



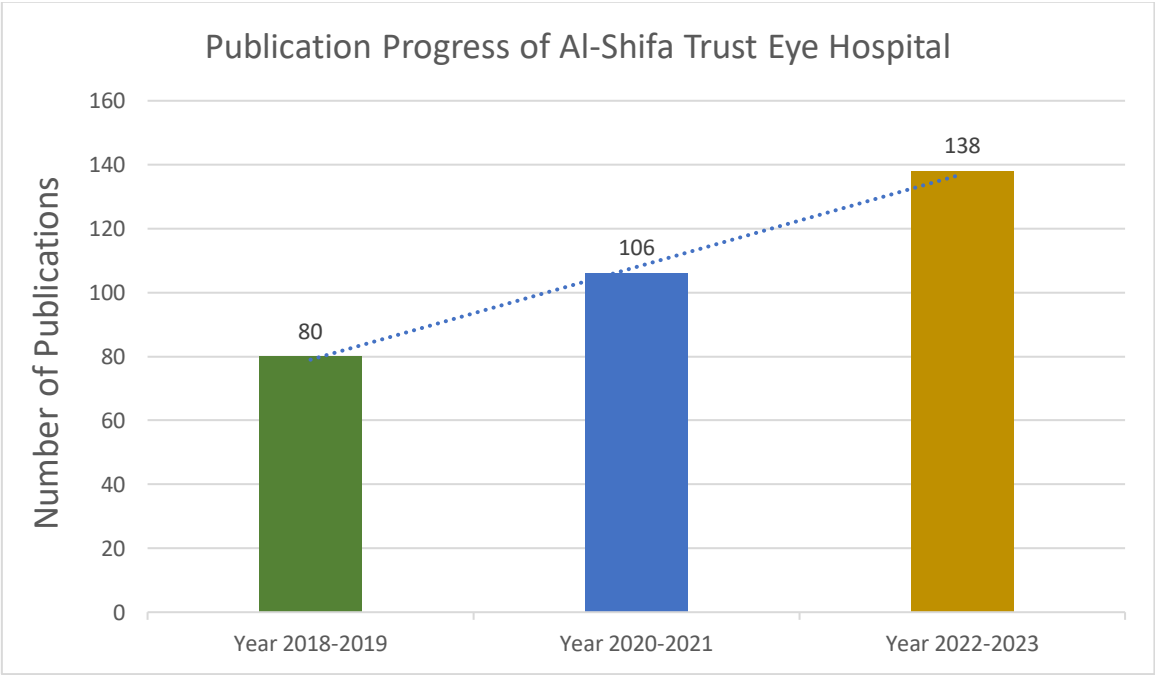
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Prepared By
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Message from President



In an era where healthcare research is constantly evolving, Al-Shifa Trust Eye Hospital continues to stand as a beacon of excellence, contributing significant advancements that resonate not only within Pakistan but across the global research community. The post-pandemic world has introduced new challenges, but it has also fostered unprecedented collaboration and the integration of cutting-edge research and technologies, which we have embraced to propel ourselves to new heights.

I extend my heartfelt gratitude to the faculty, staff, and students whose tireless efforts have culminated in this collection of captivating and meticulously researched articles. Your dedication to producing original, impactful research is commendable, and I encourage you all to look beyond individual accomplishments and strive in creating a thriving ecosystem of scientific discovery, where institutions across the globe can collaborate and contribute to a shared mission of advancing healthcare through evidence-based research. I appreciate your continuous drive towards pushing the frontiers of knowledge.

I would also like to take the opportunity to express my utmost gratitude to our generous donors who choose to donate to our noble cause that continuously support us in serving the ailing humanity. I believe this growth and success would have not been possible without the prayers, trust and faith of millions who visit us for seeking healthcare.

As we move forward, let us remain committed to our mission of advancing healthcare research for the betterment of society and reaffirm our position as leaders in the global research network.

Message from Dean



As we reflect on the exceptional achievements of 2023, it brings us immense pleasure to acknowledge the milestones set during another successful year for Al-Shifa Research Centre. This year again brought together the brightest minds in research and clinical innovation, making it a true testament to the collaborative spirit and unwavering commitment of our team.

Throughout 2023, we witnessed an exponential rise in the initiation and completion of both National and International Clinical Trials, affirming our leadership in advancing medical research. This year has also been marked by a significant expansion of our research capabilities, with groundbreaking studies in diverse fields ranging from ophthalmology to multidisciplinary healthcare. Despite the challenges presented by the global environment, our researchers demonstrated remarkable resilience, adaptability, and an unwavering dedication to push the boundaries of scientific inquiry. Their collective efforts have led to the timely completion of trials, the publication of high-impact research papers, and the introduction of innovative treatments, all while setting new standards for research excellence.

We aim to not only highlight the immense potential of our multidisciplinary teams but also forge stronger partnerships with leading global institutions. Through this synergy, we will continue to drive the future of medical research, fostering innovations that will have a lasting impact on the healthcare landscape both locally and internationally.

At the heart of these efforts lies our commitment to fostering an environment of continuous learning, collaboration, and discovery. Al-Shifa Research Centre stands as a beacon of progress, and as we embark on another year, we do so with the promise of even greater achievements on the horizon. Together with our esteemed national and international partners, we look forward to shaping a future where our research not only transforms lives but inspires the next generation of scientific pioneers.

Message from Director Research



I would like to extend my heartfelt gratitude to all the authors who have contributed to the sixth volume of our, Al-Shifa Annual Research Report 2023. This edition, continues to cover an extensive array of research fields, including clinical trials, medical, pharmaceutical, and public health studies. The overwhelming response it has received further cements our commitment to producing peer-reviewed publications of the highest caliber, providing invaluable insights into the evolving landscape of clinical and pharmaceutical sciences.

This year, Al-Shifa Research Centre (ASRC) successfully conducted four groundbreaking Phase III clinical trials, which further highlight our commitment to advancing global health research. The first trial, sponsored by AIM Vaccine Co., Ltd. China for phase III clinical trial of COVID-19 Booster. The second, which was again phase III clinical trial of the Bill & Melinda Gates Medical Research Institute, USA, focused on the use of probiotics for malnourished children. The third was also phase III clinical trial for a COVID-19 treatment in collaboration with Atea Pharmaceuticals, Inc. USA. The fourth one was a pivotal Phase III clinical trial of an anti-rabies vaccine, conducted in partnership with Yisheng Biopharma (Singapore) Pte, Ltd. These significant contributions have not only advanced clinical research in Pakistan but also contributed to global efforts in addressing key health challenges.

As we aim for even greater heights of excellence, our pursuit of purposeful and impactful research remains unwavering. We are determined to continue our growth in these critical fields, striving not only for individual success but also to become part of a collective effort that positively impacts the world around us.

**"Research is to see what everybody else has seen, and to think what
nobody else has thought"**

Albert Szent-Gyorgyi

Publications

1. Association of Central Corneal Thickness with Myopia vs Emmetropia in Patients visiting Ophthalmology Dept. of a Tertiary Care Hospital of Islamabad

Abstract

Purpose: The lockdown due to the COVID-19 pandemic lead to many countries implementing a population lockdown. This study was designed to investigate the myopic changes that occurred during lockdown due to the COVID19 pandemic in Pakistan. **Methods:** A prospective, cross-sectional study, was conducted on patients presenting to the out-patients department with symptoms suggesting a refractive problem. Subjects with a Mean Spherical Equivalent (MSE) level of myopia of at least -0.50DS were included. The second group of subjects that had emmetropia (MSE between -0.25DS and +0.25DS) was recruited. All subjects (including adults) underwent cycloplegic refraction and used objective and subjective techniques, to exclude any pseudo-myopia due to accommodation. **Results:** A total of 900 subjects were enrolled from 4 to 24 years. The myopia group consisted of 473 subjects (256 females) and the emmetropia group consisted of 427 subjects (224 females). There was no statistical difference in the ages of the groups. Both groups showed an increase in their level of myopia, which was statistically higher in the emmetropic group ($p < 0.001$). Further analysis was conducted, splitting the subjects into four age groups: 4-8 years; 9-12 years; 13-19 years; and 19-24 years. All age groups showed an increase in the magnitude of myopia, with the oldest age group showing the least increase, which was statistically significant ($p < 0.005$). **Conclusions:** An increase in the magnitude of myopia was seen in all subjects and across all age groups, but more so in the younger subjects.

How to cite: Khan, S. A., Shah, M., Sharif, A., Ullah, S., Imdad, A., & Khalid, A. (2023). Association of Central Corneal Thickness among Myopic and Emmetropic Patients Visiting Ophthalmology Department of a Tertiary Care Hospital in Islamabad. Journal of Rawalpindi Medical College, 27(1). DOI: <https://doi.org/10.37939/jrmc.v27i1.2033>.

2. Optic Neuritis: Evaluation of Visual Acuity and Contrast Sensitivity. A Hospital Based Cross Sectional Study

Abstract

Objective: To assess visual acuity and contrast sensitivity in various form of Optic neuritis patients. Study Design and **Settings:** It was a hospital based cross sectional study conducted in eye department of Teaching hospital, University of Lahore Pakistan. Total duration of the study was 4 months from January 2022-April 2022. **Methodology:** A total of 32 patients were included in the study. Purposive sampling technique was adopted for sampling. Patient's age 15-45 were included in the study. A detail eye examination was done in patients presented to eye department with pain and evaluated for optic neuritis, and demographics along with clinical signs and symptoms were documented using a proforma. **Results:** Total 32 patients were included in the study having Optic Neuritis. Mean age of the patients was $29 \pm 8.3SD$ (Range 15-45). The optic neuritis was divided into further sub-divisions, i.e., Pappilits 11 patients, Retrobulbar Neuritis 14 patients and neuroretinitis 7 patients. A paired t test comparing contrast sensitivity before and after treatment showed a significance of .03 improvement after treatment. In spite of the fact that the results demonstrated that contrast sensitivity did not return to normal, they did show that with prompt treatment, a substantial improvement in contrast sensitivity was possible. Same significance of .02 was found for improvement in VA post-operatively when a paired t test

How to cite: Islam, S. B. ., Shah, M., Abbas, . S. ., Ullah, S., Khan, S. A., & Ullah, M. . (2023). Optic Neuritis: Evaluation of Visual Acuity and Contrast Sensitivity. A Hospital Based Cross Sectional Study. Malaysian Journal of Medical Research (MJMR), 7(2), 34-39. DOI: <https://doi.org/10.31674/mjmr.2023.v07i02.005>.

was applied. **Conclusion:** Vision and contrast sensitivity both are affected in ON, however VA can be improved to normal vision after treatment but contrast seldom improve to its normal value. Key Words: Contrast Sensitivity; Optic Neuritis; Vision

3. Non-acceptance of Low Vision Aids (LVADs) among patients presented to Eye OPD in Poly Clinic Hospital Islamabad

Abstract

Background: Vision impairment is a public health problem and every patient with visual impairment doesn't accept low vision aids (LVA's). **Objective:** To explore the non-acceptability rate of low vision aids with the reasons for not opting for them. **Methods:** A cross-sectional study was conducted at the Department of Ophthalmology in the Polyclinic Hospital, Islamabad. A sample of n=100 Patients in the selected age groups 20 to 80 years diagnosed with age-related macular degeneration, retinitis pigmentosa, diabetic retinopathy, high myopia/hypermotropia, optic atrophy/neuropathies, and glaucoma were recruited using nonprobability purposive sampling technique. Data was collected using a predefined form to determine the willingness of low-vision patients to adopt LVAs. The non-acceptance rate was calculated as the percentage of participants declining LVA services, assessed through their responses on the form. **Results:** The mean age of the participants was 43.48 ± 14 with a range from 20 to 80 years. A total of n=100 patients out of which n=58 were males and n=42 were females. Among these n=100 patients, n=91 patients show non-acceptance with a gender distribution of n=53 male and n=38 female patients. The major reason for nonacceptance was unaffordability for LVA among males (n=19) and n=06), followed by usage difficulty, transportation, fear of losing jobs, social stigma, low necessity, and lack of awareness. **Conclusion:** Non-acceptance of low vision aids among the study population due to unaffordability, compounded by social stigma, financial constraints, and limited awareness, underscores the need to address these barriers for better device utilization and enhanced quality of life for visually impaired individuals.

