-invasive tear breakup time, Schirmer's test, Tear meniscus height, Tear film breakup time, Corneal and conjunctival staining to evaluate the signs of dry eye as per DEWS study guidelines. Ocular surface disease Index questionnaire was administered to subjectively evaluate the symptoms of dry eye.

Among the 75 subjects assessed clincal signs of Dry eye were positive in 12%. The mean NIBUT was 8.8 secs ± 3.7, Schirmer's was 31.5 mm ± 7.5, TMH was 0.18 mm ± 0.03, TBUT was 9.9 secs ± 4.0, corneal spots was 2.9 ± 1.5, conjunctival spots was 2.6 ± 1.4. The mean OSDI score was 9.15 ± 10.32 and 18.6% of the study participants had subjective symtpoms of dry eye. Furthermore, among the 56 subjects with positive clinical signs, 47 had negative subjective symptoms. Similarly, among 14 subjects with positive symptoms 9 had no clinical signs.

The overall prevalance of dry eye, irrespective of subjective or clinical criteria, was 81.3% among college students in our study. Our results show that signs and symptoms of dry eye could exist independently and should be considered while evaluating the same.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1162

TITLE: Visual demand, visual ability and vision standards among Electricians in SRM Institute Of Science And Technology

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Keerthana K / SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Aim

To establish vision standards for building related electricians and to assess the visual functions.

Methods

The observational cross sectional study enrolled electricians in SRM University. It was done in three phase: (i) Job profiling from visual task analysis and the minimal visual demands of the jobs were determined based on Grundy's nomogram.(ii) Comprehensive eye examination (iii) Assessment of binocular vision and spectacle recommendation. The job description was arrived based on the visual task analysis and questionnaire with electrician. All the data were entered into Microsoft excel.

Results

There were fifteen participants with a mean age of 40.9 (SD±8.97) years. The visual acuity demand was found to be 6/24 and N10, for distance and near. This study show refractive error 0.72±1.07, contrast sensitivity 1.81±0.23CS, stereopsis 34±10.74sec of arc, accommodative demand 2.29±0.46D and convergence demand 1.6±2.37cm. The lighting at the workstation was a combination of both daylight and artificial fluorescent light and the illuminance level observed was 100 lux. Even with the refractive correction, a few electricians did not meet the distance (9) and near (4) visual acuity standards (4) electricians were referred for further examination for lenticular changes, Pterygium, and foreign body removal.

Conclusion

This study provides vision standards for electricians. The field of electricians found to be visually demanding and hazardous hence require periodic examination may prove to be beneficial. The study indicates that providing appropriate protective eyewear and illumination may make a difference in their workplace performance.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1163

TITLE: A hope in aphakic patients with T-flex lenses

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Abitha M/ M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Aphakia is one of the global cause of post traumatic or post-surgical diminution of vision. IOL is the best choice of option when compared with aphakic glasses or contact lenses. There are variety of secondary IOL available but in the modern advancement placing a CMT-Flex Hydrophilic foldable Lenses provides a unique design that prevents slippage once it is brought out of sclerostomy side.

Observation

A case of 45 year old female who came to our hospital with C/O of blurred vision for distance in OS x 3months after undergoing cataract surgery. PCIOL in OD X 3 month back and the patient was left aphakic after cataract surgery in OS due to surgical complication. On performing preliminary examination, the unaided visual acuity of 6/24 in OD with PH 6/6 and counting fingers close to face (CFCF) in OS with no improvement in PH and near vision in OD - N18, OS – not able to read. In Slit lamp examination, PCIOL in OD and posterior capsule rupture in OS was noted. Patient was advised with medication and CM T- Flex scleral fixated IOL implantation in OS. After surgery with TFLEX lens her BCVA improved to 6/9 and near vision N6 in OS. This successful outcome suggests a promising future for the patient's visual well-being.

Conclusion

T-FLEX LENS emerges as a promising technique for cases with inadequate capsular support, showcasing its ability to achieve durable functional outcomes in intraocular lens placement. The positive impact on vision suggests a potential avenue for enhanced visual well-being in aphakic patients.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1165

TITLE: Comparison of visual performance and comfort between spectacle & toric silicone hydrogel contact lens

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Nilavarasi R/ SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Background

Toric contact lenses are optically and cosmetically viable options for correction of astigmatism, a refractive error with different powers in different meridian in the eye. Contact lens material and surface dynamics of contact lens could significantly influence visual performance and comfort. In this study, we compared visual performance and comfort score silicone hydrogel toric lenses (SiHy TCL) and spectacles in astigmatic participants.

Methods

This prospective, experimental study was conducted on six habitual SCL wearers. After obtaining consent, the participants were fitted and dispensed with SiHy TCL. Low contrast visual acuity (2.50% contrast LCVA) and contrast sensitivity function (CSF) were assessed using FrACT on a calibrated display, at baseline and after 5 days of CL wear. CSF was measured using gratings orientation at different directions and was assessed for 1,3,9,12,15 cpd SF. Subjective comfort score was assessed with ocular comfort index (OCI) questionnaire.

Results

The mean refractive error of participants was -2.15 spherical -0.75 cylinder for against the rule and -0.50 spherical, -1.25 cylinder for with the rule astigmatism. The median LCVA on baseline was 0.37 ± 0.08 and with SiHy TCL 0.46 ± 0.11. The CS was not significantly different with SiHy TCL from baseline across subjects and different SF (Md = 0, P = 0.60). CS was different across all spatial frequency. The median difference of contrast sensitivity of different spatial frequencies with baseline and SiHy TCL were 0.42(9cpd), 0.54(12 cpd), -0.17(15cpd). The frequency and intensity of the mean comfort scores for baseline are as follows: Dryness 1,1; Grittiness 1.6,1.8; Tiredness: 1.4,1.1; Stinginess: 0.8,1; Pain: 0.2,0.2; Itching: 1.2,1 and mean comfort scores for SiHy TCL are as follows: Dryness: 1,1; Grittiness: 1.8,2; Tiredness: 1.4,1.4; Stinginess: 0.8,1; Pain: 0.4,0.2; Itching: 1.4,1.2 respectively.

Conclusion

We conclude that there is difference in visual performance and comfort score between SiHy TCL and spectacles in astigmatic participants.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1168

TITLE: Nummular Keratitis: "Unlocking the Power of Timely Intervention with Simple Eye Drops"

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Prathepaa R/ M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Nummular keratitis is also known as Discoid keratitis, which is caused by several factors including viral, bacteria, allergy or autoimmune conditions. Its symptoms include redness, eye pain, blurred vision, photophobia etc. It can also be associated with dry eye syndrome. Treating nummular keratitis at the initial stage is crucial to prevent complications and promote ocular health.

Observation

A 22 year old male came with a complaint of redness and watering in OD since 1 day. The patient had a history of squint Sx (OD) done 15 years ago. On preliminary ocular examination, his UAVA in OD: 6/36 OS:6/18, with PH:NIP(OU). His IOP was normal. On slit lamp examination, conjunctival congestion (OS) was present. The patient was advised to take Vit-C tab and Antibiotic e/d. On his next visit, patient complained of blurred vision and photophobia x 2days (OU). On slit lamp examination, fine granular coin shaped opacities were present, representing NUMMULAR KERATITIS. The patient was advised to take steroids and antibiotics along with Vit-C tablet for 7 days. When the patient came for review, his vision was improved to 6/6(OU) and the keratitis was resolved. The patient felt happy and satisfied with the results.

Conclusion

The intervention led to notable enhancements in visual acuity, underscoring the effectiveness of steroids in addressing nummular keratitis and reinstating vision. This case highlights the need to stay alert to a possible viral etiology and a potential to use topical steroids at initial presentation for nummular keratitis.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1171

TITLE: The Hidden Impact: A Journey with Hydroxychloroquine's Bulls Eye

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Sameena Siddiqah / M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Many systemic medications may cause retinal toxicity. One such commonly used medication is Hydroxychloroquine used in treating autoimmune-conditions such as Rheumatoid Arthritis and systemic lupus erythematosus. The motive is to create awareness about the ill-effects of the drug leading to severe ocular problems if not treated early.

Observation

A 42 years-old female, who was presented with complaint of blurred vision for distance in OU for past 6months with headache & eye pain (OD) for past 1month. The patient had history of Rheumatoid Arthritis and was under medication for 11years. During her first visit, on preliminary ocular examination, her distance VA in OU:6/9+1 with pinhole - no improvement, meanwhile her near VA in OU:N12. On Slit lamp examination, Vortex keratopathy was observed with cataractous lens in OU. Fundus examination revealed, the signs of Bull's Eye Maculopathy. Visual fields had Centro-cecal scotoma. The patient was advised to take OCT and CFP. A letter was sent to the Rheumatologist to stop Hydroxychloroquine-medication to obtain fitness for cataract Surgery and to reduce retinal toxicity. When the patient came for review post-operatively, his Vision was improved to 6/6. The prescribed medications brought the patient comfort and high satisfaction.

Conclusion

Treatment with Hydroxychloroquine induces early damage to inner-retina and impacts visual functions. By encouraging people to obtain an annual ophthalmic examination as part of screening process, we can reduce the risk of various eye problems. Thus, Keeping an eye on our eyes early-on can prevent a BULLS-EYE.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1173

TITLE: Diplopia and Diabetes: "A Perspicacious Analysis of the Intricate Connection".

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Swadheeswari E / M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Diabetes is a metabolic disorder causing chronic high blood sugar due to insulin issues. Symptoms like diplopia, visual confusion, and vestibular-ocular reflex problems accompany acute ophthalmoplegia, collectively known as Diplopia, a common complaint to ophthalmologist and a distressing symptom for the patient. Neuropathy is a frequent complication in diabetic patients, showing diverse clinical presentations.

Observation

A 64 years female came to us with C/O of blurred vision in OD. She had past ocular history of cataract surgery since 8months. Patient had systemic illness of diabetes mellitus since 4years. RBS level was 230mg/dl. Anterior segment evaluation shows immature cataract (OD) and PCIOL (OS).Fundus examination revealed Diabetic Macular Oedema in OS. On her next visit, cataract-evaluation was done, diabetic level was at 144mg/dl. So phacoemulsification was done in OD with PCIOL implantation. On review after 1month patient came with complaint of binocular-diplopia. The V/A in OU 6/6 with N8.W4DT revealed crossed diplopia, followed by prism-bar cover test showed 25 prisms Exotropia with 4prisms R/L for near(OU).Hess chart revealed Lateral-Rectus overaction(OU).The patient was advised to monitor her diabetes level and was patched to avoid diplopia. This case reveals lateral rectus palsy due to vasculopathy, so patient advised to control glucose-level.

Conclusion

Patients with diabetes should get regular fundus examination. So special attention should be taken in controlling the diabetes level in order to protect eyes from life threatening conditions. The condition of uncontrolled hyperglycaemia leads to a variety of conditions, such as diplopia, muscle& nerve palsies, retinal & macular disorders that lead to even full-blown vision loss if the condition is not corrected.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1175

TITLE: Vision vantage: ICL - unlocking clarity for perfect eyesight

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Devadharshini B / M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Implantable Collamer Lenses technology revolutionizes ophthalmology field by providing versatile and effective correction of refractive errors, with a multifocal and extended depth of focus design. This case report aims to showcase the visual outcome after ICL implantation.

Observation

A 24 year old male came with the complaint of blurred distance vision in OU since 18 years and patient was using spectacles since 17 years. There was no history of systemic illness. The preliminary eye examination was done in which VA in OU was 3/60 and with pinhole 6/9 the acceptance in OD: -9.50/-1.25 x 20 vision 6/9 OS; -9.25/-2.50 x170 vision 6/9 and near was N6 (OU) The anterior and posterior segment evaluation was normal. The patient had normal IOP. The patient was advised to take white to white measurement (horizontal corneal diameter between the borders of the limbus). ICL was also advised to the patient under LA. After post-operative review of inserting ICL in OD the vision was 6/9 and the patient was asked to take medications. In next visit the VA in OD was 6/6p and in OS ICL under LA was advised. The patient had a tremendous visual change after insertion of ICL. The vision reached to peak of 6/6 (OU) in which the patient was highly comfortable and satisfied.

Conclusion

ICL surgery stands as a remarkable advancement in ophthalmology. Its proven track record, coupled with ongoing innovations underscore the significance of ICL surgery in addressing refractive error and enhancing visual well-being.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1176

TITLE: Visual stimulation therapy impact on Cortical visual impairment

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Nikitha Namasivayam/ Sankara Nethralaya, Tamil Nadu

ABSTRACT BODY:

Objective

This case report aims to elucidate the impact of visual stimulation therapy on children with cortical visual impairment (CVI).

Observation

A case of a 10-month-old female with a history of global developmental delay, microcephaly, infantile spasms, and seizures was diagnosed with cortical visual impairment due to hypoxic-ischemic encephalopathy. Despite undergoing physiotherapy for four months, her visual impairment persisted. Following comprehensive ocular examination and functional vision assessment, visual stimulation therapy and speech therapy was recommended. The child underwent visual stimulation therapy for over a year, resulting in noticeable improvements in vision.

Conclusion

Cortical visual impairment stands as a prevalent cause of visual impairment in developed nations, often stemming from hypoxic-ischemic encephalopathy. Patients with CVI necessitate a multidisciplinary approach involving ophthalmologists, neurologists, and rehabilitation specialists. While evidence-based treatments for CVI remain lacking, visual stimulation therapy demonstrates significant promise in enhancing the visual capabilities of affected children. This underscores the importance of early intervention and collaborative efforts among medical professionals to optimise outcomes for individuals with CVI.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1177

TITLE: Hypertensive Cystoid Macular Edema: Unveiling the Ocular Consequences of Elevated Blood Pressure

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kaviya S / M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Uncontrolled hypertension can impact various bodily systems, including the cardiovascular, renal, cerebrovascular, and retinal systems. This case report explains the regain of normal retinal nomenclature by controlling hypertension.

Observation

This is a case of 36 years old female who came to us with the C/O blurred distance and near vision in OU x 20 days. She had systemic illness of hypertension for 20 days but not under medications. Her UAVA in OD was 6/6 and in OS 6/9p NIP and near Vision in OD N6 and OS N6st.The BCVA in OD is 6/6 and in OS 6/6P .The anterior segment examination with slit lamp was within normal limit in OU. Fundus examination in OS showed sclerosed artery and haemorrhage. The patient was advised to take BP, CPF and OCT. In her next visit, BP report indicated 220/180mmHg. & OCT finding was diagnosed in OS as CME with BRVO. The patient was treated with intravitreal Razumab injection. On 5th day review, the vision in OU is same as the last visit. On OCT reports there is no improvement in CME level and patient is advised to strictly control the hypertension. On the 21st day review the UAVA in OU is improved to 6/6 and near vision was N6 and BP was 110/80 mmHg. The OCT in OS reports no swelling in macular region and seems to be normal.

Conclusion

The retinal changes can be halted when hypertension is treated. One should never consider the V/A of 6/6 to be normal where fundoscopic examination can discover some pathological process.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1178

TITLE: Exploring Avastin Intervention: A Breakthrough in Severe Non-Proliferative Diabetic Retinopathy Treatment

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Jagadeeshwari D/ M N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Avastin (bevacizumab) is utilized to treat severe non-proliferative diabetic retinopathy by inhibiting abnormal blood vessel growth and leakage in the retina, aiming to improve or stabilize vision and prevent complications. Regular follow-ups are crucial for monitoring treatment effectiveness.

Observation

A 59-year-old male came with a complaint of blurred vision at distance and near in OU x 1 month. He had systemic history of hypercholesterolemia and diabetes mellitus. Previous ocular history of cataract surgery in OD 5 years ago and OS 2 years ago, with posterior chamber intraocular lenses (PCIOL) in OU. Clinical examination revealed unaided visual acuity of 6/36 in OD and 6/18P in OS near visual acuity was N18 in OD and N36 in OS. Slit lamp examination confirmed the presence of PCIOL in both eyes. Fundus examination demonstrated severe non-proliferative diabetic retinopathy with microaneurysms, hard exudates, and abnormal blood vessel growth in OU. The patient was diagnosed with severe non-proliferative diabetic retinopathy, and Avastin (bevacizumab) injection was recommended. Follow-up after one month revealed improved visual acuity, with OD at 6/12 and OS at 6/18. Best-corrected visual acuity (BCVA) was 6/6p in OD and 6/9 in OS. These findings suggest a positive response to treatment.

Conclusion

Slowing the advancing stages of diabetic retinopathy (DR) and averting its sight-threatening complications, which could lead to blindness, might indicate the beginning of a shift in approach. Moving away from the traditional observation-based care for patients with non-proliferative diabetic retinopathy (NPDR), this signifies a transition to a new strategy involving intravitreal anti-VEGF injections.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1181

TITLE: Establishing vision standards for carpenters in Chennai

PRESENTING AUTHOR /AFFILIATIONS:

Ms. R Pavithra / Sri Jayendra Saraswathi Institute of Optometry, Tamil Nadu

ABSTRACT BODY:

Aim

To establish the vision standards by analysing visual demand for carpenters and their compliance with prescribed spectacle at the workplace.

Methods

A descriptive, cross-sectional study was conducted in three phases in Chennai. The first phase is task observation (Grundy's visual task analysis) and occupational history questionnaire administration; the second phase is a comprehensive eye examination; and the third phase is spectacle compliance assessment done after 3 weeks.

Results

46 subjects were included in the study with the mean age (SD) of 51.5 (11.4) years. From VTA, it was observed that the working distance ranges from near- and intermediate-level; the size of detail ranges from small (5') to medium (6'); the main working position, the head movement, and the direction of gaze are observed to be a mixture; and task movement is observed to be stationary. The recommended visual acuity demands for distance (6/12), near (N12), and visual parameters such as amplitude of accommodation (3.3 D), convergence demand (9.5 PD), stereopsis (34.4 arc sec), and horizontal visual field (84.5 degrees). Even with the best refractive correction, 9.7% and 6.5% of participants did not meet the recommended distance visual acuity and near visual acuity, respectively. From the spectacle compliance assessment, 32 carpenters reported improved and comfortable vision at the workplace with spectacles.

Conclusion

Considering the nature of the occupation, it was found to be visually demanding and prone to ocular hazards. Hence, appropriate refractive correction and safety eyewear are needed to promote work efficiency and prevent ocular injuries at the workplace.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1182

TITLE: Effect of illumination in near work induced transient myopia and its accommodative response

PRESENTING AUTHOR /AFFILIATIONS:

Ms. S Bhavani Priya/ SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Aim

Near work-induced transient myopia (NITM) refers to temporary myopic shift in distance refractive error caused due to inability of the crystalline lens to relax appropriately following sustained near work. Usage of smartphone were trending and increased worldwide which may cause various ocular symptoms. This study assessed the effect of illumination in accommodative response and NITM using varying distances for young adults.

Methods

This is a prospective cross-sectional study was conducted among fifteen young adults aged between 18–35 years. The subjects were instructed to read a story of N12 target on a smartphone under three conditions: 20cm in normal illumination, 20cm in dim illumination and 40cm in normal illumination for 20 minutes each. Continuous refractive status was assessed objectively with the Grand Seiko WAM 5500 Open field auto refractor. NITM magnitude, decay time and changes in accommodative response was calculated from the measurements obtained from the WAM 5500.

Results

The NITM magnitude and decay time for the task at 20cm in dim illumination was 0.15± 0.14D with 6.56 seconds; for 40cm in normal illumination and for 20cm in normal illumination was 0.05±0.14D with 2.3 seconds and 0.10 ±0.14D with 4.8 seconds respectively. The accommodative response for 20cm in dim illumination -0.66 ±0.56D, for 40cm in normal illumination -0.35± 0.34D and for 20cm in normal illumination -0.51±0.54D.

Conclusion

The magnitude of NITM were higher in dim room illumination compared with the normal room illumination for both distances. The effect of illumination has a changes in the magnitude of NITM and decay time.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1183

TITLE: Enhancing Healing: The Role of Bandage Contact Lenses in Corneal Abrasion Treatment

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ashifa Ameena.J.S / M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Corneal abrasions resulting from foreign body induced scratches on the cornea, manifest symptoms like photophobia and discomfort. The aim is to bring bandage contact lenses (BCL) for treatment, aiming to promote healing and alleviate symptoms.

Observation

A 21-year-old female came with a complains of ocular pain, photophobia in OS and recent history of hair fall over OS. She had no systemic illness and there is no ocular history of ocular surgery/trauma .Unaided visual acuity in OS 6/9 & OS 6/36 with pinhole OD 6/6 and OS 6/12 St and her unaided near visual acuity OU N6.The anterior segment is normal OD and in OS corneal epithelial defect and loose epithelium is seen by slit lamp examination .Epithelial debridement is done under TA and BCL placement were performed in OS. Follow-up after 10 days showed improved visual acuity in OS 6/6, with healing infiltrates seen OS by slit lamp examination. Subsequent reviews involved medications such as Soha liquigel eye drops, moxap eye drops, hicool e/o, T.Vitamin C, T.serratiopeptidase, T.aceclofenac & paracetamol, T.Rantac and BCL removal demonstrating positive progress in the patient's condition. Regular monitoring and adherence to the treatment plan are emphasized.

Conclusion

Bandage Contact Lenses (BCL) play a vital role in the healing of corneal abrasions, offering a protective layer and fostering an optimal environment for recovery. Beyond their therapeutic function, BCLs contribute to enhancing visual acuity during the healing process. Adherence to professional guidance and hygiene practices is essential for effective and safe utilization of contact lenses.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1184

TITLE: Is 0.25DS equal to one line in Snellen Acuity?

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Poojashri G/ Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Refractive error is a major cause of vision impairment and optometrists aim to establish its relationship with visual acuity (VA). This study aims in understanding this relationship and to determine if 0.25DS equal to one line in Snellen acuity.

Methods

A cross-sectional study was conducted between January and June 2023 in an educational institution, Chennai, which involved participants aged 18-35 with best corrected visual acuity of 6/7.5 or better and no ocular abnormalities. Those with refractive error ±0.50 DS with ≤-0.50DC, ±6.00DS with ≤-0.75DC were considered in emmetropic and ametropic groups respectively. After arriving monocular end point, the pupil size was measured manually. Then a +1.00DS fogging lens was introduced and defogged in +0.25DS steps, with corresponding monocular VA measured using a Snellen Acuity chart with a constant room illumination and optotypes.

Results

A total of 58 participants (male 16 (27.59%), female 42 (72.41%)), were recruited with a mean age 23.31±0.56 years, of which 32 (55.17%) were emmetropes and 26 (44.82%) were ametropes. The spherical equivalent of the ametrope group ranged from +0.375DS to -6.00DS. A significant visual acuity difference was noted for each +0.25DS reduction ($P<0.001$). Defogging from +1.00DS to +0.75DS led to a 2-line Snellen acuity reduction, and a 1-line difference for other 0.25DS reductions. There was no significant association found between pupil size and VA ($P>0.05$).

Conclusion

This study found that 0.25DS equals one line in Snellen acuity. Additionally, monitoring pupil size, and accommodation will aid in understanding the correlation between VA and refractive errors.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1185

TITLE: Monitoring Mucormycosis: Importance of Regular Eye Checkups in Detection and Impact Assessment

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ashifa Ameena.J.S / M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Mucormycosis, stemming from opportunistic fungi within the zygomycete family, can manifest in different infection forms. Typically, underlying conditions create a predisposition to this infection. While these fungi are generally harmless in immunocompetent individuals due to their environmental prevalence, they can transform into severe and challenging-to-treat opportunistic infections in immunosuppressed patients.This case report involves in raising awareness about mucormycosis, particularly its impact on the eyes.

Observation

A 58 years old male visited us with the C/O of blurred vision for distance and near OU X 2 years. He has systemic illness of Hypertension, Diabetes mellitus for 2 years under medication. He has been affected by COVID & mucormycosis in OS 2 years back. UAVA in OD 6/6st with PH 6/6 & in OS 3/60 NIP, Near VA in OD N8 and OS was not able to read. NCT value of OD is 14mmHg and OS was not able to note.The BCVA OD was 6/6 and in OS 3/60. The anterior segment examination with slit lamp was within normal limit & in OS endopthalmitis and nuclear sclerotic cataract grade-III was noted. The Patient was advised to take CT-Orbit and it was diagnosed with orbit-cavernous sinus thrombosis. Patient was treated with Intravenous antifungi Voriconazole injection and natamycin e/d and advised for regular followups.

Conclusion

A history of Covid-19 infection, unmanaged diabetes, extended corticosteroid and immunosuppressive drug usage, as well as primary and secondary immunodeficiency, can predispose individuals to mucormycosis. Regular eye check-ups are crucial for monitoring and early detection, thus by helping to prevent complications and preserve eyesight.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1186

TITLE: Validation of a computer - based visual acuity chart

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Priya N / Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

This study aimed to validate a Computer- based Visual Acuity (VA) Chart by checking its reliability with log MAR and Snellen VA charts.

Methods

A cross sectional study was conducted between January and June of 2023 at an educational institution in Chennai. Participants between the age of 18 to 35 years with refractive error within the range of [-0.50,+0.50]DS and/or -0.50DC of astigmatism were included under emmetrope category and [-6.00,-0.50) and (+0.50,+6.00]DS with astigmatism not greater than -0.75DC were included under ametrope category. The monocular distance VA was assessed using Snellen, log MAR, VA chart designed in Computer and Laptop. The computer-based chart was designed with a psychopy module for 3 meter testing distance, has a VA range of 2.5 to - 0.3 log MAR, consists of 3 rows of Tumbling E optotypes with 5 optotypes in each row and follows staircase protocol. Intraclass Correlation Coefficient (ICC) was done to assess the reliability of Computer-based VA chart.

Results

The study included 50 participants (28 emmetropes, 22 ametropes). There was excellent reliability between VA log MAR and VA Snellen (ICC 0.948). There was good reliability between VA Laptop and VA log MAR (ICC 0.844), VA Computer and VA log MAR (ICC 0.806), VA Laptop and VA Snellen (ICC 0.789), VA Computer and VA Laptop (ICC 0.814). There was moderate reliability between VA Computer and VA Snellen (ICC 0.742).

Conclusion

This study concludes that this Computer-based VA chart can be used to assess VA while screening/testing since it has good and moderate reliability with log MAR and Snellen VA charts respectively.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1188

TITLE: Amblyopia therapy - a boom for eccentric fixation

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ayesha Parveen S / M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Eccentric fixation can be seen in cases of strabismus with amblyopia where fixating through amblyopic eye will not occur in visual axis. The purpose of this case is to emphasis on the importance of amblyopia therapy will provide characteristic visual outcome.

Observation

A case of 19 years old girl who came to us for a regular eye-examination. The patient has undergone cataract surgery in OS 8 years back. The UAVA was OD:6/9,OS:6/36.We noticed face turn while checking vision in OS. The acceptance OD:-0.75DCx90 6/6, OS: Plano 6/36, NIP; anterior segment examination revealed anterior capsular phimosis & yag opening. Fundus examination showed peripapillary atrophy in OS. The patient was diagnosed with amblyopia & advised for PMT. On Squint evaluation, W4DT (OS) suppression, Cover test showed OS: Exotropia, Ocular movement showed nystagmus present on abduction (poorfixation).On Next visit, the V/A with right face turn in OS: 6/36 & advised for amblyopia therapy. After 10 days of amblyopia therapy the vision in OS: 6/18 in primary gaze without face turn but suppression & exotropia in OS was still profound. In further visit, the visual acuity was OD; 6/6,OS:6/18P;PH:6/9 with acceptance -2.50DC x 180 6/12; ADD: +2.50 DS N6.The patient was highly satisfied about the visual change relief from eccentric fixation. Further squint surgery is advised for patient where the post-operative visual changes was remarked.