Keywords: blindness; vision aids; visual impairment

How to cite: Malik, Q. A., Chaudhry, M. M., Anwar, A., Ahmed, S., Shah, M., & Ullah, S. (2023). Non-acceptance of Low Vision Aids (LVADs) among patients presented to Eye OPD in Poly Clinic Hospital Islamabad. T Rehabili. J, 7(03), 12-17. DOI: <https://doi.org/10.52567/trehabj.v7i03.25>.

4. Comparison of contrast sensitivity among Strabismic and Anisometropic Amblyopes and its association with disease-related parameters

Abstract

Purpose: To evaluate and contrast the contrast sensitivity defects present in strabismic and anisometropic amblyopes. And to find out the association of contrast deterioration with the visual acuity of the amblyopic eye, the magnitude of strabismus, and the amount of anisometropia in both groups. **Methods:** This cross-sectional study was carried out in the orthoptics unit of a tertiary eye care facility between October 2021 and December 2021. There were 45 patients altogether. In the first phase, the patient's history and ocular examination data were recorded after informed consent. The Pelli-Robson chart was used to measure contrast sensitivity. In the second phase, results were interpreted using the SPSS (Statistical Package for the Social Sciences) version 26.0. **Results:** Strabismic amblyopes were 24 and anisometropic amblyopes were 21. A significant positive association existed between both groups' contrast sensitivity and visual acuity ($P = 0.000$). A moderately negative correlation between contrast and anisometropia was statistically significant ($P = 0.025$) in anisometropic amblyopes. However, no association ($P > 0.050$) existed between

How to cite: Naheed, F., Ullah, S., Asgher, M., & Qayyum, S. (2024). Comparison of contrast sensitivity among strabismic and anisometropic amblyopes and its association with disease-related parameters. Saudi Journal of Ophthalmology, 10-4103. DOI: https://doi.org/10.4103/sjopt.sjopt_7_23.

the contrast and magnitude of strabismus in any group. **Conclusion:** The study concluded that contrast sensitivity decreases in both groups, whereas anisometropic amblyopes have poorer contrast than strabismic amblyopes. Excessively decreased contrast sensitivity among anisometropic amblyopes was solely because of the worst amblyopia in this group, whereas the magnitude of strabismus does not affect contrast sensitivity.

5. Stereoacuity in Monocularly induced Astigmatism in Emmetropes and Ammetropes: A Comparative Cross-Sectional Study

Abstract

Objective: This study aims to find the effect of monocularly induced myopic and hypermetropic astigmatism on stereopsis among ammetropes and emmetropes.

Methods: This comparative cross-sectional study was conducted at the General outdoor patient department (OPD) of Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan from October 2018 to January 2019. The study was

How to cite: Fareeha et al. Stereoacuity in Monocularly induced astigmatism in Emmetropes and Ammetropes: A comparative Cross-sectional study. Can J Appl Sc. Vol. 13. 2023. p 1- 8. DOI: <http://dx.doi.org/10.21065/1925-7430.13.1>.

conducted on 430 individuals aged between 10 to 35 years, emmetropic and with astigmatic refractive error of <4D at the axis of 900, 1800, 450, 1350, and <6D spherical refractive error. Subjects were divided into two groups of 215 individuals each. Both groups were induced with myopic and hypermetropic astigmatism using ± 1 Dc and ± 2 Dc at three axes; 45°, 90°, and 180°. Stereoacuity was measured by the Titmus Fly Stereo Test at the baseline and varying at degrees after induced astigmatism. ANOVA and paired t-tests were used for statistical analysis. **Results:** The mean stereoacuity in emmetropes and ammetropes was respectively. On average, there was a significant decrease in stereoacuity with increased dioptric astigmatism power ($p < 0.0001$). Stereoacuity was affected the most at 45° whilst least at 180° among both emmetropes and ammetropes. However, monocularly-induced hypermetropic astigmatism caused more deterioration in stereoacuity than monocularly induced myopic astigmatism. **Conclusions:** This study illustrates that monocularly induced myopic and hypermetropic astigmatism affects stereoacuity in emmetropes as well as ammetropes at all given degrees.

Keywords: Stereoacuity, emmetropia, ametropia, amblyopia, astigmatism

6. Frequency of Patients with different Stages of Diabetic Retinopathy presenting to a Tertiary Care Eye Hospital in Rawalpindi, Pakistan

Abstract

Objective: To determine the frequency of patients with different stages of diabetic retinopathy presenting to a tertiary care eye hospital in Rawalpindi. **Methods:** A descriptive cross-sectional study was carried out in the general ophthalmology department. Consultant ophthalmologists identified 366 individuals, 66 (18.0%) with type I and 300 (82.0%) with type II diabetes mellitus based on patient history. A consultant ophthalmologist

How to cite: Ahmad, W., Shah, M. A., Ahmad, H. M., Ameer, M., Yasir, S. B., & Ahmad, Y. (2023). Frequency of Patients with Different Stages of Diabetic Retinopathy presenting to a Tertiary Care Eye Hospital in Rawalpindi, Pakistan. Al-Shifa Journal of Ophthalmology, 19(2), 70-76.

performed clinical evaluation; diabetic retinopathy was diagnosed and graded according to the 2017 ICO classification². **Results:** The mean age of patients with Type I Diabetes Mellitus and Type II Diabetes Mellitus was 24.64±7.74 and 54.76±3.60 respectively. Mean visual acuity in patients with Type I DM and Type II DM was 0.36±0.26 and 0.37±0.27 decimal respectively. The mean duration of disease in patients with Type I DM and Type II DM was 7.61±2.79 and 7.59±2.87 years respectively. Similarly, 16 (16.0%) patients with Type I DM had proliferative diabetic retinopathy as compared to 84 (84.0%) patients having Type II DM. **Conclusion:** The present study demonstrated a huge burden of proliferative diabetic

retinopathy amongst Type II diabetic patients, thus warrants large multicentered studies to generalize its results to the overall population of the province and to contribute to the establishment of the national screening program for catering diabetic retinopathy.

7. Corneal changes in eyes with Silicone oil Tamponade: A Comparative Pre- and Post-Operative Assessment

Abstract

Objective: This study aimed to evaluate and compare pre- and post-operative corneal changes in eyes treated with silicone oil tamponade. **Methodology:** A comparative cross-sectional study was conducted at Al-Shifa Trust Eye Hospital in Rawalpindi, Punjab, Pakistan, enrolling subjects using a non-probability consecutive sampling technique undergoing silicone oil tamponade. Detailed ocular examination of the anterior and posterior segments was performed with slit lamp biomicroscopy. Corneal parameters, including principal corneal curvature K1, K2, its average KAVG, central corneal thickness (CCT), and anterior chamber depth (ACD), were measured with IOL Master 700 pre- and post-operatively. Data were entered and analyzed using DATATAB online web-based software. **Results:** A total of 50 subjects participated, including 34 (68%) males and 16 (32%) females, with a mean age of 48.10 ± 18.55 , ranging from 10 to 80 years. The mean pre- and post-operative values for K1, K2, KAVG, CCT, and ACD were 42.93 ± 1.91 , 44.67 ± 1.80 , 43.87 ± 1.63 , 529.14 ± 37.02 , and 3.79 ± 1.02 , and 42.71 ± 1.82 , 44.74 ± 2.01 , 43.81 ± 1.77 , 531.74 ± 38.18 , and 3.99 ± 1.00 , respectively. Comparing pre- and post-operative corneal parameters after one-month follow-up, no significant changes were observed. However, a statistically significant increase in ACD was observed ($p < 0.002$). **Conclusion:** No significant changes in corneal parameters occurred in eyes with silicone oil tamponade, while an increase in anterior chamber depth was observed. **Keywords:** Anterior Chamber Depth (ACD), Central Corneal Thickness (CCT), IOL Master, K-Readings

How to cite: KHAN, F., AMIR, H., ULLAH, S., KANWAL, F., SHAH, M., & NAZ, T. CORNEAL CHANGES IN EYES WITH SILICONE OIL TAMPONADE: A COMPARATIVE PRE-AND POST-OPERATIVE ASSESSMENT. DOI: 10.5281/zenodo.10390554.

8. Anatomical success of Tectonic Keratoplasty in children at a tertiary care eye hospital

Abstract

Objective: To evaluate the anatomical outcome of tectonic grafts performed in children with perforated or melted corneas. **Methods:** The prospective study was conducted at the Department of Paediatric Ophthalmology, Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan, from January to December 2017, and comprised children of either gender aged <16 years who received tectonic grafts owing to desmetocoele or corneal perforation of $>3\text{mm}$. The causes of corneal perforation, size of perforation, post-operative graft outcome and globe integrity were noted. Periodic follow-ups were done till December 2019. Data was analysed using SPSS 22. **Results:** Of the 27 patients, 9(33.3%) were girls and 18(66.7%) were boys. The overall mean age was 47.7 ± 43.5 months. The most common indication was corneal perforation 19(70.4%), followed by descemetocoele 8(29.6%). The most frequent cause was infectious keratitis 13(48.2%), followed by trauma 8(29.6%) and vitamin A deficiency 5(18.5%). The mean size of perforation/descemetocoele was $5.5 \pm 1.5\text{mm}$. Post-operatively, graft failure occurred in 5(18.5%) eyes and required repeat grafts. Globe integrity was restored in all 27(100%) cases, and 24(88.8%) eyes maintained their size and intraocular pressure, while 3(11.1%) became phthisical. Post-operative visual acuity was better than 6/36 in 3(11.1%) eyes, between 6/36 and 6/60 in 10(37%) and counting finger in 14(51.8%). **Conclusion:** Tectonic graft was found to be a valuable therapeutic option in emergency globe-threatening corneal thinning and perforation and in maintaining the anatomical integrity of eyes.

How to cite: Hassan, S., Noorani, S., Zaheer, N., & Jabeen, S. (2023). Anatomical success of tectonic keratoplasty in children at a tertiary care eye hospital. JPMA. The Journal of the Pakistan Medical Association, 73(1), 54-59. DOI: doi.org/10.47391/jpma.5532.

9. Sexual and reproductive health awareness, experiences and service utilization among female undergraduate students in university of Rawalpindi, Pakistan

Abstract

The purpose of the study is to evaluate the awareness, practices, experiences, and the utilization of services regarding SRH by the young female in university. A cross-sectional study was conducted at an institution starting from December 5th, 2021 to February 25th 2022. Nonprobability sampling was used; finally, 478 young female students were selected from 13 departments of the social sciences. Data on SRH (sexual reproductive health) difficulties and experiences were gathered using a self-administered close-ended questionnaire. The utilization of sexual and reproduction health services was assessed through a single-item measure that asked participants whether they had ever utilized such services. Data was entered in to Kobo toolbox and descriptive analysis was done through SPSS. About 242 (51%) of the respondents identified that maturation is one of the foremost health issues faces by adolescents. Among 60% of young females said their mothers were their main source of information on sexual and reproductive health. About 176(36.8 %) students had a conversation with their mothers about sexual and reproductive health. Only 78 (16.3%) of students reported ever used of services for SRH issues despite the fact that 192 (40.2%) reported menstruation-related problems. The proportion of young females who were aware of reproductive health issues and service utilization was found to be low. Large number of respondents of our study had experienced the onset of menstruation without any previous background knowledge on the event. There is a dire need for provision of proper knowledge and guidance to the young female.

How to cite: Rehman, A., Behlol, M. G., Shehwar, K. D., Kawish, A. B., & Idress, F. (2023). Sexual and reproductive health awareness, experiences and service utilization among female undergraduate students in university of Rawalpindi, Pakistan. *Voyage Journal of Educational Studies*, 3(3), 18-30. DOI: doi.org/10.58622/vjes.v3i3.79.

10. Evaluation of willingness to accept COVID-19 vaccine and willingness to pay among Pakistani parents for their children aged 5 to 11 years: Findings and Implications

Abstract

Vaccines are the most efficient and cost-effective tool to halt the transmission and prevention of COVID-19. The current study examined the willingness of parents to vaccinate their children against COVID-19. This was a cross-sectional study that used a questionnaire based on the Health Belief Model, previous history of COVID-19, willingness to accept, and willingness to pay for the COVID-19 vaccine. The questionnaire was administered among parents of children aged 5 to 11 years. Descriptive statistics, χ^2 tests, and regression analysis were carried out for data analysis. A total of 474 respondents participated in this survey with a response rate of 67.7%. In our study, a majority of the respondents exhibited a willingness to accept the COVID-19 vaccine for their children (Definitely yes/Probably yes = 252, 53.2%); nevertheless, 229 (48.3%) respondents were unwilling to pay for it. More than three-quarters of the respondents were worried about the probability of COVID-19 infection in their children ($n = 361$, 76.2%) and were afraid of COVID-19-associated complications ($n = 391$, 82.5%). Likewise, most respondents showed their concerns regarding the effectiveness of the vaccine ($n = 351$, 74.1%), vaccine safety ($n = 351$, 74.1%), and the halal nature of the vaccine ($n = 309$, 65.2%). Respondents who were aged 40 to 50 years (odds ratio [OR]: 0.101, 95% CI: 0.38–0.268; $P < 0.001$), family

How to cite: Hayat, K., Umer, M. F., Mujtaba, H., Kawish, A. B., Tahir, M. A., Khan, F. U., ... & Fang, Y. (2023). Evaluation of Willingness to Accept COVID-19 Vaccine and Willingness to Pay among Pakistani Parents for Their Children Aged 5 to 11 Years: Findings and Implications. *The American Journal of Tropical Medicine and Hygiene*, 109(1), 69. DOI: 10.4269/ajtmh.22-0363.Pakistan. *Voyage Journal of Educational Studies*, 3(3), 18-30. DOI: doi.org/10.58622/vjes.v3i3.79.

income > 50,000 PKR (OR: 0.680, 95% CI: 0.321–1.442; P = 0.012), and location (OR: 0.324, 95% CI: 0.167–0.628; P = 0.001) were the factors that were likely to impact vaccine acceptance among parents. Education-based interventions are urgently required to improve COVID-19 vaccination acceptance among parents for their children.

11. Effect of screen time on behavior of pre-schoolers in Islamabad

Abstract

Objective: Early years of childhood form the basis of intelligence, personality, social behaviour, and capacity to learn and nurture oneself as an adult. Our objective was to find out the effects of screen time on behavior of pre-schoolers, which could provide scientific grounds to the control of digital screen time. **Method:** A cross sectional

How to cite: Suleman, M., Ume Sughra, Riaz, A., & Akbar, M. (2023). Effect of screen time on behavior of pre-schoolers in Islamabad. *Pakistan Journal of Medical Sciences*, 39(2). DOI:10.12669/pjms.39.2.6883.

survey was conducted in four private preschools of Islamabad from June -November 2021. A sample size of 200 children ages three-five years were selected through multistage random sampling using a parental questionnaire. Children were grouped based on daily screen time of ≤60 minutes or >60 minutes. Analysis was made based on the Child behavior checklist for ages eighteen months-five years results. Cronbach's alpha coefficient was found to be 0.925. It was analyzed using SPSS version 22. Chi-square test, independent sample t-test and multi linear regression were applied to determine the association and significance levels between the variables. **Results:** Study results indicate increased screen time was statistically significant with child's age, education level and employment status of mothers. It was observed that pre-schoolers with screen time of > 60 minutes tend to suffer more from withdrawal syndrome (11.94 ± 3.91 , $p = 0.014$) sleep problems (10.97 ± 3.20 , $p = 0.010$) and Autism spectrum problems (17.66 ± 5.89 , $p = 0.047$) as compared to pre-schoolers with screen time ≤60 minutes. Strongest predictor of outcome variable was found to be mothers education level ($\beta = 21.53$). **Conclusion:** Study findings revealed that excessive screen time has deleterious effect and is associated with behavioural problems of pre-schoolers.

12. A pan-cancer analysis of Pituitary Tumor-Transforming 3, Pseudogene

Abstract

Background: Although evidence regarding pituitary tumor-transforming 3, pseudogene (PTTG3P) involvement in human cancers has been acquired via human and animal model-based molecular studies, there is a lack of pan-cancer analysis of this gene in human tumors. **Methods:** Tumor-causing effects of PTTG3P in 24 human tumors were explored using The Cancer Genome Atlas (TCGA) datasets

How to cite: Li, J., Shaikh, S. N., Uqaili, A. A., Nasir, H., Zia, R., Akram, M. A., ... & Rasheed, R. A. (2023). A pan-cancer analysis of pituitary tumor-transforming 3, pseudogene. *American Journal of Translational Research*, 15(8), 5408.

from different bioinformatics databases and applying in silico tools such as The University of Alabama at Birmingham CANCER (UALCAN), Human Protein Atlas (HPA), Kaplan Meier (KM) plotter, cBioPortal, Search Tool for the Retrieval of Interacting Genes/Proteins (STRING), Cytoscape, Database for Annotation, Visualization, and Integrated Discovery (DAVID), Tumor IMMune Estimation Resource (TIMER), and Comparative Toxicogenomics Database (CTD). Then, via in vitro experiments, including RNA sequencing (RNA-seq) and targeted bisulfite sequencing (bisulfite-seq), expression and promoter methylation levels of PTTG3P were verified in cell lines. **Results:** The PTTG3P expression was overexpressed across 23 malignancies and its overexpression was further found significantly effecting the overall survival (OS) durations of the esophageal carcinoma (ESCA) and head and neck cancer (HNSC) patients. This important information helps us to understand that PTTG3P plays a significant role in the development and progression of ESCA and HNSC. As for PTTG3P functional mechanisms, this gene along with its other

binding partners was significantly concentrated in "Oocyte meiosis", "Cell cycle", "Ubiquitin mediated proteolysis", and "Progesterone-mediated oocyte maturation". Moreover, ESCA and HNSC tissues having the higher expression of PTTG3P were found to have lower promoter methylation levels of PTTG3P and higher CD8+ T immune cells level. Additionally, PTTG3P expression-regulatory drugs were also explored in the current manuscript for designing appropriate treatment strategies for ESCA and HNSC with respect to PTTG3P expression. **Conclusion:** Our pan-cancer based findings provided a comprehensive account of the oncogenic role and utilization of PTTG3P as a novel molecular biomarker of ESCA and HNSC.

Keywords: Pan-cancer, PTTG3P, cancer, biomarker

13. Association of Central Corneal Thickness among Myopic and Emmetropic patients visiting Ophthalmology Department of a Tertiary Care Hospital in Islamabad

Abstract

Objective: The aim of the study was to determine the difference between central corneal thickness (CCT) among myopic and emmetropic eyes. **Material and Methods:** A total of 186 participants participated in this comparative cross-sectional study. The sample size was calculated using the WHO calculator and enrolled by consecutive sampling technique. Detail eye examinations were performed of anterior and posterior segments with slit-lamp and refractive status was determined with Auto-refractometer (Nidek ARK 1a) and Pachymetry with Specular Microscope (Topcon SP2000P). The analysis of data was performed in SPSS 22. **Results:** To carry out the study, 186 candidates volunteered their time and effort. Male and female participants were included in the study. About 56% of the candidates were men, and 44% were women. Individuals' ages varied from 16 to 49, on average (16-49). As for the control group, the average central corneal thickness was 522.30 microns and a standard deviation of ± 29.563 . Their sizes varied from 439 microns to 619 microns. The average CCT of myopic people was 515.18 microns, and the standard deviation was ± 28.972 microns. The relationship between CCT in myopic eyes and CCT in emmetropic eyes was analysed using a paired t-test. The P value was only 0.09, the relevance of the test was not significant. **Conclusion:** CCT difference between myopic and emmetropic eyes was not statistically significant (P 0.09).

How to cite: Khan SA, Shah M, Sharif A, Ullah S, Imdad A, Khalid A. Association of Central Corneal Thickness among Myopic and Emmetropic Patients Visiting Ophthalmology Department of a Tertiary Care Hospital in Islamabad. JRM;27(1). DOI:10.37939/jrmc.v27i1.2033.

14. Assessment of family planning services utilization among women of Union Council Bangoin (Rawalakot)

Azad Jammu and Kashmir

Abstract

Objectives: To determine the percentage of women in Union Council Bangoin (Rawalakot) Azad Jammu and Kashmir who use family planning services, and to determine the relationship between demographic characteristics and family planning service use (AJ&K). **Study design and setting:** A cross-sectional study was conducted in UC Bangoin (Rawalakot) Azad Jammu and Kashmir over the duration of 6 months, from 5 January to 5 July 2021. **Methodology:** A sample of 344 married women with the age range 18 to 45 was obtained. The study's assessment instrument was developed from an existing assessment tool (Reproductive health knowledge and services utilization among rural adolescence in Ethiopia 2014). It included 14 questions on demographics and 13 questions about the use of family planning services. **Results:** High utilization was 52% (n=179) while low utilization was 48% (n=165). Most of them had fear of side effects of using contraception (n=170, 48.9%). Chi-square test

How to cite: Fayaz, M., Tahir, Q., Zafar, T., & Butt, M. U. T.. (2023). Assessment of Family planning services utilization among women of Union Council Bangoin (Rawalakot) Azad Jammu and Kashmir. Journal of Bahria University Medical and Dental College, 13(02), 110–114. DOI: 10.51985/JBUMDC2022112.

showed significant association ($p\text{-val} = 0.05$) between fear of side effects of using contraception, decision of using contraception, education level, distance from home to hospital, number of children, exposure to mass media and utilization of family planning services. **Conclusion:** There was low family planning services utilization in that area. Study showed that there was a strong association between fear of side effects of using contraception, low education and low exposure to mass media with utilization of family planning services in Union Council Bangoin (Rawalakot) Azad Jammu and Kashmir (AJ&K).

15. Barriers to utilizing low vision devices among non-users with low vision: A cross-sectional study

Abstract

Background: By recognizing and comprehending the obstacles that prevent low vision devices (LVDs) from being used effectively, the burden of blindness can be reduced.

Objective: To find the barriers to the utilization of low-vision devices (LVDs) among non-users in patients with low vision. **Methods:** A cross-sectional study was conducted in the low vision department of Al-Shifa Trust Eye hospitals in Rawalpindi, Pakistan for a duration of six months from July

How to cite: Tariq, I., Ayyub, F., Tanveer, M., Iqbal, S., & Shahzadi, A. (2023). Barriers to utilizing low vision devices among non-users with low vision: A cross-sectional study. *The Rehabilitation Journal*, 7(04), 09-13. DOI:10.52567/trehabj.v7i04.38.

2021 to December 2021. Low-vision individuals with visual acuity $< 6/18$ fulfilling the criteria of low vision and prescribed low-vision devices over the period of 6 months but not using them were included in this study. A total of $n=420$ patients were evaluated for eligibility, out of which $n=255$ were prescribed low-vision devices due to low vision. The data was collected on the self-structured questionnaire in accordance with the tenets of Helsinki's declaration. **Results:** Out of $n=255$, a total of $n=105$ were using (acceptance) and $n=150$ were not using (non-acceptance) the LVDs. Out of 15 possible barriers, fear of being perceived as blind $N=120(80\%)$ is the major cause of non-acceptance of devices among low-vision individuals. It was followed by difficulty in handling low-vision devices $n=106(70.7\%)$ and low affordability $n=106(70.7\%)$. While fear of loss of job $2(1.3\%)$ was selected as the least occurring problem in non-acceptance of devices. **Conclusions:** Leading barriers included stigma, lack of information, concern over losing one's job, fear of being viewed as blind, and low necessity.

Keywords: blindness; low vision; low-vision devices.

16. Willingness towards eye donation: A public health necessity in Pakistan

Abstract

Introduction: According to the WHO, a person is said to be blind when he/she has visual acuity of less than $3/60$, and/or a corresponding visual field of less than 10° ; for a smaller diameter, in the better eye with the best possible correction. At present, approximately 39 million individuals are bilaterally blind, and another 285 million with severe visual impairment.

How to cite: Ayyub F, Sughra U, Khan SA, Kausar S, Khan W. Willingness towards eye donation: A public health necessity in Pakistan. *JSTMU*;5(2):81-5. DOI: 10.32593/jstmu/Vol5.Iss2.199.