Conclusion

Amblyopia is leading cause of monocular vision loss in paediatric population. Early detection and treatment of amblyopia can improve the chances of the successful visual outcomes. If the eccentric fixation with amblyopia is not detected early can lead to visual challenges where early diagnosis & intensive therapy at proper time should be emphasized.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1189

TITLE: Transformative Vision Correction: Unveiling the Benefits of Trans-PRK in Myopia Treatment

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Yagapriyan K/ M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Trans-PRK is a modern laser refractive surgery that offers an advanced, touch-free approach to vision correction. This minimal invasive procedure treats myopia, hyperopia, and astigmatism. Trans-PRK also eliminates flap complications in other treatments like LASIK while offering even greater benefits to those with thin corneas and high levels of near-sightedness.

Observation

This is the case of a 26-year-old female who came in because she wasn't happy with the cosmetic appearance of her glasses and wanted to have LASIK surgery. She has been wearing a spectacle for two years. Her unaided VA distance is OD:3/60, OS:3/60, and Near OU: N6. On slit-lamp examination, the anterior segment, i.e., the cornea and crystalline lens, was clear, and the peripheral retina showed snowflake lattice degeneration in OU. After the LASIK workup, her corneal thickness was 499µm in OD and 492µm in OS, and the rest of the values were normal. On the second visit, the patient undergoes the barrage laser treatment to strengthen the retinal tissues to prevent RD, and then the Trans-PRK on the next visit. She had come for the surgery on the third visit, and preliminary examinations were taken before the surgery. After surgery, the BCL was advised to heal with mitomycin C. On the next visit, she had an excellent improvement in her VA in OU 6/6 and felt better instead of wearing spectacles.

Conclusion

Compared to other refractive surgical procedures. Trans-PRK shows safe and rapid healing for correction of myopia making it one of the fastest routes towards crystal clear vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1192

TITLE: Exploring visual rehabilitation: a case report on cerebral visual impairment (CVI) and co-occurring cerebral palsy: insights and therapeutic strategy

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Praveena V / Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Objective

This case report aims to contribute insights of effective therapeutic strategies for visual rehabilitation in children with Cerebral Visual impairment and co-occurring cerebral Palsy.

Observation

A one year old male was referred to Vision Enhancement Clinic with a diagnosis of Cerebral Visual Impairment (CVI) and Cerebral Palsy (CP). Following comprehensive ocular assessment and functional vision assessment, the child was advised to undergo early intervention therapies. The baseline vision assessment revealed the child was not able to fixate or follow light. Child's visual skills were enhanced following the 233 sessions of vision stimulation. The sensory awareness, and fine motor skills were enhanced after 58 sessions of Occupational therapy. Gross motor skills with neck control and the ability to sit without support developed after 73 sessions of physiotherapy. Child showed progress in various visual skills when compared to baseline visits.

Conclusion

Timely identification, integrated therapeutic approaches and consistent interventions can positively impact the developmental trajectory, offering them a better chance for optimal functioning. Early interventional therapies play a crucial role in improving the visual and cognitive abilities, as well as the overall well-being, of children with CVI and associated comorbidities.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1194

TITLE: Estimation of direct and indirect cost of myopia in Tamil-Nadu - A cross sectional study

PRESENTING AUTHOR /AFFILIATIONS:

Ms.Mahalakshmi.D.M / SRM Medical College Hospital & Research Centre, Tamil Nadu

ABSTRACT BODY:

Purpose

To estimate of direct and indirect cost of myopia in Tamil-Nadu.

Methods

This is an ongoing cross-sectional study of 69 myopic subjects (age range: 8-75yrs) from Kanchipuram, Chennai, Chengalpattu and Tiruvallur districts. Direct and indirect cost of myopia was assessed using Health Expenditure Questionnaire and productivity loss questionnaire.

Results

The median annual direct cost of myopia was INR 2157.14(IQR: INR 1869.26, INR 3022.50) (US$25.96 (IQR: US$ 22.49, US$ 36.38). The median annual cost for pair of spectacles(n=64), CL(n=7) and optometrist visit(n=44) was INR 3900(IQR: INR 2775, INR 4950)(US$ 46.97(IQR: US$ 3.41, US$ 59.60)),INR 2200(IQR: INR 1100, INR 3250)(US$ 26.49(IQR: US$ 13.25 , US$ 39.13)) and INR 500(IQR:INR 500, INR 2500)(US$ 6.02(IQR: US$ 5.02 , US$ 30.10)). The median annual direct cost of high(mean SER:-6.70D±1.18, n=22), moderate(mean SER:-4.28D±0.90, n=47) and low(mean SER:-1.00D±0.29, n=47) degree of myopia was INR 1800(INR: 1350, INR 2900)(US$ 21.67(IQR: US$ 16.26,US$ 34.92)), INR 2200(IQR INR 1175, INR 3425)(US$ 26.49(IQR: US$ 14.15, US$ 41.24)) and INR 2500(IQR: INR 1500, INR 3137.5)(US$ 30.11(IQR: US$ 1806 , US$ 7.78)). The median annual direct cost for early onset (n=37) and late onset (n=51) myopes was INR 1100(IQR: INR 1500,INR 3137.5) (US$13.25(IQR:US$18.06,US$37.78)) and INR 3000 (IQR:INR1350,INR2900) (US$36.13(IQR:US$16.25,US$34.92)). For indirect cost (n=59) the mean paid and unpaid work hours before and after myopia treatment were 62 hrs±19.17 and 29.2 hrs±22.91. But these differences were not statistically significant.

Conclusion

There was no significant difference in the median annual cost of myopia between high, moderate and low myopes as well as between late onset and early onset myopes.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1195

TITLE: Succeeding Without High-Tech; Tailoring Scleral Lenses in Coexisting Limbal Stem Cell Deficiency (LSCD), Ptosis, Pinguecula- A Case Report

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Janani B / Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

To describe the scleral lens (SL) tailoring without advanced technology in managing patient with coexisting LSCD, ptosis, and pinguecula

Case-Description

A 37-year-old male with blurred vision, ptosis, and photophobia in OD followed by chemical injury 17 years ago was referred to specialty CL-clinic. CDVA was 6/12, N10@15-20cm (OD), and 6/6, N6@25-30cm (OS). Partial LSCD and nasal pinguecula (OD) were observed in slit lamp. Palpebral fissure height(PFH) was 4mm(OD) and 8mm(OS). SL of 16.0mm/2.6Sag improved CDVA to 6/6 with efforts and PFH-6.0mm. Adequate central and limbal vault, impingement on the pinguecula was present. Subsequently, 17.0mm/3.0Sag improved CDVA to 6/6, N6@25-30cm, and PFH to 7.5mm but excess central and limbal vault, impingement, edge lift below pinguecula and post-removal corneal staining was noted. Fit assessment was done1,3 and 6 hours post lens wear. To mitigate complications, vault was reduced, and notch at the area of pinguecula (2.5mm height and width/smooth-polished-edges) was incorporated by measuring with graticule of slit-lamp. Final SL (BSS/17.0mm/8.0BC/Boston-XO2- material) was optimum. Patient appreciated cosmesis and reduced photophobia. Boston-MPS for cleaning lenses along with saline(0.9%Nacl) for rinsing and to fill in SL was recommended. As a precaution wearing hours with breaks was recommended. Quality-of-Life was measured with the “NEI-VFQ25” questionnaire, score improved from 55 to 85 post-3-months of lens wear.

Conclusion

Larger diameter and slight excess vault are well-known in ptosis management but in such coexisting conditions, higher vault and the impingement can worsen LSCD. This case-report highlights steps taken for successful management without advanced technology and improving patient QOL without any adverse complications

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1197

TITLE: Vision Lost and Found: A Tale of VKH Syndrome Recovery

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Divya Dharshini P/ M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Vogt-Koyanagi-Harada disease (VKH) is a central nervous system condition that specifically affects vision and hearing. The most noticeable symptom is a rapid loss of vision. There may also be neurological signs such as severe headache, vertigo, nausea. The purpose of this case report is to provide detailed information about a patients experience with VKH Syndrome.

Case Report

A 54 years old male visited us with a C/o blurred vision for both distance & near and with orbital pain in OD x 4 days. He was also reported with hearing issues. He is in under treatment for hypertension &hypercholesterolemia for past 6 yrs. He has been using reading glasses when needed. His UAVA for distance OD-6/60, OS-6/9p, with pinhole OD-NIP, OS-6/6 meanwhile his near visual acuity OD-N36, OS-N8.During slitlamp examination for anterior segment there was mild congestion in the conjuctiva and Early lens changes in his crystalline lens. As he was not willing to dilatation we was advised to take non-mydriatic OCT imaging. Post which his OCT reports revealed the presence of separated subretinal fluid and changes in choroidal volume and thickness which let us to confirm the diagnosis as VOGT-KOYANAGI-HARADA SYNDROME in OD. He was prescribed with IVMP as intervention. After 3 doses his vision is OD-6/6.

Conclusion

Early and effective treatment of VKH could lead to comparatively favourable prognosis. However, recurrent episodes of the disease can progressively worsen the outlook over time. By paying attention to small signs and gathering significant evidence, we can proactively address health issues rather than waiting for them to manifest as major problems.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1198

TITLE: Angle dysgenesis in juvenile open-angle glaucoma: a prospective study utilizing spectralis-AS OCT

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Mousumi Patro / Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

To characterize qualitative and quantitative parameters that determine angle dysgenesis in patients with Juvenile Open-Angle Glaucoma (JOAG).

Methods

In a prospective cross-sectional study, twenty JOAG patients and age-matched controls underwent Spectralis anterior segment optical coherence tomography imaging. Quantitative parameters, including Schlemm's canal (SC) area, trabecular meshwork (TM) width, and thickness were analyzed from the anterior-segment images using Image J. The presence of SC and abnormal membrane in JOAG was also assessed from the anterior-segment images. Mann Whitney U test was performed for the comparative analysis of all parameters in JOAG and controls.

Results

Among 40 participants, 65.9% were male, and 34.1% were female, with a mean age of 26.6 ± 8.6 (11- 41) years. In JOAG, there was an absence of SC both nasally (22.4%) and temporally (16.1%) compared to controls ($p < 0.001$). JOAG exhibited a higher prevalence of abnormal membrane at TM, both nasally (31.9%) and temporally (24.7%), compared to controls ($p < 0.001$). The median (IQR) of nasal and temporal SC area (µm2) was 2142.31 (3720.85) and 3288.63 (2433.59) in JOAG, and 6765.19 (3833.61) nasally and 5412.15 (2311.44) temporally in controls ($p < 0.001$). The nasal and temporal TM width (µm) was 617.33 (122.59) and 651.98 (100.99) in JOAG, and 595.01 (156.07) and 497.37 (119.01) in controls ($p < 0.001$). No statistical significance was seen in TM thickness nasally and temporally in JOAG and controls.

Conclusion

JOAG exhibits abnormal membranes at TM with reduced SC area and increased TM width compared to controls.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1199

TITLE: Comparison of blur perception and contrast sensitivity between myopic and emmetropic individuals

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Jeslin Alvinda Dsouza / Manipal College of Health Professions, Karnataka

ABSTRACT BODY:

Aim

The study aims to compare Blur perception and Contrast sensitivity function(CSF) in individuals with early-onset myopia(EOM), late-onset myopia(LOM) and emmetropia.

Methodology

This cross-sectional study included a total of 20 participants in Blur perception experiment, and 15 participants in CSF experiment between the age 8-35 years, with mild to moderate myopic individuals. Psychophysical methods were used to determine blur perception threshold and peak-CSF, cut-off frequency, AUC(area under the curve). Both the experiments were measured at 1-meter distance from the monitor in a dark room. CSF was measured using quick CSF method, where participants were asked to identify the orientation of the Gabor stimulus. In blur perception experiment, the participants had to subjectively determine, if the displayed image was sharp or clear.

Results

The mean value of blur perception threshold in EOM, LOM, emmetropes greater than 15 years of age, emmetropes between 8-15 years of age were 0.115±0.02, 0.078±0.02, 0.141±0.1, 0.140±0.1 dioptres respectively. The mean CSF values of emmetropes greater than 15 years of age, emmetropes between 8-15 years of age, EOM and LOM were 2.53±2.50, 2.16±2.24, 3.52±2.71 ,2.57±2.67 in AUC; 5.73±5.93, 5.17±4.43, 5.02±5.08, 4.93±4.89 in Cutt-off frequency; 36.2±6.67, 28.6±4.65, 33.1±11, 37.4±10.3 in peak spatial frequency respectively. There was no statistically significant difference between early onset myopes, late onset myopes and emmetropic individuals.

Conclusion

This study validates that age of onset of refractive error does not affect the blur sensitivity nor the contrast sensitivity function in an individual.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1201

TITLE: Caution: drinking alcohol is injurious to ocular health- a case report on Me-ION

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Abdul Bhasith J / M.N College of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Methanol-induced optic neuropathy(Me-ION), a serious ocular condition which results irreversible visual impairment secondary to damage and loss of function of the optic nerve and retina caused by exposure to methanol(a toxic alcohol).The ultimate goal of this case report is to educate the unprivileged community about the risk factors of alcohol consumption on ocular health by advocating awareness towards it.

Observation

A 28 years male came with C/O diminished distance and near vision in OU since 5 years. Patient had the history of occasional alcohol consumption. His UAVA for distance was 1/60 with NIP and near NAR in OU. Fundus examination showed pale disc with CDR 0.8:1 in OU.OCT-macula appears normal but Full-field ERG showed reduced scotopic and photopic response and flash VEP also abnormal. On next visit, an intensive history unveiled that patient has consumed, 500ml of local liquor containing methanol toxicity at a Malaysian party and hospitalized 5 years back which led to vision deterioration. Then, immediate MRI brain and orbital was performed, results in Bilateral putaminal gliosis- sequelae to toxic optic neuropathy due to methanol which confirmed the diagnosis of Methanol induced Optic neuropathy(Me-ION) in OU. Despite, initial vitamin B12 injection was not effective, patient advised for LVA trial, specifically Bioptic(4X) improved 6/36 for distance and video magnifier N6 for near. Patient was prescribed with their aids.

Conclusion

Beyond diagnosis and treatment, this case report underscores the critical necessity for widespread awareness initiatives on hazards of alcohol consumption towards our society. As an eye-care professional, we should strive to prevent similar complexities like Me-ION and can safeguard ocular health.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1203

TITLE: Managing Post-COVID-19 Vaccine-Induced Diplopia: A Case Study of Successful Treatment with Scleral Lenses

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Krishna Shah/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Purpose

This case study aims to elucidate the presentation, diagnostic journey, and management outcomes of diplopia in a young adult following COVID-19 vaccination.

Case Details

We present the case of a 25-year-old male experiencing persistent monocular and binocular diplopia for one year post his COVID-19 booster dose. Previous medical history indicated a skin allergy for the past four years. Initial examination, His Best corrected visual acuity (BCVA) revealed 6/6, N6 in both eyes revealing no significant abnormalities. Patient was referred to Binocular vision clinic for further evaluation. W4DT revealed fusion for both distance and near. Cover test revealed orthophoria for distance and near. Then patient was advised for abberometry. ITRACE test revealed significant astigmatism in both eyes with high order aberration (HO-RMS) of 0.553µ and 0.734µ in OD and OS respectively. In view of higher aberration patient was referred to contact lens department for further management. Contact lens trial was done with traditional management approaches with soft and rigid gas permeable (RGP) which showed suboptimal result. Scleral lens trial was done. Itrace post scleral lens wear revealed HO-RMS 0.293 µ in OD and 0.252 in OS. Significant reduction in HO-RMS was noted

Conclusion

Scleral lenses helps in managing post-vaccination diplopia, emphasizing the importance of tailored therapeutic approaches in mitigating symptoms and improving visual outcomes.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1204

TITLE: Comparison of accommodation and vergence parameters in early and late-onset myopia

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Shravya/ Manipal College of Health Professionals, Karnataka.

ABSTRACT BODY:

Aim

To compare the accommodation and vergence parameters in early and late-onset myopia.

Methodology

This Cross-sectional observational study was conducted in the Ophthalmology department, KMC, Manipal and Optometry clinic, CTC, Manipal. It included 40 subjects with mild to moderate myopia aged 18-35 years. After the comprehensive eye examination subjects were categorised into two groups: Early-onset myopia (who had their first prescription before 15 years of age) and late-onset myopia (who had their first prescription at the age of 15 years or older). Accommodation and Vergence parameters such as amplitude of accommodation, accommodative facility, accommodative response, AC/A ratio, near point of convergence, positive and negative fusional vergence and vergence facility were measured.

Results

A total of 40 subjects (20 early-onset and 20 late-onset myopic individuals) were included in the study. The mean age of the early-onset myopic individual was 21.7±2.25 and late-onset myopic individual was 21.6±2.41. The results showed that there was a statistically significant difference ($p<0.05$) between early and late-onset myopia in accommodative facility and negative fusional vergence for distance. There was no statistically significant difference ($p>0.05$) between early and late-onset myopia in other parameters. Measurement of accommodative response showed lag of accommodation in both the groups.

Conclusion

This study revealed that the Late-onset myopes have reduced accommodative facility compared to early-onset myopes and lag of accommodation is present in both groups. Assessment of accommodation and vergence parameters will help us in deciding better treatment options for myopic adults.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1205

TITLE: Early Recognition and Treatment for a Rare Retinal Challenge - Eales disease

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Hemasri.P/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Rare-retinal disorders are often under–recognized and under-researched. Most of the condition may be treated if it was diagnosed early. One such condition is Eales Disease.

Observation

A 21 years old male who came to our hospital with the C/O of redness only during morning since 2 days in OU and the complaint was mainly red spot that is seen in his centre of visual field in both eye since 2 days. The patient visited nearby pharmacy and he was prescribed with ciprofloxacin e/d (OU).The patient didn't notice any reduction in the symptoms. When he visited hospital the UAVA OD: 6/6 and OS 6/9P NIP, the near vision was N6 in OU. The BCVA OD: Plano 6\6, OS: Plano 6/9-2, NIG. Fundus examination revealed OD: normal OS: vitreous haemorrhages, vascuilitis, pre-retinal haemorrhage. The patient was diagnosed with Eales disease. On his next visit there is no visual change and patient was advised to take physician opinion. Ocular advice was to take avastin in OS. Since the Eales disease was in its stage-I steroids was considered as the first line treatment in inflammatory stage. The visual outcomes was 6/6 in OS and the patient was kept under observation with follow ups at 6 to 12 months interval.

Conclusion

Eales disease is idiopathic which affects the peripheral retina in young male adults. The management depends on the severity of the disease. Awareness regarding this rare condition is quiet low and it can often be misdiagnosed too. Early detection is better for prevention.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1207

TITLE: Crisis in Sight: Purtscher-like Retinopathy in Adolescent Chronic Pancreatitis

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Swetha M/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Purtscher-like retinopathy manifests with retinal hemorrhages and ischemia, likely stemming from complement-mediated leuko-embolization. This rare and severe angiopathy is observed in conditions like acute pancreatitis.

Observation

A15 year girl presented with defective distance and near vision and photophobia in OUsince2days.The patient has k/c/o chronic pancreatitis under Rx since 7 years and stenting done for chronic pancreatitis. The UADVA is 1/60 with NIP OU & UANVA is NAR in OU, scleral icterus observed in torch light examination. The BCVA for distance is 1/60(OU) and for near is NAR in OU. Diagnosis made by indirect-ophthalmoscope as retinal purtscher flecken, cotton wool spot, disc edema, intra retinal hemorrhage. After all the assessment major group of signs conforming the diagnosis of Purtscher –like retinopathy (OU).Advice to take steroidal-medication. After 2 months of follow-up BCDVA was 6/18 (OU), BCNVA was N8. Her colour vision was 1/25 in OU. Her visual fields impacted in nasal and superior side in the right eye, while only superior side was affected in the left eye. Low vision aid was advised for distance SEE-TV (6/6), monocular telescope 6/6st in OU. For near dome magnifier and pocket magnifier N6. Finally patients prescribed with SEE-TV 6/6 (OU), pocket magnifier (N6). Patient counseled for various adaptive technique to improve her academic independence.

Conclusion

Collaboration among different healthcare professionals is crucial in effectively managing Purtscher-like retinopathy. The prognosis hinges on the specific retinal areas affected, necessitating careful monitoring. Improvement in acute pancreatitis has been linked to the resolution of acute ocular lesions and has a positive effect on visual acuity.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1210

TITLE: Listen to your patient, He will guide you to diagnose -The impact of history taking in USHERS syndrome

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kavya S/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Ushers syndrome is a rare genetic disorder involving dual sensory impairment, characterized by progressive vision loss due to retinitis pigmentosa and hearing loss with vestibular dysfunction. By exploring how these sensory deficits intersect, we aim to highlight the importance of holistic approach to diagnosis and management in individuals with dual sensory impairments.

Observation

A 31 years male came to our hospital with the longstanding C/O blurred vision for distance and near since 20 years in OU. He had been diagnosed with RP 3 years back. H/O using PG X 20 years and managed with cochlear implantation for 15 years. A comprehensive history and vision assessments have been taken in patient and noted with slurred speech, difficulty with balance and coordination, hypopigmentation of iris and see-saw nystagmus with moderate frequency. His UADVA was 3/60 in OU with pinhole 6/60 in OU. In anterior segment examination early lens changes noted in OU. Posterior segment evaluation with OCT & CFP confirms the diagnosis of retinitis pigmentosa which involves the combination of hearing and visual impairment conclude with the diagnosis of USHERS SYNDROME. LVA trail significantly improved visual acuity with dome magnifier and video magnifier for near N6(OU) and for distance with See TV-6/12;Monocular telescope-6/9. LVA play a crucial role in managing ushers syndrome by maximizing the remaining vision.

Conclusion

This case report emphasizes the critical role of thorough history taking in recognizing the complex manifestations and the significant role of rehabilitation strategies thereby enhancing patient's independence and quality of life. Intricate landscape of diagnosing syndromic disorders & meticulous history taking stands as a corner stone.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1211

TITLE: Exploration of modern approaches to refractive error correction

PRESENTING AUTHOR /AFFILIATIONS:

Ms Hemasri P / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Nearsightedness, commonly known as myopia, is a refractive error of the eye. It occurs when the eyeball is excessively elongated. Myopia is typically addressed through eyeglasses, contact lenses, or refractive surgery, all of which serve to correct and restore clear distance vision. Orthokeratology (ortho-k) involves intentionally reshaping the front surface of the cornea using specialized Cl.

Observation

A 14 yrs old male visited with blurred vn in OU. During preliminary examination UAVN in OU: 6/18. Acceptance in OD: ± /-2.75×10 - 6/9P, OS: ± /-2.75 ×170 - 6/9P. He was advised to Amblyopia therapy. After amblyopia therapy his aided VA in OU: 6/6. In 2ND visit AXL OU 24.84mm.Refractive error was in OD -1.25/-2.75×10 - 6/6 & OS -1.75/-2.50×170 6/6. Hence, DIMS lens was advised to avoid more progression. At 3rd visit the AXL in OD: 24.88mm & OS: 24.87mm and acceptance was in OD -1.50/-2.75×10 6/6 & OS -2.25/-2.75×170.Now he was advised to try Ortho k lens as he was football player. The ortho k trial was done to the patient with the power of OD -2.50D & OS -2.75D, fitting curve OU 43.00mm ,diameter OU 10.6mm. The fluorescein pattern shows both eye optimal fit. After 24 hrs the vn OD 6/12 & OS 6/18. After 1 week of ortho k use vn in OD 6/9p an OS 6/12. At another visit of 1 month OU 6/6P.

Conclusion

One of the non-surgical advancement in refractive correction is Orthokeratology. Providing reversibility and suitability for those seeking temporary solution to improve their vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1212

TITLE: Unveiling the potential of optometrist in the management of LCA- a multi-disciplinary approach

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Abdul Bhasith J/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Leber's Congenital Amaurosis (LCA) is a rare genetic eye disorder typically causes severe heterogeneous retinal dystrophy. It usually presents at birth or early infancy. This case report explores the vital role of Optometrist in diagnostic assessments and thereby prescribing appropriate management through multidisciplinary approach.

Observation

A 9 years girl presented with blurred distance and near vision, severe photophobia in OU since birth. The patient had history of consanguinity-marriage, preterm birth, C-sectional, 2kg weight,12 days incubation. The distance visual acuity was 4/60 in OU with no PH improvement and near vision N24 in OU. Pendular nystagmus was observed in 9 gazes and had absence of pupillary reflex in OU. Subjective and cycloplegic refraction with retinoscopy, shows high hyperopia with BCVA of 4/60 for distance, N24 for near in OU. Electroretinogram indicated abnormal retinal responses. After all the assessments, major group of signs confirming the diagnosis of Leber's Congenital Amaurosis (OU). Patient has advised for LVA trial. For distance, Telescope results 4/60, See TV device: 6/36blur in OU. Amber filter over spectacle correction used to reduce photophobia, surprisingly distance vision improved to 6/36 in OU. For near, Bar-magnifier: N18, Dome-magnifier:N10 and Video-magnifier results N6 in OU. Finally patient prescribed with Amber tinted glass to reduce photophobia with BCVA 6/36 and video-magnifier, N6 in OU. Patient counselled for various adaptive techniques to improve her independence.

Conclusion

This case report underscores the distinctive expertise and knowledge of optometrists in diverse diagnostic assessments and implementing effective management through a multi-disciplinary approach, leading to positive outcomes in challenging genetic disorders.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1213

TITLE: Beyond Expectations: A Journey towards Vision Enhancement through the strategic interventions- A case report on STRAATSMA syndrome

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Abdul Bhasith J/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Straatsma Syndrome is characterised by traditional triad of axial myopia, amblyopia and unilateral myelinated retinal nerve fibres growth. This case report aims to raise awareness on aspects of diagnostic measures, significance of clinical features and to out-reach the vital role of Soft CL as a key-element in achieving optimal visual outcomes.

Observation

A 11 years old male presented with C/O blurred distance and near vision in OS since 1 year. The UAVA for distance was 6/6 OD and 3/60 with NIP in OS & near N6 in OD and N36 in OS.W4DT revealed suppression in OS. Subjective and cycloplegic refraction was plano with 6/6 & N6 (OD) and -8.50DS/-1.50DCX150 in OS with BCVA of 3/60 & N36 results in unilateral amblyopia. The axial length was 27.15mm in OS.Dilated fundoscopy revealed MRNF along inferior arcade (OS).The triad of high axial myopia, amblyopia and MRNF growth, confirmed the diagnosis of STRAATSMA syndrome (OS).Patient advised for Soft CL trial in which the spectacle power was converted to -9.25DS using spherical equivalent with BC 8.6mm in OS in which BCVA significantly improved to 6/18 for distance and N12 for near. Finally, the patient was prescribed SCL with the power of OS: -9.25DS, which led the patient to have satisfactory visual outcome. The patient advised for amblyopia therapy for further visual prognosis.

Conclusion

The journey from diagnosis to the implementation of SCL fitting not only enhanced visual acuity for this patient but also sets the stage for ongoing therapeutic aspect for amblyopia, emphasizing the potential for positive and long-term visual prognosis in cases of Straatsma syndrome.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1214

TITLE: An interventional study on the Impact of vision therapy on visual perceptual skills among Optometry students

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ashwini Ninganur / Sankara College of Optometry, Bangalore.