Objective: To assess the willingness and knowledge of the people regarding eye donation and to evaluate factors associated with eye donation. **Methodology:** This cross-sectional study was carried out in the outdoor patient department (OPD) of two governments and two private tertiary healthcare hospitals in Rawalpindi and Islamabad. A total of 360 individuals who visited OPD of the tertiary health care hospitals were included. Data were obtained by using an interview-based questionnaire after taking informed consent. Inferential analysis was done by applying the Chi-Square test and binary logistic regression. **Results:** Out of 360 respondents, the majority were males 201. 276 were willing to donate their eyes. Willingness showed a statistically significant association with occupation. 175 had good knowledge regarding eye donation. Male respondents had 3 times more knowledge regarding eye donation as compared to females. Respondents having an age higher than 30 years had 2 times high

knowledge as compared to individuals having an age less than 30 years. **Conclusion:** The majority of the people showed willingness but had little knowledge regarding eye donation procedures and eye banks in Pakistan.

17. Knowledge and barriers associated with contact lens use among spectacle wearers

Abstract

Objective: To determine the knowledge and barriers to contact lens usage among spectacle wearers. **Methods:** This cross-sectional study was conducted from November 2020 to January 2021 on the spectacle wearers visiting Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan. Data were obtained from all the respondents of either gender, aged between 18 and 50 years, using a structured questionnaire after obtaining informed consent. **Results:** Out of 362 study respondents, 184 (50.8%) were females, 248 (68.5%) hailed from urban areas, 92 (25%) were graduates. Mean age of participants was 35.94 ± 10.56 years. Majority (n=170; 47.0%) had Myopia, followed by Astigmatism (n=56; 15.5%). A majority (n=284; 78.5%) expressed satisfaction with their spectacles. Overall, 246 (68%) individuals were aware of contact lenses, and 184 (50.8%) participants were knowledgeable about the dual usage of contact lenses for both cosmetic and correction purposes. Females (63.6%) had more knowledge about contact lenses than males (53.9%). Barriers to contact lens wear reported were lack of interest (14.5%), lack of knowledge (13.5%), difficulty in insertion and removal (12.7%), and fear of side effects (9.5%). The younger adults and those from urban areas were more likely to know about contact lenses. A significant association was seen among barriers and demographics of respondents (p-value 0.012). **Conclusion:** Despite having good knowledge of contact lenses, people were not interested in using them as an alternative vision correction tool. Educating people about contact lenses and conducting experimental trials for visual performance on potential candidates may help overcome the barriers to wearing contact lenses.

How to cite: Aiman, Umm & Sadiq, Muhammad & Ayub, Fareeha & Ali, Khizar. (2023). Knowledge and barriers associated with contact lens use among spectacle wearers. Khyber Medical University Journal. 15. DOI: 10.35845/kmu.2023.23338.

Keywords: Knowledge (MeSH); Barriers (Non-MeSH); Contact Lenses (MeSH); Refractive Errors (MeSH); Eyeglasses (MeSH); Myopia (MeSH); Astigmatism (MeSH).

18. Endothelial Cell Count and Central Corneal Thickness in Type-2 Diabetes

Abstract

Objectives: This study aimed at evaluating and comparing the values of Endothelial Cell Density (ECD) and Central Corneal Thickness (CCT) among Type 2 Diabetic cases and Non-Diabetics. It also aimed at finding the correlation between ECD and CCT with the diabetes duration, Random Blood Sugar (RBS) levels, and more severe stages of Diabetic Retinopathy (DR) in the diabetic subjects. **Design:** Comparative Cross-sectional. **Study Setting and Duration:** The data was collected from the General Outdoor Patient Department (OPD) of Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan within duration of 8 months from January to August 2021. **Methodology:** After taking the informed consent, a complete history of each subject was taken. ETDRS (Early Treatment Diabetic Retinopathy Study) visual acuity chart was used to evaluate Visual acuity and subjective refraction and then a complete slit-lamp anterior and posterior segment examination was performed followed by Specular Microscopy to measure the ECD and CCT. The diabetic subjects were checked for their RBS immediately after Specular Microscopy (TOMEY Specular Microscope EM-4000) using a digital glucometer and the readings were carefully recorded. **Results:** Results showed ECD to be significantly lower ($p = 0.000$) while CCT to be significantly higher ($p = 0.000$) in type-2 Diabetics than in Non-Diabetics. On correlation analysis, ECD was negatively correlated

How to cite: Firdous, M., Saif Ullah, Shah, M., & Qayyum, S. . (2023). Endothelial Cell Count and Central Corneal Thickness In Type-2 Diabetes. Malaysian Journal of Medical Research (MJMR), 7(1), 1-6. DOI: 10.31674/mjmr.2023.v07i01.001.

($p < 0.05$) while CCT was positively correlated ($p < 0.05$) with diabetes duration, RBS, and severity of DR. **Conclusion:** This study concluded that the ECD and CCT were significantly different among diabetics and non-diabetics.

19. Frequency of moderate to high myopia in primary open-angle glaucoma in tertiary care hospital

Abstract

Introduction: Glaucoma is one of the leading causes of irreversible blindness in the adult population worldwide with Primary Open-Angle Glaucoma being its most common type. Moderate to high myopia is one of the various risk factors associated with POAG. Early detection and management of glaucoma in patients can slow down

How to cite: Saheem S, Ahmad S, Ullah S, Firdous M, Qayyum S. Frequency of moderate to high myopia in primary open-angle glaucoma in tertiary care hospital. JSTMU;5(2):69-4.

its progression and prevent vision loss. **Objective:** To evaluate the frequency of moderate to high myopia in Primary Open Angle Glaucoma (POAG) and to find out the association between myopia and POAG. **Methodology:** A total of 100 participants were included in this cross-sectional study through consecutive sampling techniques. Refractive error was measured through an auto refractometer. Glaucomatous Patients were diagnosed as POAG on clinical findings (elevated IOP and optic nerve changes), visual field loss, and/or retinal nerve fiber layer (RNFL) defects. The anterior chamber angle was evaluated with the Van Herrick technique. Association between myopia and independent variables were statistically determined. **Results:** The mean age of all the participants was 52.36 ± 15.350 . The frequencies of low, moderate, and high myopia were 34%, 12.5%, and 4% respectively. Male gender had a significant association with the high prevalence of low myopia in patients with POAG (p -value < 0.05). Illiteracy and low and middle-class socioeconomic background were the other significant risk factors. **Conclusion:** Myopia is the major risk factor in POAG and other factors like illiteracy and a poor socioeconomic background attributed to it should be screened and assessed so that earlier detection in the population can prevent vision loss.

20. Effect of phacoemulsification on intraocular pressure in glaucoma patients

Abstract

Introduction: Cataracts and Glaucoma are the leading causes of irreversible blindness worldwide. Lens extraction using the Phacoemulsification technique can be an effective IOP-lowering treatment for all types of glaucoma.

Objective: To study was to measure the Intra-Ocular Pressure before and after phacoemulsification and to determine the mean change in Intra-Ocular Pressure.

How to cite: Iqbal S, Ahmad S, Qayyum S, Firdous M. Effect of phacoemulsification on intraocular pressure in glaucoma patients. JSTMU;5(2):75-0.
DOI: 10.32593/jstmu/Vol5.Iss2.198.

Methodology: This study included 53 glaucoma patients with Primary Open Angle Glaucoma (POAG), Angle Closure Glaucoma (ACG), and Pseudoexfoliation (PXF) % ($n=4$) Glaucoma who visited the Glaucoma Department of Al-Shifa Trust Eye Hospital Rawalpindi. Pre and post-interventional study designs were used. Based on a slit lamp examination, patients were labeled as having cataracts in glaucomatous eyes. Pre-operative Intraocular pressure (IOP) was noted using Goldmann Applanation Tonometer (GAT). Patients were referred for Phacoemulsification and their IOP was noted after 2 weeks of surgery. The non-Probability convenient sampling Technique was used. Paired t-test was used to find the mean change in IOP. **Results:** The mean age of respondents was (62.5 ± 10.25) and had a maximum value of 81 years and a minimum value of 40 years among a sample of 53 respondents. The mean IOP before phacoemulsification was (16.25 ± 7.251) the mean IOP after phacoemulsification was (13.28 ± 5.940) and the mean difference was (2.962 ± 8.364) in glaucomatous patients having cataracts. This difference was found to be statistically significant (p -value < 0.05). **Conclusion:** In Glaucomatous patients having cataracts after

phacoemulsification there is a significant reduction in IOP and medications after surgery. This IOP reduction was more marked in POAG patients as compared to other types of Glaucoma.

21. Assessment of the effect of Posterior Sub-capsular cataract on the refractive status of the eye at the outpatient department of Hayatabad Medical Complex, Peshawar

Abstract

Introduction: Cataract-induced refractive change is the refraction change caused by a cataract. It can reach multiple diopters (D). It modifies expected refraction errors during cataract surgery by modifying axial length measurement. Objective: To find the effect of the Posterior subcapsular Cataracts on the refractive status of the eye.

Methodology: A cross-sectional study was progressed in Eye OPD in Hayatabad Medical Complex, Peshawar. 102 patients having Posterior Subcapsular Cataracts were part of this study. The anterior segment was examined with a slit lamp for evaluation of the posterior subcapsular cataract. The refractive status of an eye having a posterior subcapsular cataract was determined using Retinoscopy and subjective refraction techniques. The axial length of the eye was measured using A-Scan. Keratometric reading was measured using Keratometer. **Results:** A total of 102 patients were included in this study. Of these, 27 were males and 75 were females. The mean age was 60.5 years with 5.8SD. Results from the study showed refractive error due to Posterior Subcapsular Cataracts were mainly myopic astigmatism and spherical myopia with 0.16SD. Patients with PSCs had myopic astigmatism with a mean value of (1.7diopters, 15.7%) with 0.93SD and spherical myopia with a mean value of (0.1D, 2.9%) with 0.67SD. **Conclusion:** The most common refractive error found in PSCs was Astigmatism followed by Myopia. These results may help to clarify the types of refractive errors in patients with PSCs and the prediction of visual outcomes with spectacles.

How to cite: Amin F, shah M, Safi S, Qayyum S, ullah S. Assessment of the effect of Posterior Sub-capsular cataract on the refractive status of the eye at the outpatient department of Hayatabad Medical Complex, Peshawar. JSTMU;5(2):99-03.
DOI: 10.32593/jstmu/Vol5.Iss2.214.

22. Comparison of Retinal Nerve Fiber Layer Thickness in Diabetic Patients with and without Diabetic Retinopathy and Healthy Individuals using Ocular Coherence Tomography

Abstract

Objectives: Using Ocular Coherence Tomography, the study aimed to examine the RNFL thickness of type diabetics, patients with Diabetic Retinopathy, and healthy persons. **Methods:** 101 patients from the outside patient department and the Retina department of Tertiary Eye Care Hospital participated in this research. The cross-sectional study design was used. Non-probability consecutive sampling was utilized as the sampling technique. Patients were selected according to inclusion criteria. Visual Acuity was assessed using an (ETDRS) Early Treatment Diabetic Retinopathy Study Visual acuity chart at a distance of 6m. After the Ophthalmological Examination was done by a doctor, Ocular Coherence Tomography (Heidelberg Spectralis) was performed to assess RNFL thickness. The association between different types of diabetic retinopathy, Type-2 Diabetes, Normal Healthy, and retinal RNFL thickness was determined using a one-way ANOVA test. **Results:** The age range of the participants was between 40 and 69 years, with a mean of 55.68 ±10.437 years. 15.3% had diabetes for 1 to 5 years. 24% had Diabetes for 6 to 10 years 19.9% had a Diabetes duration of 19.9%. The RNFL thickness was significantly decreased in type 2 diabetics, NPDR, and PDR as compared to normal Healthy individuals (p<.001). Age and duration of diabetes were closely correlated with the retinal nerve fiber layer (p<0.001). **Conclusion:** This study indicated that the (retinal nerve fiber layer) RNFL was considerably thinner in all quadrants of

How to cite: Aslam, I., Qayyum, S. ., Firdous, M. ., & Ullah , S. (2023). Comparison of Retinal Nerve Fiber Layer Thickness in Diabetic Patients with and without Diabetic Retinopathy and Healthy Individuals using Ocular Coherence Tomography. Malaysian Journal of Medical Research (MJMR), 7(3), 8-14. DOI: 10.31674/mjmr.2023.v07i03.002.

diabetic retinopathy (NPDR, PDR), type 2 diabetics, and healthy persons. Age and duration of diabetes were significantly correlated with average RNFL thickness.