ABSTRACT BODY:

Aim

To study the Impact of vision therapy on visual perceptual skills among Optometry students

Methodology

It is a prospective study where subjects were taken from Sankara academy of vision, Bangalore. Students who met the criteria of inclusion and exclusion were considered. The complete baseline evaluation was done following detailed binocular vision assessment involving Sensory tests, Motor tests, Accommodation tests and Vergence tests. Students who were diagnosed with NSBVA were not included in the study. TVPS-3 assessment was carried out among all the students and the raw scores were calculated. The student underwent seven days of vision therapy. TVPS-3 was re-assessed at the end of seventh day and raw scores were calculated for the same. Data analysis was done using Paired T-test with help of SPSSv26 software. The mean values of gender, visual acuity, refraction, BV Parameters and Visual perceptual skills were calculated. Then, the comparison was done between the visual perceptual skills, pre and post vision therapy.

Results

A total number of 60 students were evaluated. Students were selected from Sankara College of optometry in Bangalore based on inclusion and exclusion criteria. Students diagnosed with NSBVA were excluded from the study. Students whose all BV Parameters were within normal range were included in the study. Out of 50 subjects participated, 13 (74%) were males and 37 (26%) were females. The results showed that there was a significant improvement in all seven visual perceptual skills post vision therapy among all the students with significant changes ($p<0.001$)

Conclusion

To conclude, there was a significant improvement seen in all the visual perceptual skills among optometry students post vision therapy.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1215

TITLE: Effects of diabetes mellitus on intraocular pressure and central corneal thickness

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Bidisha Ghosh / Manipal College of Health Professionals, Karnataka.

ABSTRACT BODY:

Purpose

Diabetes mellitus (DM) is a major health concern all over the world. With the global prevalence of DM over recent decades, more patients are suffering from several diabetic complications including systemic as well as ocular.

Objective

To assess the effect of diabetes mellitus on intraocular pressure and central corneal thickness.

Methods

This prospective cohort study assessed 92 individuals, aged 18 to 80 years. Two groups were included based on the inclusion criteria as the DM group (n= 46) and the non-diabetes group (n=46). Central corneal thickness (CCT) was measured using Pachymeter Tomey (BIO AND PACHYMETER AL 3000) and intraocular pressure (IOP) using Icare tonometer. All individuals were assessed for IOP and CCT for 3 days within a week times.

Results

A total of 92 individuals were included with the median age of 58.6+11.9 for diabetes group and 43+11.7 for non- diabetes group. Diabetes group showed increased level of IOP of 28 +7 mmHg on 1st day, when blood sugar level was greater than 250 mg/dL. But there was no significant change in central corneal thickness with 485+51 µm. There was a significant reduction in IOP when measured on 2nd and 3rd day, compared to 1st day.

Conclusion

This study provides an insight on variation in IOP that can be caused due to high blood sugar level. Therefore, it suggests the need for early screening for occurrence of secondary glaucoma among uncontrolled diabetes population.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1216

TITLE: Exploring enhanced vision: Low Vision Aids as a supportive approach in the treatment of Stargardt's Disease

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Athira A/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Stargardt's disease is a hereditary disorder impacting the macula and leading to vision loss in children. In this condition prevalence is 1 in 8000 people is affected. The main aim is to understand its implications for pediatric patients which is essential for early detection, monitoring, and potential intervention strategies.

Observation

A 10-year-old female presented with a one-year history of blurred vision for distance in OU. No systemic illness or ocular trauma/surgery and no history of wearing spectacle was reported, but consanguinity in the family was noted. The UADVA revealed 6/60 in OD and 6/36 in OS. Pinhole correction showed no improvement in OU. UANVA was N12 in OD and N18 in OS. On Fundus examination by IDO (OU) foveal atrophy with beaten bronze appearance is noted and foveal reflex was absent suggestive of Stargardt's macular dystrophy. Despite a BCVA of 6/36 in OU, low vision aids have been advised. On his next visit low vision aids, including telescopes and handheld magnifiers, improved distance and near vision, respectively to OU 6/18 and OU N6. Regular eye checkups were advised for ongoing monitoring and intervention adjustment.

Conclusion

The integration of low vision aids proves to be a valuable and supportive approach in the treatment of Stargardt's disease in children. While there is no cure for this hereditary condition, leveraging these aids enhances visual capabilities and contributes to improved quality of life. As we navigate the ongoing challenges of Stargardt's, the utilization of low vision aids offers a fostering independence in optimizing their daily experiences.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1217

TITLE: Evidence based management of Vernal Kerato-Conjunctivitis with Limbal Stem Cell Deficiency with Scleral lens

PRESENTING AUTHOR /AFFILIATIONS:

Ms. M. Sindhu Vaishnavi/ The Sankara Nethralaya Academy, Tamil Nadu.

ABSTRACT BODY:

Introduction

Limbal Stem Cell Deficiency (LSCD) is one of the complications of long-standing Vernal Kerato Conjunctivitis (VKC) contributing to severe visual impairment in young individuals. Scleral lenses (SL) are large diameter lenses that land on bulbar conjunctiva and rest on sclera, the fluid reservoir present between lens and cornea in SL will helps in protecting, hydrating and neutralizing the irregularities of cornea.

Case details

A case of 17 years old male with a history of healed VKC reported to the clinic with complaint of blurring of vision since 1 year, the unaided visual acuity was 6/18, N10 in right eye and 6/6, N6 in left eye; the slit lamp findings revealed right eye stage 3 LSCD with small epithelial defect and left eye stage 2 LSCD. He was diagnosed with VKC involving cornea and limbus. He was advised for SL trial for further vision improvement.

Management

Bandage contact lens (BCL) along with topical medications were advised to heal the epithelial defect in right eye and once the defect was healed an SL trial was advised, with 16 mm diameter and 3.20 sag lens the central and limbal vault was good with no edge lift/blanching was achieved, the visual acuity with SL was 6/9, N6. Lenses were prescribed to the patient, the unaided visual acuity improved from 6/18 to 6/12, N6 and the aided visual acuity with SL improved from 6/9 to 6/6, N6 in the 6 month follow up visit; and a significant reduction in central corneal haze was noted from previous visits.

Conclusion

A significant improvement in ocular surface health was noted pre and post SL use within 6 months of wear, the patient was very happy and comfortable with the lenses which proves the fact that Scleral lenses can improve more than just vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1220

TITLE: Clinical Considerations of Intravenous Methyl Prednisolone Pulse Therapy in Retrobulbar Neuritis

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Agina A.V/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Retrobulbar neuritis is a form of optic neuritis in which the optic nerve becomes inflamed, the prognosis and treatment of optic neuritis will vary depending upon the etiology, the duration and severity of vision loss, and the success of prior treatment.

Observation

A 24 yrs male came to us with the complaint of blurred vision for distance in OD for 4 days N/H/O systemic illness his vision for distance in OD 6/6 OS 6/60 and No improvement in pinhole and near vision OD N6 OS NAR the slit lamp examination of OD is within normal limit and in OS RAPD noted and the fundus examination in OU within normal limit ,In MRI report -hyper intensity found ,on colour vision test with ishihara OD 38/38plates OS 0/38 plates, after investigation of visual field and OCT patient has diagnosed with normal results ,After this examination patient is diagnosed as retrobulbar neuritis in OS and we have treated with intravenous pulse methyl prednisolone injection, injection renerve plus 2cc IM alternate days×5days,Tab harmivit after injection Tab wysolon 60mg 1-0-0 ×1week, subject under gone medication for 1 month and review with best results of vision OD 6/6 OS 6/6Near OD N6 OS N6 and the patient has satisfied with his vision.

Conclusion

Rapid determination of the etiology of retrobulbar neuritis is important for implementing timely and appropriate treatment in which they can regain their normal vision

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1221

TITLE: Vision in focus: Exploring DIMS lens and atropine for myopia control

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Preethi M / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

One of the newest approaches in myopia control is the use of defocus incorporated multiple segments (DIMS) lenses. Recent studies proved the effectiveness of these lenses compared to children who had worn single vision lenses for myopic control.

Observation

This is the case of a 6 years old girl who came for a complaint of high myopia. She had a past ocular history of using glasses since one and half years. She had nil systemic illness and had a medication history of using to atropine 0.01% since 8 months. She had strong family history of myopia. Her birth history is normal. Her UAVA is 3/60 in OD and 6/36 in OS with pinhole improvement of 6/6-1 in OU. Her near vision is also normal. Her current spectacle prescription is -2.75ds/-1.25dc x80 (6/9) in OD and -1.25ds/-0.75dc x100 (6/9) in OS and Acceptance in OD -4.00ds/ -1.00dc x80 (6/6-1) OS -1.75 ds/ -1.00dcx110 (6/6-1).Her axial length in OD: 24.05mm in OS 23.25mm.Rest of the other preliminary examination is normal. The patient is diagnosed with AXIAL MYOPIA. Though the patient had myopic progression even under atropine 0.01%. Hence we prescribed DIMS lenses for myopia control and asked for a review after 6 months. After the period of 6 months patient had good control in myopia progression.

Conclusion

To conclude, DIMS and 0.01% of atropine appear to offer efficacious for slowing myopic axial elongation and combination of these two treatments seems more effective at slowing myopia progression.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1223

TITLE: Transforming Visual Experience: Specialty Contact Lenses in Keratoconus

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Balakumar.S / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

The most common ectatic condition of the cornea is keratoconus which usually occurs from frequent eye rubbing, environmental and genetic factors. The purpose of this case report is to emphasise the importance of fitting Rose-K contact lenses and Mini- Scleral contact lenses to figure out its clinical outcomes.

Observation

A 28 years old male who came to us with the C/O opinion for C3R (College Cross linkage - Riboflavin).The patient using glasses since 10 years in which the power got gradually increasing over years. He was diagnosed with Keratoconus in OU. His UAVA in OD was 6/60 with PH 6/24; N36 in near & in OS was 6/12 with PH 6/9; N6 in near. Retinoscope confirmed the presence of scissoring reflex. The slit lamp showed Munson's sign while looking down. The patient was advised to do C3R + TREK (OD).The post-operative review after a day in OD was 6/60; N36, after a week it was 6/36 with PH 6/18; N36, after a month 6/36 with PH 6/9; after 3 months 6/36 with PH 6/9st; N36.The patient was advised for Rose-K trail. The final Rx with Rose-K were higher over CL.The patient is further trailed with Rose K2 XL (miniscleral) which showed good centration and slightly less movement. After over refraction the final Rx prescribed and vision improved to 6/6.

Conclusion

The Scleral lenses are the good choice of option to improve visual acuity in keratoconus patient when they are unlikely to use glasses and RGP lenses. It gives a valid alternative to surgery by improving the quality of vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1224

TITLE: Exploring Steroidal Interventions for Panuveitis

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Gayathri R / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Panuveitis, inflammation affecting all uveal layers, may stem from various causes. Swift recognition and treatment are crucial for preventing complications and preserving vision. The study aims to evaluate the effectiveness of steroid medications in treating panuveitis and improving visual outcomes.

Observation

A 51 years old male came with the complaint of blurred vision for distance and near in OU 2 weeks. He has no history of any systemic illness and ocular history of cataract surgery done in OD 10 months back and OS 1 year.Unaided distance visual acuity in OD was 3/60 and OS 6/18st with pinhole OD 6/60 and OS 6/12p, unaided near visual acuity OD not able to read and in OS N18.The BCVA in OD 6/60 & in OS 6/12 p. In anterior segment OU PCIOL & iritis is been by slit lamp examination. In fundus examination by IDO in OU vitritis with pan uveitis is noted. He was given medications such as OU Bidin, T.wyaolone and predsol eld tapering and said to come for review after 1 month. In review his Unaided distance visual acuity in OD 6/12 and OS 6/18, the BCVA OD 6/6p and OS 6/6p. The patient was satisfied with better visual outcomes.

Conclusion

The intervention resulted in significant improvement in visual acuity within a month, highlighting the efficacy of steroids in managing panuveitis and restoring vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1225

TITLE: Comparison of ocular parameters and exposure duration to sunlight, digital gadgets, and near work among emmetropes and myopes

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Preethi Anie / Vasan Institute of Ophthalmology and Research, Tamil Nadu.

ABSTRACT BODY:

Aim

To compare the ocular parameters and duration of exposure to sunlight, digital gadgets, and near work among emmetropes and myopes.

Method

A total of 64 subjects, 30(47%) emmetropes and 34(53%) myopes), aged 22years ± 4.19 (range 12-35), 38(59%) females and 26(41%) males underwent a comprehensive ocular examination. Post cycloplegic spherical equivalent refraction (SER), axial length (AXL) and choroidal thickness (CT) were measured and compared with the duration of sunlight exposure, usage of digital gadgets usage and near work.

Result

The median SER was 0DS (IQR 0) in emmetropes, -2.0DS (-1-(-3.09)) in myopes ($p<.00001^*$). The median AXL was 23mm (22.7-23.5) in emmetropes, 23.5mm (22.8-23.9) in myopes ($p<0.00782^*$). The median CT was 296µ (276-318) in emmetropes, 283.5µ (271-301) in myopes ($p< 0.0232^*$). The median exposure to sunlight was 1hr/day (0.5-2) among emmetropes, 0.5hrs/day (0.5-2) among myopes, ($p=0.0601$). The median exposure to digital gadget was 5hrs/day (4-6) in emmetropes, 5hrs/day (3-8) in myopes, ($p=0.7489$). The median exposure to other near work was 2hrs/day (0.5-4) in emmetropes, 2hrs/day (1-3) in myopes, ($p=0.6744$). The median exposure to near work in total was 7hrs/day (6-9.3) in emmetropes, 8hrs/day (5.6-10) in myopes, ($p=0.490$). We found moderate correlation between sunlight/SER ($r=0.457$), sunlight/CT ($r=0.347$), digital gadgets/SER ($r=0.3148$), among emmetropes. We found moderate correlation between total near work/AXL ($r=0.3349$) in myopes.

Conclusion

We found higher SER and AXL and reduced CT among myopes. Sunlight exposure was less in myopes but not significantly different from emmetropes. Digital gadget usage and near work were similar in myopes and emmetropes.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1227

TITLE: Evaluation of near vision triad and reading characteristics before and after caffeine intake

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Manoj M/ Vasan Institute of Ophthalmology and Research, Tamil Nadu.

ABSTRACT BODY:

Aim

To investigate near vision triad and reading characteristics before and after caffeine intake.

Method

Fifty subjects aged 17 to 27 years (20.2 years ± 2.113) participated in this study after preliminary eye examination. Near point of accommodation (NPA), amplitude of accommodation (AA), accommodative response (MEMvalues), accommodative facility (AF), near point of convergence (NPC), pupil size (PS), reading speed (RS) and reading accuracy (RA) before, 1 hour and 2 hours post intake of milk coffee (150ml) with 61mg caffeine concentration.

Result

NPA, NPC, MEM values did not show any difference after coffee intake compared to baseline, $p > 0.05$. AF for OD increased from 12.9 cpm± 3.936 at baseline to 14.0 cpm ± 4.160 at 1hr and 14.1cpm ± 3.573 at 2hrs, $p = 0.009$. PS during distance viewing increased from 3.8 mm ± 0.310 at baseline to 4.0 mm± 0.302 at 1hr and4.1mm ± 0.339 at 2 hrs, $p = 0.007$. PS during near viewing increased from 3.2 mm±0.339at baseline to 3.3 mm ± 0.284 at 1hr and 3.4 mm ± 0.303 at 2 hrs, $p = 0.002$. RS increased from 98.9 words per min ± 26.058 at baseline to 109.3 wpm± 26.206at 1hrand 118.4wpm ± 21.305 at 2 hrs, $p = 0.0006$.

Conclusion

We found significant increase in accommodative facility, pupil size and reading speed at 1 hour and 2 hours after drinking coffee. These may result in transient attentiveness among coffee drinkers.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1228

TITLE: Does the caffeine intake alters the tear film characteristics?

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Thaslima Nasreen A/ Vasan Institute of Ophthalmology and Research, Tamil Nadu.

ABSTRACT BODY:

Aim

To evaluate the effect of caffeine intake on the tear film characteristics.

Method

Fifty subjects aged 17 to 27 years (mean 20.2years±2.113) participated in this prospective study. After preliminary eye examination, Schirmer's 1 values (S1V), tear breakup time (TBUT), and blink rate (BR) were measured before and 1 hour and 2 hours after 150 ml milk coffee intake, with caffeine concentration of 61 mg. Only right eye data were considered for analysis using the one-way repeated measures ANOVA (TBUT) and non-parametric Friedman test.

Result

TBUT significantly decreased from 10.5seconds ±1.909 at baseline to8.4seconds ±1.761 at 1hour and 5.9seconds ±1.597 at 2hours, p=0.00001.Schirmer's 1 value significantly decreased from 35mm(30-35) in 3mins(1.83-5) at baseline to 35mm (22.5-35) in 4.25mins (2.24-5) at 1hour and 30mm(17-35)in 5mins (3-5) at 2hours, p=0.00001. Blink rate significantly increased from 11bpm (8-12.8) at baseline to 13bpm (11.3-15.8) at 1hour and 17bpm (14-19) at 2hours, p=0.00001. Schirmer's 1 and TBUT values started to improve at 3hours.

Conclusion

Caffeine intake significantly alters the tear film and blink rate transiently in young, healthy individuals. Decreased tear production and stability and increased blink rates were noted up to 2 hours after caffeine intake with a reversal in the effect at 3 hours. Our results are suggestive of occurrence of transient dry eyes among coffee drinkers. Known dry eye patients may have to restrict coffee intake to avoid further dry eye related symptoms and signs.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1229

TITLE: Combined visual dilemmas in pediatric ophthalmology-an insight from Tuberculosis meningitis case- a case study

PRESENTING AUTHOR /AFFILIATIONS:

Ms. V. Soundarya Dharshini/ Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Objective

The objective of this case is to thoroughly record and document the difficulties faced by pediatric patient involving sequence of disease such as megalencephaly, sixth nerve palsy and optic atrophy following tuberculosis meningitis .It seeks to provide valuable information about the clinical approach and possible intervention in the management of these cases.

Case

A 10 yr old child reported to clinic with the complaint of diminision of vision since a year. She had the h/o megalencephaly, sixth nerve palsy in the right eye, and optic atrophy in both eyes following tuberculous meningitis. The diagnostic journey included VEP and CT Brain assessments, revealing bilateral dysfunction of the anterior optic pathway. Notably, the patient's history of Ethambutol use for TB raised concerns about medication-related optic neuropathy. The comprehensive visual examination, low vision advice, and interdisciplinary collaboration recommendations underscore the intricate challenges in managing this complex case. The patient's motivation to improve self-confidence and continue schooling highlights the management of visual impairment in the pediatrics population.

Discussion

Despite challenges, correct diagnostic tests and investigations make the treatment and management of these conditions fruitful. Managing this patient with low vision device had improved the quality of life of patient.

Conclusion

Ophthalmologists help in diagnosing the condition and Optometrists play a vital role in managing visual challenges through low vision aids, emphasizing collaborative interdisciplinary teamwork for comprehensive patient care. The case provides valuable insights into managing ocular conditions with multiple sequels, emphasizing the significance of collaboration between ophthalmologists and optometrists.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1230

TITLE: Finding undetected macular pathologies in patients with cataract using OCT

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Joice Mercy/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

To identify any macular abnormality that goes unnoticed during a routine fundus examination and is revealed exclusively through Optical Coherence Tomography (OCT) in the preoperative assessment of cataract surgery.

Methodology

This cross sectional study included patients came for cataract surgery between January 2020 and December 2023 in MN eye hospitals. Eyes with a prior history of macular abnormalities were excluded from the study. Patients were categorized into two groups based on visibility of the fundus while viewing through the slit lamp with 90D. The patients who had hazy view were referred to Spectral Domain OCT, (Model No: RS-3000). The patient's macular findings and its abnormalities identified only through OCT were noted. Descriptive statistics was done.

Results

The study comprised of 72 eyes of 36 patients. The mean age of the patients was 40 ± 70 Years.13 patients were female and 23 patients were male. Of 36 patients 2.4 % had hypertension, 2.11 % had diabetes mellitus. Of the total population (N=72 eyes), 11.1 % had macular abnormalities. Of the patients who had hazy view (N=41 eyes), 18.1% showed macular abnormalities. The abnormal macular findings were epi retinal membrane (4.1%), macular hole (1.3%), age related macular degeneration (2.7%), macular edema (2.7%).

Conclusion

While examining cataract patients, macular abnormalities were exclusively identified through OCT imaging in 11.1 % of the population. This indicates the importance of OCT in patients who have hazy view of the fundus using slit lamp with 90D.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1231

TITLE: Dead bag syndrome, late intraocular lens implant dislocation and glaucoma- clinical, histopathological findings and management options

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Aashna Ratra / Stanley Medical College, Tamil Nadu.

ABSTRACT BODY:

Purpose

To report the clinical and histopathological findings in a case series of patients with the dead bag syndrome, late intraocular lens (IOL) dislocation along with glaucoma and discuss management options.

Methodology

A retrospective analysis of eyes that developed IOL dislocation and were found to have the dead bag syndrome was done. Only cases with history of uneventful cataract surgery were included. Eyes with raised intraocular pressure or those on anti-glaucoma treatment were included. Eyes with complicated cataract surgery, history of trauma or any retina pathologies were excluded.

Results

Twelve eyes of 11 patients (age 52- 75 years, all males) were included. Ten eyes reported IOL dislocation after 6 - 10 years of uneventful cataract surgery (83.3%). Two eyes reported within 3 years. No predisposing factors were noted. The dislocated IOL was replaced by scleral fixated IOL (SFIOL) in 10 eyes and in 2 eyes the same IOL was refixed to the sclera. Concurrent open angle glaucoma was noted in 5 eyes. Three were controlled by medical management and two underwent trabeculectomy. Final best corrected visual acuity of ≥20/30 was achieved in 7 cases. Histopathology of the explanted IOLs showed acellular capsule confirming the dead bag syndrome diagnosis.

Conclusion

Dead bag syndrome can be associated with weak zonules and lead to late in the bag IOL dislocation. Open angle glaucoma can be associated with dead bag syndrome which requires additional medical or surgical management.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1232

TITLE: Does Frequent Usage Affect the Colorimetric Properties of Ishihara Pseudoisochromatic Plates?

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Yashoda Khanna / Elite School of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Ishihara Pseudoisochromatic plates(PIPS) are more prone to fading due to prolonged exposure to moisture and sunlight. But there's little information on how the frequency of using Ishihara charts affects their color properties. This study aims to explore the relationship between chart color and usage frequency.

Methodology

In a 5-month experimental study at the Elite School of Optometry, all 38-plate editions of Ishihara charts at a tertiary eye care hospital were assessed. Dots were selected based on literature criteria, and Color Grab, a validated colorimetric analysis app, was used in a light booth (500lux). Chromaticity variables (l*,u*,v*) were determined, and chromaticity difference and alignment values were calculated for each plate. Charts used over 15 days/month were frequently used; the rest were less frequently used. Binary logistic regression analyzed the relationship between usage frequency and the recommended replacement schedule.

Results

A total of 18 Ishihara charts (oldest:1989-latest:2020), were procured for evaluation. During the evaluation of vanishing plates, a noticeable colorimetric shift towards the red-green axis was observed in 55%(10) of the charts. This enables the color vision deficients to perceive numerals similarly to those with normal color vision. A comparable shift in transformation (55%,10), plates enabled individuals with color vision deficiency to read alternate numerals. Most (13,72.22%) of the diagnostic plates showed fairly good results. Among the 12 frequently used charts, 6 required replacement. Notably, no significant association was found between usage frequency and replacement schedule (p=0.99).

Conclusion

This study concludes that besides the red-green shift in old Ishihara PIPs, even new charts showed a similar trend with frequent usage. These findings emphasise the need for a systematic replacement schedule based on the frequency of usage besides the procurement time.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1233

TITLE: Accessory iris membrane causing complete blockage of pupils

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Aashna Ratra / Stanley Medical College, Tamil Nadu.

ABSTRACT BODY:

Purpose

To report a case of accessory iris membrane in a young boy and enumerate the differentiating features from persistent pupillary membrane.

Case report

A 6 year old boy presented with poor vision since birth. Parents complained that he bumped into things frequently. He was systemically healthy. His unaided vision was 6/15. Both eyes showed clear cornea with normal depth of the anterior chamber. Thick membranous tissue similar to the iris was seen arising from the collarette and covering the pupil completely. After dilation, pupillary aperture was visible in between tissue strands. Ultrasound confirmed normal posterior segment. Surgical removal of this membrane resulted in adequate pupillary opening and recovery of vision to 6/9. Histopathology confirmed it to be an accessory iris membrane. It differs from a persistent pupillary membrane which is thin, translucent, and does not hamper vision. It often regresses in intrauterine stage.

Conclusion

Accessory iris membrane is a rare congenital anomaly, which occurs due to hyperplasia of iris stroma. Surgical excision is the definitive treatment. If treated in time amblyopia can be avoided. It is necessary to differentiate it from persistent pupillary membrane.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1234

TITLE: Importance of vitrectomy in vision restoration

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Hemasri.P / M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

"Tractional retinal detachment (TRD) is the separation of the neurosensory retina from the retinal pigment epithelium, resulting from a pulling mechanism that gives rise to the development of membranes, opacities, and hemorrhages in the vitreous. TRD represents a vision-threatening ocular complication linked to diabetes."

Observation

A 25 years female visited our hospital with OS Blurred vision since 2 months. She undergone with cataract surgery in OD since 3 months and OS since 1 month. She is under treatment of diabetic mellitus since 23 years and hypertension since 15 years. The preliminary examination was done. Her unaided visual acuity in OD : 6/6 and OS : 2/60 (NIP,NIG) and near visual acuity in OD : N10 and OS : NAR. During slit lamp examination anterior segment shows normal and posterior segment shows vitreous hemorrhage and opacity in OS. Then 'B SCAN' was advised, it also revealed vitreous hemorrhage, vitreous opacities along with Tractional retinal detachment. The patient was advised to undergo "VITRECTOMY + MEMBRANE PEELING + ENDOLASER+ C3F8" under LA. After this surgery her vision in unaided OS was improved to 6/6.

Conclusion

"This undertaking examines the assessment and management of individuals experiencing TRD and vitreous hemorrhage, emphasizing the integral role of the interprofessional team in providing care for these patients."

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1235

TITLE: Ocular profile of visual vertigo, non-strabismic binocular vision, and oculomotor functions in individuals with vertigo

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Kavyashree / Manipal College of Health Professionals, Karnataka.

ABSTRACT BODY:

Aim

Vertigo is a feeling of unsteadiness, when they develop high visual dependence, they may experience visual vertigo(vv) symptoms. Literature suggests a possible risk factor for vv is an abnormality in non-strabismic binocular vision. To gain a better understanding of these factors, this study assesses the ocular profile of visual vertigo, non-strabismic binocular vision, and oculomotor function in individuals with vertigo.

Methods

This cross-sectional study included eleven individuals with vertigo based on the inclusion criteria. They were assessed for vv symptoms by using Visual Vertigo Analogue Score (VVAS) followed by an orthoptic evaluation where stereopsis and all the motor evaluations were done and using videonystagmography their oculomotor (saccades&pursuit) findings were documented. Later these values were analyzed with the normative values.

Results

Among eleven participants (Age, 42.3±6.80) four were male and seven were female. Eight revealed mild VVAS scores while three had moderate levels of symptom score. Among these five didn't have any non-strabismic abnormality, four showed convergence insufficiency, and one showed accommodative insufficiency and ill-sustained accommodation each and all have shown similar patterns of abnormality in the saccade and pursuit eye movement.