23. Association between Intraocular Pressure and Myopia Among Children Aged 7 to 16 years

Abstract

Objectives: To investigate the association between high intraocular pressure and myopia in children and compare it to emmetropia, and to determine the relationship between elevated intraocular pressure and varying degrees of myopia. **Study design and Setting:** Comparative cross-sectional study was performed at the tertiary eye care hospital, Rawalpindi for six months from July 2021 to December 2021. **Methodology:** Patients with myopia of

greater than 0.5Ds and emmetropes with visual acuity of 6/6 were included. All patients underwent visual acuity, cycloplegic refraction, and fundus examination in order to exclude the myopic patients with other systemic and ocular disorders. Intraocular pressure and central corneal thickness were measured using a Tonopen tonometer and Pachymeter respectively. Data was entered on SPSS version 26 for analysis. Independent sample T-test and one-way ANOVA was utilized for inferential statistics. **Results:** A total of 218 subjects were included with a mean age of 11.38 ± 2.602 ranging from 7 to 16 years. Females 50.9% (n=111) were outnumbered by male participants 49.1% (n=107). The mean IOP in emmetropes was 13.35 ± 2.433 mmHg and in myopes was 15.22 ± 3 mmHg and there is a statistically significant mean difference between these groups (P-value <0.05). There is also a statistically significant mean difference between IOP and varying degrees of myopia, that is; low (13.46 ± 2.797), moderate (16.62 ± 2.981), and high (19.215 ± 2.184). **Conclusions:** The IOP was higher in high and moderate myopic eyes as compared to emmetropes. Moreover, a strong association was found between myopia and elevated IOP in children.

How to cite: Shahzadi, A. ., Firdous, M. ., Ayyub, F. ., Qayyum, S. ., ullah, S., & Zafar, R. . (2023). Association between Intraocular Pressure and Myopia Among Children Aged 7 to 16 years. Journal of Bahria University Medical and Dental College, 13(03), 197–200. DOI: 10.51985/JBUMDC2023165.

24. Strabismus Surgery with Adjustable Suture Technique in Patients with Horizontal Strabismus

Abstract

Objective: To evaluate the outcomes of squint surgery with adjustable sutures in patients with horizontal Strabismus. **Study Design:** Quasi-experimental study. Place and Duration of Study: Department of Pediatric Ophthalmology and Strabismus, Al-Shifa Trust Eye Hospital, Rawalpindi Pakistan, from Jul 2016 to Jun 2018. **Methodology:** Adult patients with horizontal Strabismus and co-operative enough were selected for squint surgery with adjustable sutures. Squint surgery was performed under general anaesthesia. The recessed muscle was attached to the insertion site with hang back technique with a bow tie knot if required adjustment (further recession or advancement) was performed on the first post-operative day under topical anaesthesia. Preoperative, pre and post-adjustment and final postoperative orthoptic assessment were recorded. **Results:** One hundred thirty-two patients were selected for strabismus surgery with adjustable sutures. Eighteen patients (13.6%) had a history of previous strabismus surgery. 75(56.8%) patients required post-operative adjustment of sutures. Orthophoria was achieved in 107(81.1%) and residual exotropia of less than 10pd in 25(18.9%) patients. Desired surgical outcome of orthophoria or the residual squint of less than 10 prism diopters was achieved in 100% of patients. **Conclusion:** A positive surgical outcome was observed in our patients, and the second surgery for residual or consecutive squint was avoided.

How to cite: Hassan, S., Noorani, S., Jabeen, S., Zaheer, N., & Sadiq, M. U. (2023). Strabismus Surgery with Adjustable Suture Technique in Patients with Horizontal Strabismus. Pakistan Armed Forces Medical Journal, 73(3), 870–73. DOI: 10.51253/pafmj.v73i3.8226.

25. Comparative Analysis of Cycloplegia's Effect on Intraocular Parameters in Keratoconus and Controls

Abstract

Background: Cycloplegia, the paralysis of the ciliary muscle, can significantly alter ocular biometrics. However, its effect on the intraocular parameters in individuals with keratoconus (KC), a corneal condition causing visual impairment, remains inadequately understood. This study aimed to elucidate and compare the impact of cycloplegia on ocular parameters in KC patients and controls.

Objective: To determine the effects of cycloplegia on anterior chamber depth (ACD), lens thickness (LT), and axial

length (AL) in individuals with keratoconus compared to age-matched controls. **Methods:** This pre- and post-interventional study was conducted at Al-Shifa Trust Eye Hospital's Cornea Department in Rawalpindi. Subjects with KC, diagnosed using the Rabinowitz criteria, and age-matched controls were enrolled. Comprehensive anterior segment examinations, including slit lamp biomicroscopy, were performed. Cycloplegia was induced using 1% cyclopentolate. Measurements of ACD, LT, and AL were taken using the IOL Master 700, both before and after cycloplegia. Data analysis was carried out using DataTab. **Results:** The study encompassed 72 participants in each of the KC and control groups. The mean ages were 20.46 ± 6.47 (KC) and 22.14 ± 5.8 (controls), with a gender distribution of 58.33% male and 41.67% female in the KC group, and 54.17% male and 45.83% female in the control group. Significant differences were observed in ACD and LT pre- and post-cycloplegia in both groups, but no significant changes were noted in AL. The KC group showed changes in ACD (3.75 ± 0.28 to 3.84 ± 0.28 , $p < 0.001$) and LT (3.49 ± 0.24 to 3.45 ± 0.24 , $p < 0.001$), while AL remained stable (23.5 ± 0.88). Controls showed similar trends in ACD and LT with no significant change in AL. Notably, post-cycloplegia, differences in ACD and LT were significant between the KC and control groups. **Conclusion:** Cycloplegia significantly influences anterior chamber depth and lens thickness in both keratoconus patients and controls, while axial length remains unaffected. These findings underscore the importance of considering cycloplegic effects in ocular biometric assessments in keratoconus and normal eyes.

How to cite: Khan, F., Kanwal, F., Ullah, S., Amir, H., Shah, M., Naz, T., & Khan, S. A. (2023). Comparative Analysis of Cycloplegia's Effect on Intraocular Parameters in Keratoconus and Controls. *Journal of Health and Rehabilitation Research*, 3(2), 477-482. DOI: 10.61919/jhrr.v3i2.168.

26. Sleep Quality and its Possible Predictors Among University Students of Islamabad, Pakistan

Abstract

Objective: To assess sleep quality among Islamabad university students and find predictors of poor sleep quality. **Study Design:** Cross-sectional analytic study. **Place and Duration of Study:** Capital University of Science and Technology, Islamabad Pakistan, from Feb to Jun 2019

Methodology: The study population (n=397) was undergraduate students from all eight semesters of four faculties. The dependent variable sleep quality was

measured through a standard validated tool, Pittsburgh Sleep Quality Index (PSQI). **Results:** Out of 397 participants, 158(40%) were hostelites and 239(60%) were day scholars. There were 134(33.5%) students having a good sleep, and 263(66.5%) were having a bad sleep, according to PSQI scores obtained. Association analysis showed a statistically significant association between sleep quality and heavy meals, gadget use, drinking beverages before bedtime, sleeping in a noisy room, and type of residence ($p \leq 0.001$). Study findings showed gadget use before bedtime (AOR=4.472, 95% CI=2.674-7.478), residence type (AOR=2.323, 95% CI=1.4-3.855), sleeping in a noisy room (AOR=2.241, 95% CI=1.369-3.665) and heavy meal before bedtime (AOR=1.985, 95% CI=1.142-3.451) were significant predictors of poor sleep quality.

How to cite: Zahoor, M., Waqar, S., Kawish, A. B., Sughra, U.-, Mashhadi, S. F., & Shahzad, A. (2023). Sleep Quality and Its Possible Predictors Among University Students of Islamabad, Pakistan. *Pakistan Armed Forces Medical Journal*, 73(1), 164-68. DOI: 10.51253/pafmj.v73i1.7814.

Conclusion: It was concluded that two out of three students need better sleep quality. Universities should give preparatory assistance for developing and executing health promotion and educational curricula.

27. Country Representative World Health Organization (WHO), Salmiya

Abstract

Background and Objectives: Respectful maternity care promotes practices that acknowledge women's preferences and women and newborns' needs. It is an individual-centered strategy founded on ethical and human rights principles. The objective of this systematic review is to identify the impact of income on maternal care and respectful maternity care in low-and middle-income

How to cite: Kawish, A.B.; Umer, M.F.; Arshed, M.; Khan, S.A.; Hafeez, A.; Waqar, S. Respectful Maternal Care Experience in Low- and Middle-Income Countries: A Systematic Review. *Medicina* 2023, 59, 1842. DOI: 10.3390/medicina59101842.

countries. **Materials and Methods:** Data were searched from Google Scholar, PubMed, Web of Science, NCBI, CINAHL, National Library of Medicine, ResearchGate, MEDLINE, EMBASE database, Scopus, Cochrane Central Register of Controlled Trials (CENTRAL), and Maternity and Infant Care database. This review followed PRISMA guidelines. The initial search for publications comparing low-and middle-income countries with respectful maternity care yielded 6000 papers, from which 700 were selected. The review articles were further analyzed to ensure they were pertinent to the comparative impact of income on maternal care. A total of 24 articles were included, with preference given to those published from 2010 to 2023 during the last fourteen years. **Results:** Considering this study's findings, respectful maternity care is a crucial component of high-quality care and human rights. It can be estimated that there is a direct association between income and maternity care in LMICs, and maternity care is substandard compared to high-income countries. Moreover, it is determined that the evidence for medical tools that can enhance respectful maternity care is sparse. **Conclusions:** This review highlights the significance of improving maternal care experiences, emphasizing the importance of promoting respectful practices and addressing disparities in low-and middle-income countries.

28. Respectful Maternal Care Experience in Low- and Middle-Income Countries: A Systematic Review

Abstract:

Background and Objectives: Respectful maternity care promotes practices that acknowledge women's preferences and women and newborns' needs. It is an individual-centered strategy founded on ethical and human rights principles. The objective of this systematic review is to identify the impact of income on maternal care and respectful maternity care in low- and middle-income countries. **Materials and Methods:** Data were searched

How to cite: Kawish, A.B.; Umer, M.F.; Arshed, M.; Khan, S.A.; Hafeez, A.; Waqar, S. Respectful Maternal Care Experience in Low- and Middle-Income Countries: A Systematic Review. *Medicina* 2023, 59, 1842. <https://doi.org/10.3390/medicina59101842> DOI: 10.3390/medicina59101842.

from Google Scholar, PubMed, Web of Science, NCBI, CINAHL, National Library of Medicine, ResearchGate, MEDLINE, EMBASE database, Scopus, Cochrane Central Register of Controlled Trials (CENTRAL), and Maternity and Infant Care database. This review followed PRISMA guidelines. The initial search for publications comparing low- and middle-income countries with respectful maternity care yielded 6000 papers, from which 700 were selected. The review articles were further analyzed to ensure they were pertinent to the comparative impact of income on maternal care. A total of 24 articles were included, with preference given to those published from 2010 to 2023 during the last fourteen years. **Results:** Considering this study's findings, respectful maternity care is a crucial component of high-quality care and human rights. It can be estimated that there is a direct association between income and maternity care in LMICs, and maternity care is substandard compared to high-income countries. Moreover, it is determined that the evidence for medical tools that can enhance respectful maternity care is sparse. **Conclusions:** This

review highlights the significance of improving maternal care experiences, emphasizing the importance of promoting respectful practices and addressing disparities in low- and middle-income countries.