Conclusion

People with a greater history of vertigo exhibit increased symptoms of vv. Along with Saccade and Pursuit's findings, few of them showed non-strabismic abnormality findings. So, it is preferable to have an ocular evaluation with a longer history of vertigo to lessen the burden of vertigo symptoms with the visual aspect.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1236

TITLE: Higher order Aberration and the significance of its necessary evaluation: a case report

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Priyom Parashar / The Sankara Nethralaya Academy, Tamil Nadu.

ABSTRACT BODY:

Purpose

To investigate different approaches for reducing the magnitude of the starburst in eyes with high aberration.

Observation

A 39-year-old patient reported in out-patient department with a complaint of monocular and binocular shadowing of images past nine months more in dim illumination followed by seasonal viral fever. He had revealed a history of systemic medications for vitamin B12 deficiency. His best corrected visual acuity was 6/6 in either eye with peripheral spoke noted in objective refractive error estimation by streak retinoscopy. Further, a slit lamp examination confirms that the cornea and lens were clear. However, the shadowing effects were reducing with pinhole assessment. The keratometer mires displayed clarity, and results were within normal range. Pentacam reported normal parameters. Binocular vision assessment showed intact stereopsis and bi-foveal fusion. Visual field, colour vision, and optical coherence tomography tests indicated no neurological impairment due to vitamin B12 deficiency. Subsequently, he underwent aberrometry and dry eye assessment, receiving a diagnosis of both starburst and dry eye syndrome. Furthermore, gas permeable and scleral lenses were used, however he reported both uncomfortable with the lens types. Further he was fitted with type C prosthetic contact lens with 3 mm pupillary diameter. He reported a reduction in the shadowing effect.

Outcome

Initially, the patient selected customized contact lenses, which significantly reduced visual disruptions.

Conclusion

Employing techniques such as aberrometry and modifying prosthetic pupil coverage contact lens is advocated for personalized treatment.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1237

TITLE: Beyond near triad in the diagnosis of Accommodative spasm- A case report

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Raghul G / The Sankara Nethralaya Academy, Tamil Nadu.

ABSTRACT BODY:

Aim

To evaluate the change in ocular biometry parameters pre and post atropine in a patient with accommodative spasm.

Case Presentation

A 14-year-old female presented with complaints of headache and sudden onset of blurred vision for distance. She was denied any systemic illness or ocular injury in recent past. On examination, her best corrected visual acuity was 6/7.5 and 6/18 in right and left eye respectively and near vision was N6 in both eyes. Objective refraction with open field autorefractor (WAM 5500) varied between -3.00DS to -4.50DS in the right eye and -3.75DS to -5.00DS in the left eye. Accommodative response had shown lead of accommodation upto 1.50D with open field autorefractor. Clinical signs pointed towards accommodative spasm and she was advised for 1% atropine eye ointment, twice a day for three days. Furthermore, lens thickness (LT), and anterior chamber depth (ACD) were compared with non-contact ocular biometry at pre and post atropine. LT was reduced to 3.23mm from 3.70mm in right eye and 3.24mm from 3.86mm in left eye respectively. Pre and post ACD was 3.72mm and 4.14mm in right eye and 3.86mm and 4.15mm in left eye respectively. A change of 0.063 mm in LT induced 1D of accommodation was reported, this report revealed a significant change in LT and ACD pre and post atropine use.

Conclusion

Ocular biometry can emerge as diagnostic tool for accommodative spasm beyond near triad.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1240

TITLE: Reading performance and Visual Fatigue in ambient and dark room conditions with blue light filter

PRESENTING AUTHOR /AFFILIATIONS:

Ms. S Keerthana / Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

Visual fatigue during reading is the most common ocular symptom exhibited by smartphone users. In-built settings like Blue light filter is a widely used mobile modification to tackle this. This study aimed to determine the reading performance and visual fatigue in different lighting conditions with and without bluelight filters.

Methods

This study was conducted between January and July 2023 recruiting thirty subjects with a BCVA of ≥6/9,N6 without any ocular pathology. All subjects performed a reading task (20min) in a smartphone with and without blue light filters in bright and dark room conditions. Basic BV parameters, Words per minute, errors and blinks per minute was noted. Visual fatigue was assessed using a semi-structured survey. Data were collected in Google Sheets and parametric tests were performed.

Results

Mean(SD) age of the subjects was 20.95(1.48) years. Reading speed(164.16±27.9), blink rate(9.83±6.52) and basic BV parameters were not statistically significant with and without blue light filter in both lighting conditions. There was a statistically significant difference in the number of errors with and without blue light filter in dark room condition (p:0.06). From the survey it was found that there was no significant difference in the visual fatigue with and without filters. Although no statistically significant difference was noted in the preference of filters in both lighting conditions(z:1.1,P:0.2816), majority preferred reading with a blue filter in both ambient lighting conditions(56.66%) and dark room conditions(70%).

Conclusion

This study showed that although objectively no significant difference was found in reading performance and visual fatigue with and without filters in different lighting, the majority of the subjects still preferred to read with filters.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1241

TITLE: Profile of Contact Lens fitting in Marfan syndrome in a tertiary eye care hospital – A Retrospective study

PRESENTING AUTHOR /AFFILIATIONS:

Ms. A.Vishnu Priya/ Elite School of Optometry, Tamil Nadu

ABSTRACT BODY:

Purpose

The purpose of this study is to identify the modality of contact lens being accepted by Marfan syndrome patients, and provide the number of trials needed for Marfan syndrome patients to achieve the perfect fitting thereby reducing the chair time.

Methodology

This was a retrospective study to analyze the profile of contact lens fitting in Marfan syndrome patients done with the sample of data collected from January 2011 to December 2022. Data was collected from the Electronic Medical Records department. Totally 210 medical records were extracted from the Information Technology department of Sankara Nethralaya. Out of 210, among these 65 patients came to the clinic with more than a follow-up. Data analysis was done through Microsoft Excel and SPSS software.

Results

The distribution of subluxation types among Marfan syndrome were 21% of temporal subluxation, 7% Nasal subluxation, 10% Superotemporal subluxation, 6% Inferior and Posterior subluxation. 58.5% of the population accept the Phakic correction, 30.8% accept the aphakic correction and 10.8% accept both phakic and aphakic. 83.3% of the population were dispensed with SCL and 16.7% of the population were dispensed with RGP. The percentage of population who were dispensed with the hydrogel material was 48.6%, silicone hydrogel was 17.1%, RGP was 34.3%. The average base curves of SCL and RGP were 8.6±0.3mm and 8.3±0.3mm respectively which were taken based on the flat keratometry values. There was an average difference of 0.3±0.4mm in the dispensed base curve for both lenses from the base curve calculated from the K values. The average diameter selected was found to be 13.48±1.4mm for SCL and 10.4±2.0mm for RGP. Visual acuity after SCL wear in the right and left eye was 0.39±0.39 and 0.38±0.31 log MAR. Vision of the patient after RGP wear in the right and left eye was 0.52±0.47 and 0.43±0.39 respectively.

Conclusion

In this study we found that most of the patients were dispensed with SCL specifically of hydrogel lenses and the number of trials to achieve the final CL fitting were the range between 1.5+/-1.27.The diameter of Soft contact lens ranges between 13.4+/-1.4mm and of RGP 10.2+/-2mm.The number of persons who accepted aphakic correction was 15 and phakic correction was 45.The results thus help clinicians to reduce the chair time in the fitting of Contact Lenses among the Marfan Syndrome population.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1242

TITLE: Combination treatment for Anisomyopia – A success story

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Asha Tharsis/ Sankara Nethralaya, Tamil Nadu

ABSTRACT BODY:

Introduction

Anisomyopia is a refractive condition in which the interocular difference of myopic spherical equivalent refraction is ≥1 D or an asymmetry in axial length (AL) of more than 0.30 mm. The reported prevalence of refractive anisometropia in East Asian countries was 3.6% in the age range of 7 to 9 years, 7.0% between 4 and 18 years of age, and 5.3% in 8-year-old school children.

Case

We present a case of 5 y/o, male with high anisomyopia. PGP (1 year) showed OD: -6.75 DS/ -0.50 DC*20 (6/36+1); OS: -16.50 DS / -2.00 DC*150 (6/18). On examination, cycloplegic refraction showed OD: -9.00 DS/ -1.00 DC*120 (6/18), OS: -16.00 DS/ -2.50 DC*160 (6/18). EOM was full and ortho for D&N. OU: Anterior and Posterior segments were normal. OS had PPM. AL-OD: 24.87 mm; OS: 27.65 mm, advised new glasses and PTO 2hrs/day. On follow-up 1 after a year cycloplegic refraction was OD: -12.50 DS (6/12) and OS: -21.00 DS/ -3.00 DC*160 (6/24). AL-OD: 25.07 mm; OS: 28.32 mm. He was advised for CL (Sphere) + DIMS (cyl). OU, VA with CL improved to 6/12 and 6/18 respectively. On follow-up 2 after 12 months, Vision with DIMS over CL was 6/7.5 and 6/12. Cycloplegic refraction showed OD: -13.00 DS; OS: -22.00 DS/ -3.00 DC*160. AXL showed OD: 25.52mm; OS: 28.86 mm. He was advised to continue the same CL and DIMS glasses. Glaucoma opinion was sorted, nil intervention currently, observation for 6 months.

Conclusion

Combination treatment may work better for anisomyopia.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1246

TITLE: Are anti-fatigue lenses beneficial for individuals with digital eye strain?

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Preetha Ramprasat/ Vasan Institute of Ophthalmology and Research, Tamil Nadu

ABSTRACT BODY:

Aim

To compare the effectiveness of anti-fatigue lenses on digital eye strain (DES).

Methods

This is a prospective experimental study on 30 emmetropic subjects (18 females, 12 males) aged 20.7 years ± 1.74 (19-24 years) with normal binocular vision, ocular and systemic health. The test battery consisted of measurement of subjective DES symptoms using CVS-Q and DEQ-5 questionnaires, objective assessment of accommodation and vergence before (baseline1) and after watching a movie on mobile phone for 1hour without any lenses (baseline 2 on day 1) or with Anti-fatigue spectacle lenses (day 2).

Results

NPC with red filter/pen torch was significantly better with anti-fatigue lens (break 13.2cm ±4.76/ recovery 19.1cm ±10.65) than baseline 2 (B 17.9cm ±8.55/ R 25.1cm ±13.58), p = 0.00254. Monocular accommodative facility was significantly higher with anti-fatigue lens (12.7cpm ±5.03), than 10.7cpm ±5.06 (baseline 1) & 12.1cpm ±5.13 (baseline 2), p = 0.00316. Other accommodative and vergence parameters were not different in the 3 conditions. The mean CVS–Q scores were 1.36 ±2.48 in baseline 2 condition and 0.93 ±0.94 with anti-fatigue lens. The mean DEQ-5 scores were 0.53cm ±1.30cm in baseline 2 condition and 0.06cm ±0.36cm with anti-fatigue lens.

Conclusion

Anti-fatigue lenses significantly reduced DES and dry eye symptoms and provided better comfort from the ocular symptoms. Objectively only monocular accommodative facility and subjective NPC with non-accommodative target improved with anti-fatigue lens. Long time wear of these lenses may need to be assessed to ascertain the effect on binocular vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1252

TITLE: Unveiling Ethambutol's Silent Threat: A Tale of Vision Loss and Unpredictable Toxicity

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Ushiya Paulni.C/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Ethambutol is an antimicrobial agent used frequently to treat Tuberculosis. The Main aim is to show the severe and unpredictable nature of ethambutol toxicity and its potential or irreversible vision loss despite careful ophthalmologic monitoring.

Observations

A 46 year old Male presented with C/O sudden vision loss in OU since 3 days. The patient is under medication for 8 months Diabetic and 16 years epileptic. He is under Ethambutol for 6 months as he diagnosed as Tuberculosis. The UAVA is CF@3m in OU with NIP and for near OD is N36B and OS is N24st.In Ishihara color vision test patient scored 5/25 plates in OU. The intra ocular pressure was normal. Anterior segment results using Slit lamp showed lens changes in both eyes. Fundus examination showed Disc hyperemia. Increased foveal thickness seen in Optical coherence Tomography and generalized depression in retinal sensitivity seen in 3 quadrants of Right eye and 4 quadrants of Left eye. Ophthalmologic examination suggested three possible diagnosis Retrobulbar neuritis, bilateral Anterior Ischemic Optic Neuropathy, and Ethambutol toxicity. The Magnetic Resonance images of brain, Computed Tomography of orbit and Blood reports were normal. The patient was diagnosed as ethambutol toxicity. Patient was advised for the trial of oral steroids under Diabetologist guidance and to complete anti-tuberculosis treatment. He was prescribed with Renerve plus tab for 30 days and review after 1 month.

Conclusion

Ethambutol toxicity caused irreversible vision loss in a patient despite early intervention, underscoring the need for heightened awareness and prevention.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1253

TITLE: Vision Unleashed: Harnessing Dichoptic Therapy and MFBF to Improve Contrast Sensitivity among patients with amblyopia

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Namratha/ Sankara college of Optometry, Bangalore.

ABSTRACT BODY:

Aim

To study the changes in contrast sensitivity with dichoptic therapy and MFBF on a virtual reality platform among patients with amblyopia.

Methods

Children with amblyopia were the study subjects, selected based on the detailed ophthalmological evaluation. Children with a best-corrected visual acuity of 0.1 log MAR in the amblyopic eye were considered for the study. Patients were given either only occlusion therapy or dichoptic therapy and MFBF therapy on a virtual reality platform as an adjunct therapy for 20 minutes a day for 12 weeks. The baseline visual functions were compared with the follow-up among the two groups using Mann Whitney test on SPSS version 23.