Keywords: respectful maternal care; low- and middle-income countries; maternal mortality; pregnancy; childbirth; evidence-based maternity; maternal health; healthcare systems; prenatal care; continuity of patient care

29. Axial length changes after short term exposure to blue light among Emmetropes with optically induce Hyperopic Defocus

Abstract

Objective: The study aimed to measure the transient axial length (AXL) changes after short-term exposure to blue light before and after hyperopic defocus. **Methodology:** An interventional study design (quasi-experimental pre and post-interventional design) was conducted at Al-Shifa Trust Eye Hospital among optometry students using a non-probability judgmental sampling technique. Visual acuity was measured with LogMAR, and refractive status was determined with a Retinoscope. Blue light exposure was administered using a Blue Laser Pointer emitting a 405nm wavelength. Hyperopic defocus was induced using a -3.00DS lens in a trial frame. The IOL Master Zeiss 700 was used to measure the AXL. Data were entered and analyzed through online web-based software, Data tab. **Results:** A total of 30 subjects, including 06 (20%) males and 24 (80%) females, with a mean age of 20.67 ± 0.96 , participated in the study. Comparing Pre-defocus Axial length (PDAXL) and After Defocus Axial length (ADAXL) following 30 seconds (23.2 ± 0.69 , 23.19 ± 0.68 , $p 0.006$), 60 seconds (23.2 ± 0.68 , 23.2 ± 0.68 , $p 0.056$), and 90 seconds (23.2 ± 0.69 , 23.2 ± 0.69 , $p 0.002$) of exposure to blue light, a statistically significant difference was observed among the 30-second and 90-second exposure groups ($p 0.006$ and $p 0.002$, respectively), but not among the 60-second group ($p 0.056$). **Conclusion:** The study concludes that short-wavelength exposure and hyperopic defocus together cause axial length shortening, which could be employed to manage myopia progression.

Keywords: Axial Length, Blue Light, Myopia, Optical Defocus.

How to cite: Masood, A., Iqbal, F., Qayyum, S., Firdous, M., & Ullah, S. Axial length changes after short term exposure to blue light among Emmetropes with optically induce Hyperopic Defocus. Journal of Xi'an Shiyu University, Natural Sciences Edition, 66(12),48-54.

DOI: 10.5281/zenodo.10390583

30. Congenital Cyst of the Optic Nerve: A Case Series

Abstract

Congenital cyst of the optic nerve is a rare congenital anomaly, scarcely reported. We report a large case series from a single institute over a period of 21 years, consisting of 3cases with rare presentations. Retrospective study of 1100 orbital cases revealed three cases with congenital cyst of optic nerve reported here. In these patients, a cyst was replacing almost all of the intraorbital portion of the optic nerve, with their unique features. Management of the cases is also discussed.

How to cite: Taimur, Fariha & Akbar, Maheen & Manzoor, Amna & Ahmad, Saadullah & Afghani, Tayyab. (2023). Congenital Cyst of the Optic Nerve: A Case Series. Pakistan Journal of Ophthalmology. 39. 10.36351/pjo.v39i4.1613
DOI: 10.36351/pjo.v39i4.1613.

31. Pharmacoepidemiology of drugs in glaucoma patients with comorbidities like hypertension and diabetes mellitus type 2 in Pakistan

Abstract

Purpose: To evaluate the prescription pattern and utilization of drugs used by glaucoma patients with comorbidities including hypertension and diabetes mellitus type 2. **Methods:** This study was conducted at Al-Shifa trust eye hospital, Rawalpindi Pakistan from April 2021 to October 2021. Data regarding patient demographics, disease profile, medications & side effects were recorded. Percent utilization of total ophthalmic, antiglaucoma, antihypertensive, and antidiabetic drugs was calculated.

How to cite: Sadiq, M., Ali, M., Ahmad, W., Khan, M. A. & Akhtar, F. (2023). Pharmacoepidemiology of drugs in glaucoma patients with comorbidities like hypertension and diabetes mellitus type 2 in Pakistan. *Azerbaijan Pharmaceutical and Pharmacotherapy Journal*, 22(2), 76-82. DOI: 10.61336/appj/22-2-20.

Comparative utilization of antiglaucoma drugs in hypertensive and diabetic patients and in pre and post-visit to glaucoma specialists was also calculated. **Results:** Out of 876 glaucoma patients, majority had primary open-angle glaucoma, 58.3% were males, >50% belonged to the 50-70 years age group, and 27% and 18.8% were hypertensive and diabetic respectively. In the majority of cases, 1 or 2 eye drugs were prescribed and mostly in the topical dosage form. Fixed dose combinations (33.39%) mainly were prescribed in all groups and Dorzolamide + Timolol was given in almost 80% of the time. Prostaglandin analogs (29.09%) were 2nd most prescribed drugs. Beta-blockers were the least prescribed in all groups. Burning of the eyes was the most common side effect of ophthalmic drugs (28%). Systemic beta-blockers were most commonly utilized by hypertensive patients while sulfonylureas by diabetic patients. No prominent change was noted in pre- and post-visit utilization of antiglaucoma drugs except brinzolamide. **Conclusion:** This study highlights the need for rational prescribing of antiglaucoma drugs in multimorbid patients and the importance of creating awareness of pharmacological actions, drug interactions, and side effects among physicians.

32. Occam's Razor Versus Hickam's Dictum: A Case Report of Junctional Epidermolysis Bullosa and Lower Urinary Tract Infection (Case Report)

Abstract

Epidermolysis bullosa (EB) is a rare heterogeneous group of diseases which typically presents with extensive blistering and mucocutaneous erosions. EB is mechanobullous in nature and thus commonly involves sites of trauma and friction. It is a painful and disfiguring disorder. The involvement of different internal organs and systems, such as respiratory, genitourinary, and gastrointestinal systems, has been reported in the literature depending on the type of EB. We report a case of junctional epidermolysis bullosa (JEB) with urogenital involvement in a female child in Pakistan. JEB is a rare subtype of EB which is transmitted in an autosomal recessive pattern of inheritance. It classically affects neonates. Diagnosis is established after clinical examination, and investigations are directed at the exploration of skin lesions such as histopathological and direct immunofluorescence studies. Management of patients is primarily supportive.

How to cite: Rehman A, Raza H, Zia B, et al. (January 23, 2023) Occam's Razor Versus Hickam's Dictum: A Case Report of Junctional Epidermolysis Bullosa and Lower Urinary Tract Infection. *Cureus* 15(1): e34117. DOI: 10.7759/cureus.34117.

33. Prevalence of dry eye disease among IT students in Pakistan

Abstract

Background: Dry eye disease (DED) is a common tear film disorder caused by decreased tear production or increased tear evaporation. The increased use of computers in the workplace has brought about the development of ocular health concerns, including dry eye disease. Therefore, this study was designed to determine the prevalence of DED

How to cite: Sidra Sarwat, Izma Mamoon, Fareeha Ayub et al. Prevalence of dry eye disease among IT students in Pakistan, 14 February 2023, DOI: 10.21203/rs.3.rs-2540748/v1.

associated with computer work and recommend preventing or reducing its development. This study investigated the prevalence of DED among IT students in Dera Ghazi Khan. **Methods:** A cross-sectional descriptive study was conducted among 327 undergraduate students of the IT department in the district of Dera Ghazi Khan over five months from September 2021 to January 2022. DED was assessed subjectively with Ocular Surface Disease Index (OSDI). Data were analysed using SPSS version 21. The quantitative analysis was presented as mean and standard deviation, and qualitative variables were introduced in frequency and percentages. The chi-square test (Fisher's exact test) was used to study the significance of associations between dependent and independent variables. **Results:** The mean age of the participants was 20.25 ± 1.305 years (range, 17–25). The prevalence of DED among computer programmers was 47.7%. This study showed that gender ($p = 0.31$), contact lens usage ($p = 0.64$), and duration of time spent on computer display units ($p = 0.47$) were not significant determinants of DED among computer programmers. **Conclusion:** DED is prevalent among IT students, along with different symptoms. However, further studies are required to adequately measure the prevalence of DED during longer exposure time to computer screens and explore environmental risk factors.

34. Aftermath of the COVID-19 Pandemic on Mental Health and Well-Being of Patients with Thalassemia Major in Pakistan: A Qualitative Study

Abstract

Background and aim: Chronic patients with thalassemia major were mainly recognized as more prone to poor mental health during this global pandemic. This study aims to evaluate causal relationships leading to poor outcomes and how they manage to tackle this. **Methods:** In-depth face-to-face semi-structured interviews were conducted with 21 thalassemia patients selected through probability

How to cite: Hammad M, Arif R, Bano S, et al. (February 16, 2023) Aftermath of the COVID-19 Pandemic on Mental Health and Well-Being of Patients with Thalassemia Major in Pakistan: A Qualitative Study. Cureus 15(2): e35048. DOI: 10.7759/cureus.35048.

consecutive sampling from Pakistan Thalassemia Welfare Society Centers. The following criteria served as the basis for the interview: (1) solitude at home, (2) interruption of transfusion services, (3) alteration of appetite and interests, (4) lack of control and uncertainty, (5) extensive media coverage, (6) deterioration of pre-existing health issues, difficulty in sleeping, (7) practicing gratitude, (8) participation in activities and hobbies, (9) connectivity with others, and (10) ability to recognize social support. All interviews were recorded, transcribed, and analyzed with reflexive thematic analysis. **Results:** The commonly described mental health conditions were depression and concern about the overall health status. The following seven elements associated with the pandemic contributed to the deterioration of mental health: (1) isolation at home, (2) disruption in transfusion services, (3) change in appetite and interests, (4) lack of control and uncertainty, (5) intensive media reporting, (6) worsening of pre-existing health problems, and (7) difficulty in sleeping. The following four coping strategies were identified for maintaining mental issues: (1) practicing gratitude, (2) involvement in activities and hobbies, (3) connectivity with others, and (4) discerning social support. **Conclusions:** Thalassemia major patients had been negatively affected during the pandemic. Only a small number of people modified their management techniques to maintain steady well-being.

35. Current Practices and Perceived Role of Community Pharmacists in Type 2 Diabetes Services in Pakistan

Abstract

Background Diabetes mellitus is a chronic illness which is becoming more prevalent in developing countries, and it is being managed mostly in hospitals or clinics in underdeveloped nations. Other strategies for treatment delivery in emerging nations must be considered as the number of diabetic patients grows. Community pharmacists are a valuable choice for diabetes care.

However, only developed countries have data on community pharmacists' diabetes treatment practices. Methodology A non-probability consecutive sampling strategy was used to gather a self-administered questionnaire from 289 community pharmacists. Six points Likert scale was employed to score current practices and pharmacists' perceived role. A response rate of 55% was attained. Characteristics associated with present behaviors and perceived roles were analyzed using Chi-square and logistic regression. Results The majority of the respondents were males, 234 (81.0%). Out of 289, 229 (79.2%) were of 25-30 years of age and were pharmacists as well as qualified persons (QP) 189 (65.4%). A QP is one who has the legal authority to sell drugs to customers. The majority had <5 years of working experience as a community pharmacist, 268 (92.7%), and did not have diabetes training, 237 (82.0%). Most community pharmacies were stand-alone, 110 (38.1%), and had a single or a group of proprietors, 248 (85.8%). Open hours of most of the pharmacies were 16-20 hours per day, 202 (69.8%), and most had one pharmacist, 243 (84.1%), i.e., working as a pharmacist as well as a qualified person. Approximately 203 (70.2%) of the pharmacies had customers >2000 in a month and >100 customers purchased anti-diabetes medications per month. Only 44 (15.2%) community pharmacies had a designated room or space for patient counselling. The majority of pharmacists were also in favor of providing services other than dispensing such as counselling the patients about prescribed medicines, direction of use, use of devices for insulin administration, training on self-monitoring of glucose, and healthy lifestyle and diet practices. Pharmacy setting, ownership, patient counseling area, and the number of customers per month were key factors in the provision of diabetes services. The main obstacles identified were a lack of pharmacist availability and academic competency. Conclusion In Rawalpindi and Islamabad, most community pharmacies only provide a basic dispensing service for diabetes patients. Most of the community pharmacists agreed to extend their duties. The expansion of pharmacist professional responsibilities would help control the rising diabetes burden. The facilitators and hurdles identified would serve as a foundation for the introduction of diabetic care in community pharmacies.

How to cite: Arif R, Khan A, Hammad M, et al. (April 08, 2023) Current Practices and Perceived Role of Community Pharmacists in Type 2 Diabetes Services in Pakistan. Cureus 15(4): e37311. DOI: 10.7759/cureus.37311.

36. Comparison of Changes in Endothelial Corneal Cell Count of Vitrectomized Silicone Oil-Filled Eyes

Abstract

Objective: To determine the mean endothelial cell change in patients undergoing vitrectomy with silicon oil replacement and to compare the corneal endothelial cell loss frequency of phakic, pseudophakic, and aphakic Vitrectomized Silicone Oil-filled eyes. Study Design: Cross-sectional Study. Place and Duration of Study: Retina Department, Al-Shifa Trust Eye Hospital, Rawalpindi Pakistan, from Aug 2020 to Jan 2021. Methodology: A total of one hundred patients of either gender, aged 50-80 years, who underwent vitrectomy with silicon oil replacement were enrolled in the study. Patients were assigned to one of the three groups based on their lens status, phakic, pseudophakic and aphakic. Mean endothelial count density before and three months after vitrectomy was estimated in all the patients. Results: Cell

How to cite: Hannan, Abdul & Zafar, Sarah & Bashir, Aziz & Massana, Hassan & Habib, Kashif & Naeem, Abdullah. (2023). Comparison of Changes in Endothelial Corneal Cell Count of Vitrectomized Silicone Oil-Filled Eyes. Pakistan Armed Forces Medical Journal. 73. 349-52. DOI: 10.51253/pafmj.v73i2.6098.

loss was higher in the pseudophakic and aphakic groups than in the phakic groups. More than 5% cell loss at three months was observed in 11.8%, 21.2% and 33.3% in the phakic, pseudophakic, and aphakic groups, respectively (p-value 0.102). Conclusions: Mean endothelial cell loss was higher in the pseudophakic and aphakic groups than in the phakic groups.

37. The Anatomical and Functional Outcomes of 27-Gauge Pars Plana Vitrectomy in Diabetic Tractional Retinal Detachments in the South Asian Population

Abstract

Objective The objective of this article was to report the clinical and surgical outcomes of diabetic tractional retinal detachment (TRD) with 27-gauge plus pars plana vitrectomy (27G+ PPV) **Methods** This is a retrospective, consecutive cohort study of 196 eyes of 176 patients that underwent 27G+ PPV for TRD from July 2015 to June 2019 at the ophthalmology department of Shifa International Hospital, Islamabad. The outcomes include primary and secondary anatomical attachment of the retina, best-corrected visual acuity, and post-operative complications. **Results** The mean age of the patients in this study was 55.3 ± 11.3 years. Out of 176 patients, there were 47.2% (n=83) females. The mean operating time calculated was 60 ± 36 min (range 22-130 min). Of 196 eyes, 64.3% (n=126) also combined phacoemulsification with lens implantation. Internal limiting membrane peeling was done in 11.7% (n=23) of the cases. Post-operatively, 98% (n=192) achieved primary retinal attachment, and 1.5% (n=3) underwent a second procedure to achieve retinal attachment. At three months follow-up, the mean best corrected visual acuity (BCVA) remarkably improved from 1.86 ± 0.59 to 0.54 ± 0.32 logarithm of the minimal angle of resolution (logMAR) (p-value<0.001). Among complications, one patient had intra-operative suprachoroidal oil migration, which was managed successfully, while post-operatively, 11 patients (5.6%) developed a transient rise in intraocular pressure, which was controlled with anti-glaucoma drugs, and one patient had vitreous cavity hemorrhage which resolved on its own with time. **Conclusion** This study strongly suggests that the 27G+ PPV offers successful repair of eyes with diabetic TRD with statistically significant improvement in visual acuity and minimal rate of complications.

How to cite: Awan, Amer & Shaheen, Fiza. (2023). The Anatomical and Functional Outcomes of 27-Gauge Pars Plana Vitrectomy in Diabetic Tractional Retinal Detachments in the South Asian Population. *Cureus*, 15(4). DOI: 10.7759/cureus.38099.

38. Factors Related to Anemia Prevalence Among Women of Childbearing Age in the Period of Global Pandemic

Abstract

Background Health authorities in Pakistan in collaboration with local and foreign non-government organizations are working hard to achieve the targets set by World Health Organization in 2012, that is, to reduce anemia prevalence and its related factors. However, due to the prevailing COVID-19 crisis, all resources and attention were diverted toward it, which led to ignorance of existing basic health issues. **Objective** This study assesses anemia prevalence and its related factors among women of childbearing age in the period of global pandemic. **Methods** A time-lagged, cross-sectional survey was conducted using a self-administered questionnaire among 1,702 volunteer women aged between 15 and 49 years across five major cities of Pakistan from January 2021 to December 2021 using the non-probability consecutive sampling technique. Blood sample results were analyzed to determine prevalence and anemia severity. The chi-squared test and multiple logistic regression were performed to examine the relationship and effect of related factors with hemoglobin levels using SPSS version 26. **Results** Among the 1,702 respondents, 788 (46.3%) were non-anemic and 914 (53.7%) were anemic. Anemia prevalence in

How to cite: Hammad, Muhammad & Fardoos, Sadaf & Khan, Ali & Rasheed, Anmol. (2023). Factors Related to Anemia Prevalence Among Women of Childbearing Age in the Period of Global Pandemic. DOI: 10.7759/cureus.38491.

Karachi was slightly greater (n=294, 55.48%) compared to other cities, and the mean hemoglobin level was 11.98 ± 0.92 g/dL. The chi-square test and multiple logistic regression indicated that the respondents' employment status, mother's profession, family income, living conditions, chronic health conditions, use of iron and folic acid supplements, junk food, source of drinking water, and knowledge about anemia and its preventive measures were associated significantly with anemia during the pandemic. Conclusion Results confirmed that anemia is a multi-factor health problem and that it was totally ignored during the COVID-19 pandemic, as the prevalence increased during the pandemic. Therefore, more attention should be paid to anemia surveillance, anemia awareness programs, and mobilization of community health workers and volunteers to reach a wide range of the population, including women of childbearing age even during the pandemic.

39. CASE REPORT Suprachoroidal silicone oil migration following 27 gauge 3 ports pars plana vitrectomy -a rare complication and its management

Abstract

Suprachoroidal silicone oil migration is an unusual complication of small gauge 3 ports Pars plana vitrectomy (3PPV) system. Our objective is to report a retrospective, observational case of an intra-operative suprachoroidal silicone oil (SO) migration during 27-gauge 3PPV and its successful surgical management. A 49 years old type 2 male patient with diabetes presented to the ophthalmology outpatient department with reduced visual acuity in his right eye. He was diagnosed as having tractional retinal detachment involving macula. During combined phaco-vitrectomy following injection of SO, peripheral choroidal elevations were noted suggesting suprachoroidal SO migration. In an attempt to drain this intra-operatively nasal sclerotomy was enlarged. Post-operative B scan showed significant choroidal detachment for which patient was re-scheduled for surgery after 1 day. Three radial trans-scleral incisions (2 nasal and 1 temporal) for drainage were made at the site of maximum choroidal detachment.

How to cite: Shaheen, Fiza & Fatima, Sahar & Khan, Hashim Ali & Awan, Amer. (2023). CASE REPORT Suprachoroidal silicone oil migration following 27 gauge 3 ports pars plana vitrectomy -a rare complication and its management. Journal of the Pakistan Medical Association. DOI: 10.47391/JPMA.6823.

40. Role of Prophylactic Oral Antibiotics in the Prevention of Post-cataract Surgery Acute Infective Endophthalmitis

Abstract

Purpose To evaluate the role of perioperative oral antibiotics in the prevention of acute infective endophthalmitis (IE) after cataract surgery. **Methods** A prospective cohort study of patients older than 18 years of age undergoing uncomplicated phacoemulsification was conducted. Group A was given post-op oral ciprofloxacin for three days, whereas Group B was not. Both groups received 5% povidone-iodine (PVI) preparation for five minutes in the conjunctival cul-de-sac, and intracameral (IC) 0.5% moxifloxacin was administered at the end of the procedure as prophylaxis. The minimum post-op follow-up period was six weeks. **Results** Out of 2161 patients, 859 (39.8%) were included in Group A, and 1302 (60.2%) were included in Group B. No significant difference in anterior chamber (AC) reaction was found on day 1 ($p = 0.67$), day 14 ($p = 0.03$), or day 45 ($p = 0.1$). One patient developed acute post-op IE (0.04%) and two patients developed toxic anterior segment syndrome (TASS) from Group A. The non-oral antibiotic group had no serious complications. **Conclusion** Perioperative oral antibiotic use in routine clinical practice is not recommended

How to cite: Zafar, Aruba & Shaheen, Fiza & Afzal, Tahira & Ahmad, Sabihuddin & Amjad, Muhammad. (2023). Role of Prophylactic Oral Antibiotics in the Prevention of Post-cataract Surgery Acute Infective Endophthalmitis. DOI: 10.7759/cureus.42662.

for the prevention of acute post-op IE. Pre-op conjunctival PVI 5% for five minutes and IC moxifloxacin at the end of surgery were proven to be effective prophylactic measures in our study.

41. Improving nutritional status of children using artificial intelligence-based mobile application postsurgery: Randomised Controlled Trial

Abstract

Background: Malnutrition is a common problem in children postsurgery especially in low-middle-income countries. Health-based mobile apps play an important role for better nutritional status. **Methods:** This is a two-arm randomised controlled trial, which was conducted at a tertiary care hospital, Rawalpindi. The study duration was 6 months from February 2021 to July 2021. The sample size with power of 80% and significance level of 5% was calculated to be 88. The intervention group was given a diet-related mobile app, and the usual care group was handed

How to cite: Zahid, Maryam & Sughra, Ume & Mumtaz, Sehrish & Hassan, Mawara. (2023). Improving nutritional status of children using artificial intelligence-based mobile application postsurgery: randomised controlled trial. *BMJ Nutrition, Prevention & Health*. DOI: 10.1136/bmjnp-2023-000645.

a pamphlet with diet instructions on discharge. **Findings:** The mean weight of all participants was 15 (SD 5.7) kg at the time of discharge. However, at the end of the 8th week, the mean weight of the participants in the usual care group was 16.5 (SD 7.2) kg and that of the intervention group was 17.1 (SD 5) kg. The average calorie consumed by the usual care group was 972 (SD 252) kcal and 1000.75 (SD 210) kcal by the intervention group after 8 weeks of discharge. The average protein consumed by the usual care group was 34.3 (SD 12.5) g and 39 (SD 6.4) g by the intervention group after 8 weeks of discharge. **Interpretation:** This study showed strength for the future of scalable modern technology for self-nutrition monitoring. There was a slight increase in the weight and nutritional intake of both groups. Trial registration number NCT04782635.

42. Long-Term Clinical Outcome of Tacrolimus Skin Ointment (0.03%) for the Treatment of Vernal Keratoconjunctivitis: A Quasi-Experimental Study

Abstract

Background: Vernal keratoconjunctivitis (VKC) is an allergic conjunctival inflammation with severe ocular complications if left untreated. The current management regimen is plagued with adverse effects, long-term problems, and clinical relapses. Tacrolimus offers an alternative treatment option, and long-term studies are needed to determine its efficacy. **Methods:** A two-year follow-up based study was conducted on moderate to

How to cite: Ali, W., Khan, F. U., Khan, S., Khan, W. A., Zafar, R., & Moqeet, M. A. (2023). Long-Term Clinical Outcome of Tacrolimus Skin Ointment (0.03%) for the Treatment of Vernal Keratoconjunctivitis: A Quasi-Experimental Study. *Cureus*, 15(12). DIO: 15. 10.7759/cureus.50579.

severe VKC patients, who were prescribed tacrolimus skin ointment. The 5-5-5 exacerbation scale was used for the monitoring and grading severity of the disease. Analysis of variance (ANOVA) and intergroup comparisons were conducted on exacerbation scale scores among follow-ups. **Results:** A significant reduction was observed in the total score of severity from baseline (203.17±102.05) to three months' follow-up (69.94±70.54), and it kept reducing for 18 months post therapy. Similar results with statistically significant reduction were observed for all grades of the scale. The relapse rate was 5.71% within a month after therapy cessation, and none of the other patients showed relapse afterward. No significant ocular and systemic complications were observed during the study. **Conclusion:** Tacrolimus is effective in the long-term management of VKC without the complications of conventional steroid-based therapy.