Results

A total of 69 study participants were involved with an average age of 10.5±3.85 years in both case and control. It was observed that, among the case group in OD and OS who underwent therapy with adjunct VR-based treatment, there was a clinical as well as statistically significant difference with p-values of 0.008 and 0.012 respectively. On testing the effectiveness of VR-based binocular vision therapy on contrast sensitivity function, there was a statistically significant difference (p=0.008, 0.00 and 0.002) in OD, OS and OU post-therapy as compared to control groups where no difference in CS function was observed.

Conclusion

The contrast sensitivity function showed significant changes with dichoptic therapy and MFBF on a virtual reality platform among the patients with amblyopia

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1260

TITLE: Regular Eye Examinations for Hypertension Patients with a History of Stroke

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Perumal S/ M N College of Optometry, Tamil Nadu.

ABSTRACT BODY:

Purpose

Regular eye examinations are crucial for patients with hypertension, especially those affected by a stroke. Hypertension can impact the blood vessels in the eyes, leading to conditions like hypertensive retinopathy. The aim is bring regular eye exams help monitor and manage potential ocular complications, ensuring early detection and intervention stroke survivors, eye examinations become even more important, as strokes may affect various aspects of vision and eye health.

Observation

A 64-year-old male with a history of stroke 1year back .He has systemic illness of hypertension 15 years, diabetes 6 years, and cardiac problems 6 years , presented with blurred vision in both distance and near in OU. Ocular examination revealed NS 2 in both eyes and PDR with unstable FVP and NVE in the fundus. After undergoing color fundus photography, the patient was advised anti-VEGF treatment, phacoemulsification with intraocular lens implantation (IOL), and panretinal photocoagulation (PRP). In the postoperative review after one week, the patient achieved a corrected visual acuity of 6/6 in both eyes.

Conclusion

Stroke is a critical concern in hypertension as elevated blood pressure can damage blood vessels in the brain, increasing the risk of a stroke. Managing hypertension is crucial to prevent such vascular complications, underlining the importance of timely intervention and lifestyle modifications to mitigate this risk.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1262

TITLE: Examining the Impact of Pre-Sleep Smartphone Usage on Convergence Insufficiency: A Before-Bedtime Investigation among Participants

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Nandhini G/ Sri Ramachandra Institiute of higher education and Research, Tamil Nadu.

ABSTRACT BODY:

Purpose

Increasing use of smartphones before bedtime disrupts sleep, impacting overall quality of life. Yet, its influence on visual health, specifically convergence insufficiency, remains underexplored, presenting a critical gap in understanding potential risks. Insights from this study can provide valuable information on the potential risk factors for visual health and inform public health initiatives aimed at promoting responsible smartphone use. Hence the purpose of this study is to investigate the impact of pre-sleep smartphone usage on convergence insufficiency among participants in the age group of 15 -30 years.

Methods

One hundred and fifty-one digital users, in age group of 15-30 years, who has an habit of using smartphones for more than one hour before going to sleep were enrolled in this study. The mean age of the participants was 23.1± 3.0 years and 69% of them were females. Convergence insufficiency symptoms survey (CISS), a validated questionnaire was administered. All the participants were asked to take the survey at the close of their smartphone usage and just before going to sleep.

Results

The Pearson correlation results indicate significant associations between convergence insufficiency symptoms (CISS) and various factors like age ($p < .05$) gender ($p < .05$) and hours of use ($p < .05$). However, the years of use ($p = .081$) of digital gadgets was found to have no impact on convergence insufficiency.

Conclusion

By conducting the before bed time investigation, this study has shown that the duration of smartphone usage before sleep exacerbates convergence insufficiency.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1265

TITLE: Association of Dry eye with prolonged use of facemask

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Shabna H/ Chaithanya Eye Hospital and Research institute, Kerala.

ABSTRACT BODY:

Background

Prolonged use of face mask has been a mandatory from the widespread of COVID 19 Pandemic. But nowadays as the COVID is resolving, face mask wearing has been a myth as only clinicians wear face masks for a prolonged time in clinics. We conducted a mixed method study including a set of questionnaire associated with dry eye and clinical assessments like Schirmer I and II, Tear Film Break Up Time (TBUT) to examine and understand the association of the dry eye related symptoms among hospital workers across the job spectrum with prolonged face mask use.

Methods

We recruited clinical and non-clinical hospital workers, some with prolonged face mask use and others with minimal use of facemask. We measured symptoms using 6-item Dry Eye Questionnaire and objective clinical assessments including Schirmer I,Schirmer II, and TBUT .We analyse symptoms and signs across dry eye severity, facemask type, job type, duration of facemask wearing, and previous ocular history.

Results

We enrolled 15 clinical and 15 non-clinical hospital workers .87% were females of about 20-30 age group and the rest 13% were males. From the quantitative analysis, we found that 90% of subjects with prolonged face mask use who have clinical jobs were reported worsened severity of dry eye at work due to prolonged use of facemasks. Findings from the past qualitative studies supported the finding that, use of face mask worsened dry eye symptoms, especially when facemasks were not fitted around the nose. They found that wearing a fitted facemask with a pliable nose wire appears to mitigate the upward air flow.

Conclusion

Prolonged and consistent facemask use associated with increasing dry eye disease. Wearing a fitted facemask with a pliable nose wire appears to mitigate the upward air flow. Healthcare providers and patients with dry eyes should be educated about the risks associated with use of fitted face masks.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1268

TITLE: Ocular Profiling of Children with Hearing Impairment

PRESENTING AUTHOR /AFFILIATIONS:

Ms. Tharakeswari T/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Aim

To understand the ocular health and visual profile of children with hearing impairment.

Methods

A comprehensive eye examination was conducted for children at a school for hearing impairment, covering detailed ocular and medical history, age-appropriate vision assessment, subjective and objective refraction, ocular alignment, anterior segment evaluation, intraocular pressure measurement, and posterior segment examination.

Results

Seventy-six children underwent the examination, with a mean (SD) age of 14 (±4) years, of which 36 (47%) were girls. Among them, 36 (47%) children exhibited visual and ocular conditions. Refractive error was found in 22 (29%) children, with a mean (SD) spherical equivalent refractive error of -0.29 (±1.18) Dioptre (D) in the right eye (range:-4.75 to 3.50D) and -0.24 (±1.15) D in the left eye (range: -5.50 to 3.50D). The best-corrected visual acuity was 0.06 (0.24) logMAR in the right eye and 0.07 (0.22) logMAR in the left eye. Among the 22 children with refractive error, 13 were prescribed new glasses, 4 continued with the same glasses, and 5 were scheduled for cycloplegic refraction. Non-strabismic binocular vision anomalies were found in 6 (7.8%) children, while constant strabismus and strabismus syndrome were noted in two children each. The mean (SD) intraocular pressure was 14 (±3) mmHg in either eye, and three children exhibited retinal and optic nerve findings on posterior segment evaluation.

Conclusion

This report demonstrates the clinical ocular profile of children with hearing impairment. To the best of our knowledge, no reports are available regarding the profile among this special group.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1269

TITLE: Effect of rectus muscle dis-insertion on accommodation of the eye in patients undergoing squint surgery

PRESENTING AUTHOR /AFFILIATIONS:

Mr. Prasannasai K/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Aim

To assess the changes in accommodation parameters in patients undergoing rectus muscle dis-insertion.

Methods

This prospective study was done at a tertiary eye care centre who were undergoing squint surgery with recession/resection of recti muscle. The participants with the age between 7 to 30 years with the visual acuity of 6/18 or better in either eye were included. Accommodation amplitudes, facility and response were measured at pre and post-surgery.

Results

A total of 29 eyes (15 Right and 14 left) were included and used the median and interquartile range (IQR) in all stages of the analysis. The median (IQR) monocular amplitude of accommodation in the right and left were found to be 6.6 (12.5 to 16.7) and 7.5 (11.2 to 16.7) dioptres (D) at pre-operatively and 7.3 (12.5 to 20) and 9.8 (12.5 to 20) D at post operatively, respectively. The monocular accommodative facility in right and left were 2.9 (0 to 5) and 3.1 (0 to 5.5) cycles per minute (cpm) at pre and 3.4 (0 to 6) and 3.1 (0.5 to 4) cpm at post surgery respectively. A statistically significant difference was noted in the left monocular amplitude ($p= 0.04$). Accommodative facility remained the same ($p= 0.2$), ($p=0.7$) Furthermore, the Wilcoxon Signed rank test revealed that accommodative response with monocular estimation method (MEM) and Open field auto refractometer response remained unchanged at pre ($p=0.6$), ($p=0.5$) and post-squint surgery ($p=0.7$), ($p=0.5$).

Conclusion

The study concluded that there was an increase in the monocular amplitude of accommodation noted post-strabismic surgery

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1275

TITLE: Sports vision: What-Who-When-Where. A systematic review

PRESENTING AUTHOR /AFFILIATIONS:

Mr Robin S/ Sankara Nethralaya, Tamil Nadu.

ABSTRACT BODY:

Vision tends to be the dominant among all other sense. Sports vision is a branch of vision science which aims to assess, manage, treat, and enhance visual skills among sport professional. Anyone who play sport can be considered for sports vision assessment. Barret et al, reports 25% of professional cricketers had undergone eye examination 5 years back or never had one. A survey done among 1500 participants, who play sports revealed that 38.2% population had defective vision. Vision and visual skills are two tangible skills which cannot be ignored. Awareness of sport specific visual examinations and training are still low among sport professionals. Anyone, who feels vision does not supply the demands of sport should be addressed and assessment should be tailor made with respect to the sport. Sports vision assessment should include knowledge of sport, nature of sport (dynamic vs static), Understanding visual demands, Comprehensive Ocular examination, Contrast measurements, Binocular vision assessment and Visual cognitive assessment along with sports psychology/physiological referral. Training with cognitive and oculomotor skills using training devices such Strobe glasses, Senaptec etc., have proven improvement in sports performance as well better neural visual motor activities. Training can be done in the clinic and sporting arena. The aim of the training is to create awareness and use vision effectively for the sports has studies have reported those who utilize vision strategically had better success rates. In turn sport playing population had better vision and vision skills than a sedentary individual. This review aims to direct a picture of evidences in sports vision.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1279

TITLE: Comparison of amplitude of accommodation determined subjectively and objectively in Indian university students.

PRESENTING AUTHOR /AFFILIATIONS:

Ms Bhoomika T N/ Sapthagiri Institute of Medical Sciences & Research Center, Karnataka.

ABSTRACT BODY:

Purpose

To determine AA using objective and subjective techniques in emmetropes, myopes and hypermetropes.

Methodology

Measuring AA in emmetropes, myopes and hypermetropes using dynamic retinoscopy, pascal heterodynamic retinoscopy and push-up technique, pull-away technique and minus lens method.

Results

The mean AA for the push-up of OD, OS and OU in emmetropes were 10.77D ± 0.97D, 10.70D ± 0.97D and 16.93D ± 3.85D respectively. In myopes 12.60D ± 2.15D, 12.38D ± 1.94D and 20.17D ± 5.92D respectively and in hypermetropes 8.77D ± 1.44D, 8.59D ± 1.34D and 9.76D ± 1.77D respectively. ($p<0.001$). The mean AA for pull-away in emmetropes in OD,OS and OU was 10.02D ± 1.00D, 9.92D ± 0.88D and 14.64D ± 2.44D respectively. For myopes 11.10D ± 1.61D, 11.35D ± 1.60D and 15.77D ± 3.13D respectively. For hypermetropes 8.41D ± 1.33D, 8.21D ± 1.14D and 9.10D ± 1.57D respectively. ($p<0.001$). Mean AA for minus lens method in OD and OS for emmetropes was 7.86D ± 0.40D and 7.89 ± 0.39D respectively. In myopes 8.17D ± 0.58D and 8.18 ± 0.56D respectively. In hypermetropes 6.80D ± 0.58D and 6.71 ± 0.63D respectively. ($p<0.001$). In dynamic retinoscopy the mean AA for emmetropes in OD and OS were 6.06D ± 0.25D and 6.04D ± 0.24D respectively. For myopes 6.24D ± 0.26D and 6.24D ± 0.28D respectively. For hypermetropes 5.81D ± 0.23D and 5.81D ± 0.23D respectively. ($p<0.001$). Pascal heterodynamic retinoscopy showed a mean value of 6.03D ± 0.25D and 6.02D ± 0.23D for emmetropes in OD and OS respectively. 6.22D ± 0.26D and 6.17D ± 0.29D for myopes respectively. 5.78D ± 0.23D and 5.77D ± 0.24D for hypermetropes respectively. ($p<0.001$).

Conclusion

The mean AA was highest for the push-up technique, followed by pull-away technique, minus lens method, dynamic retinoscopy and pascal heterodynamic retinoscopy in myopes, emmetropes and hypermetropes.

Scientific Session Oral abstracts
Poster

ABSTRACT ID: 1280

TITLE: Comparison of amplitude of accommodation and convergence in different reading postures among myopes

PRESENTING AUTHOR /AFFILIATIONS:

Ms Robia Mary S/ Sapthagiri Institute of Medical Sciences & Research Center, Karnataka.

ABSTRACT BODY:

Purpose

To evaluate amplitude of accommodation and convergence in myopes in different reading posture.

Methodology

Measuring the NPA, NPC & AA among myopes using RAF ruler & minus lens method.

Results

Among 60 subjects examined, the mean age was 22.12 ± 1.54 years among which 29 were male and 31 were female. The mean values of NPA in both eyes in sitting, standing& supine posture was 8.09±2.61, 7.57±2.56& 7.06±2.25 respectively with p- value of 0.08.The mean values of NPC in both eyes in sitting, standing & supine posture was 5.38±1.15, 5.38±1.15& 5.15±1.45respectively with p-value 0.53. The mean values of AA in sitting, standing & supine posture 5.47±1.41, 4.91±1.45& 5.20±1.32 respectively with p-value 0.94.

Conclusion

There was no statistically significant value in different reading posture among myopes, although our study concludes that sitting reading posture is more significant than supine & standing posture.

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