Keywords: Topical Steroid, Conjunctivitis, Long Term, Tacrolimus, Vernal Keratoconjunctivitis

43. Knowledge, Attitudes, Anxiety, and Preventive Behaviors Related to COVID-19 Among Healthcare Providers: A Developing Country's Perspective

Abstract

Background: In early 2020, the rapid global spread of coronavirus disease 2019 (COVID-19) presented healthcare workers (HCWs) with an unprecedented challenge. The constant influx of new information about the virus created knowledge gaps, and the relentless demands of their work schedules left many feeling overwhelmed. This paper explores the knowledge, attitudes, anxiety levels, and preventive behaviors of HCWs in the twin cities of Pakistan,

How to cite: Hammad, M., Fardoos, S., Arif, R., Ghani, U., Paudel, S., Vardhan, K., ... & Khan, A. D. (2023). Knowledge, Attitudes, Anxiety, and Preventive Behaviors Related to COVID-19 Among Healthcare Providers: A Developing Country's Perspective. *Cureus*, 15(12). DIO: 15. 10.7759/cureus.51026.

Rawalpindi and Islamabad, related to the COVID-19 pandemic. In the face of this crisis, it is essential to gain insights into the experiences and needs of these frontline heroes. **Methodology:** We conducted a descriptive web-based cross-sectional study among healthcare professionals to delve into the multifaceted aspects of their experiences. This included analyzing sociodemographic characteristics, knowledge levels, attitudes, practices, and the psychological implications of the pandemic. By employing both quantitative and qualitative analysis, we aimed to provide a comprehensive understanding of these parameters. **Results:** Out of the 1150 responses collected, it became evident that breathing problems were the most recognized symptom of COVID-19 among HCWs. Impressively, 95.7% of participants believed in the primarily symptomatic nature of treatment, although 37% held the misconception that antibiotics were effective against the virus. Another noteworthy discovery was that 68.2% of HCWs favored testing before initiating treatment, yet a concerning 22.7% of treated patients received no testing. A significant proportion, approximately 19.6%, experienced heightened anxiety levels during the pandemic, leading to an increased frequency of handwashing. In terms of preventive behaviors, a majority of respondents displayed a heightened sense of caution. Nearly 59.1% reported avoiding the use of others' accessories and emphasized not reusing face masks. Furthermore, 84.1% of participants preferred staying at home during quarantine. **Conclusion:** The study reveals the profound impact of COVID-19 on healthcare providers in Pakistan's twin cities, highlighting elevated anxiety levels among most. This underscores the urgent need for mental health support. Beyond physical effects, the pandemic significantly strains their psychological well-being. To address this stress, vital strategies include workload reduction, structured shifts, stressor minimization, and improved knowledge sharing. Cultivating a healthy work environment is equally crucial for healthcare providers' overall well-being. These insights are essential for crafting policies and interventions to better protect and support frontline workers in a developing nation like Pakistan, demonstrating healthcare professionals' resilience and dedication amid unprecedented challenges.

Editorials

44. The Revolutionary Impact of Artificial Intelligence on Advancing Glaucoma Care

The Impact of Asynchronous Learning on Cognitive Performance in the Delivery of Undergraduate Ophthalmology Curriculum. **Objective:** To determine the impact of asynchronous learning on student performance in the delivery of undergraduate ophthalmology curriculum.

Methods: Randomized controlled crossover study was conducted in the Department of Ophthalmology, Islamabad Medical & Dental College between January 2020 to November 2021. A total of 110 4th year medical students of the Islamabad Medical and Dental College (class of 2021) rotating in the ophthalmology clerkship were recruited in the study. Curricular content in the ophthalmology clerkship is organized into 5 themes, each one representing a specific pattern of patient presentation. Each of the 10 clerkship groups rotating in the ophthalmology department were instructed asynchronously (on line for 2 weeks after which they rotated in the clinic for face-to-face sessions for another 2 weeks.) At the end of each 2-week rotation, the students' performance was assessed via a 70 MCQ paper and their performance in each of the components of asynchronous learning was compared. **Results:** A total of 110 (40 male and 70 female) students were recruited in the study. The mean students' score for the themes delivered on line was 34.5 (± 14.7) versus 41.96 (± 16.5) for those taught via face-to-face sessions. This result is statistically significant ($P = 0.000$, $t = 5.079$, $d = 109$). Students who did well on line, also scored better in the themes delivered face to face. (Pearson's correlation 0.55, $p = 0.000$). Comparing genders, female students did better in the assessment for the themes taught on campus (42.95 ± 14.18 vs 39.46 ± 15.70) while male students did better in the assessment of themes taught on-line. (38.11 ± 15.40 vs 34.90 ± 16.70). These results, however, were not statistically significant. **Conclusion:** Students tend to do better when taught on-campus, with online learning having a negative impact on their performance

How to cite: Ali, M. (2023). The Revolutionary Impact of Artificial Intelligence on Advancing Glaucoma Care. *Al-Shifa Journal of Ophthalmology*, 19(3), 7.

45. Navigating Hope and Reality: Challenges in Communicating Glaucoma Diagnosis and Prognosis

Breaking bad news is an intricate aspect of the ophthalmologist's role, especially in the realm of glaucoma care, where it is the leading cause of irreversible blindness worldwide. Within Ophthalmology clinics, practitioners often encounter challenging scenarios, such as when end-stage glaucoma patients present seeking advice, hopeful that glasses or cataract surgery will restore their vision.

Additionally, in tertiary care ophthalmic settings, patients may arrive with an established glaucoma diagnosis, hoping that advanced treatment facilities will provide solutions to their vision concerns. However, informing these patients about their condition and discussing the irreversible loss of vision due to glaucoma can evoke intense emotions, leading to feelings of hopelessness. Effective communication, particularly in delivering distressing news, is an essential skill for Ophthalmologists specializing in glaucoma care. While the disclosure of distressing information commonly pertains to end-of-life scenarios, ophthalmologists routinely confront circumstances where revelations could profoundly affect a patient's long-term perspective. These situations may involve unveiling a novel chronic condition or delving into the advancing trajectory of glaucoma despite therapeutic endeavors. Breaking bad news encompasses a multifaceted task, demanding careful consideration of various elements. Establishing a mental strategy for conveying information, addressing emotions, involving family members, and planning for ongoing care and support becomes more manageable when there's an existing relationship between the ophthalmologist and the patient. Utilizing a structured approach, such as a template or communication protocol, can imbue the process with quality and empathy, even in challenging clinical settings. The SPIKES Protocol offers a valuable framework for effectively delivering bad news. Developed by Walter Baile and

How to cite: Ali, M. (2023) Navigating Hope and Reality: Challenges in Communicating Glaucoma Diagnosis and Prognosis. *Al-Shifa Journal of Ophthalmology*, 19(3), 91-92.

colleagues, this protocol guides healthcare professionals through following essential steps: **Setting up:** Establishing an appropriate environment for the conversation, including physical space and timing. **Perception:** Understanding the patient's existing knowledge, perceptions, and emotional readiness. **Invitation:** Seeking permission from the patient to share information. **Knowledge:** Presenting the news clearly and sensitively, tailoring the information to the patient's level of understanding. **Emotions with Empathy:** Acknowledging and responding empathetically to the patient's emotions. **Strategy or Summary:** Collaborating with the patient to develop a plan for the next steps and ongoing support. Each step in the SPIKES Protocol is crucial for facilitating effective communication and supporting patients through difficult news. While following a structured protocol may not always be feasible in every clinical scenario, adopting its principles can enhance communication and patient-centered care. Ensuring proficiency in breaking bad news is essential for ophthalmologists specializing in glaucoma care. Incorporating communication skills training into their education and professional development, through both didactic and experiential learning approaches, can equip them with the tools they need to navigate challenging conversations effectively. In conclusion, breaking bad news is an integral aspect of glaucoma care, demanding professionalism, empathy, and careful communication. By embracing structured approaches like the SPIKES protocol and prioritizing communication skills training, ophthalmologists can effectively support patients and families through moments of uncertainty and distress, ultimately enhancing the quality of care provided in glaucoma management.

46. Shedding Light on the Ethical Dilemma: The Avastin Injection Crisis in Punjab

The recent uncovering of issues surrounding Avastin (Bevacizumab) injections in Punjab has sparked serious ethical questions and highlighted the urgent need for regulatory changes. More than 70 people losing their sight due to the use of this injection has shaken the public's trust

How to cite: Ali, M. Shedding Light on the Ethical Dilemma: The Avastin Injection Crisis in Punjab. *Al-Shifa Journal of Ophthalmology*, 19(4), 137-138.

in healthcare providers and regulators. At the heart of this crisis lies the widespread off-label use of Bevacizumab, driven primarily by its affordability compared to approved alternatives such as Ranibizumab and Aflibercept. Originally meant for cancer treatment, Avastin injections were used in the management of various ocular pathologies as a cheaper option. But the illegal production, storage, and distribution of these injections has caused irreversible harm to many patients, raising concerns about patient safety. The role of regulatory authorities, such as the Drug Regulatory Authority of Pakistan (DRAP), also comes under scrutiny in light of this debacle. Despite the existence of licensing requirements and quality control measures, the Avastin scandal underscores the inadequacies in enforcement and oversight mechanisms. The failure to identify and prevent the illegal production and distribution by some unauthorized distributors of this injection reflects systemic shortcomings that demand immediate attention and reforms. Foremost, regulatory agencies must consider licensing Bevacizumab for intravitreal use under controlled conditions. Despite its off-label status, extensive clinical data, alongside endorsements from reputable entities like the National Institute for Health and Care Excellence (NICE) and the International Council of Ophthalmology, underscore its potential efficacy and safety in the management of diseases like diabetic retinopathy, age related macular degeneration and choroidal neovascularization. Regulatory bodies can ensure stringent oversight while facilitating access to this vital treatment modality by implementation of robust pharmacovigilance mechanisms and enable the generation of comprehensive long-term safety data, assuaging concerns regarding its off-label usage and bolstering confidence among clinicians and patients alike. Furthermore, healthcare stakeholders, including Ophthalmologists and drug manufacturers, play pivotal roles in safeguarding patient welfare amidst off-label drug utilization. Ophthalmologists must diligently apprise patients of the off-label nature of treatments, thereby empowering them to make informed decisions. Simultaneously, drug manufacturers should rigorously monitor off-label usage and commit to ongoing safety surveillance to uphold their ethical obligations.

Collaborative efforts between regulatory bodies, healthcare providers, and pharmaceutical companies are indispensable in navigating the intricate terrain of off-label drug usage, ensuring both patient safety and ethical integrity remain paramount. In response to these challenges, Ministry of Health, regulatory bodies like drug Regulatory Authority and Healthcare commission must adopt a multifaceted strategy that balances patient access with stringent safety standards. This entails conducting thorough assessments of Bevacizumab's efficacy and safety for ocular applications, guided by evidence from extensive clinical studies and meta-analyses. By leveraging insights from reputable organizations like NICE and the international Council of Ophthalmology, regulatory agencies can formulate evidence-based guidelines for the controlled licensing of Bevacizumab, ensuring that its utilization adheres to rigorous standards of safety and efficacy. additionally, the establishment of robust pharmacovigilance systems is imperative to monitor adverse events and long-term outcomes associated with off-label usage, thereby facilitating the generation of comprehensive safety data and informing future regulatory decisions. One of the most important challenges faced by these important regulatory bodies is to strictly ensure the safe distribution of this injection by maintenance of appropriate cold chain and sterility during its distribution. By fostering collaboration between stakeholders and prioritizing patient safety, the healthcare ecosystem can navigate the complexities of off-label usage of Bevacizumab while upholding ethical principles and regulatory standards.

“As for the future, your task is not to foresee it, but to enable it.”

Antoine de Saint Exupery

Conference & Webinar

Sr. No.	Participating Faculty	Title	Event
1.	Prof. Dr. Mahmood Ali, Prof. Dr. Farah Akhtar	Role of OCT Angio in the diagnosis of Glaucoma	Karachi Ophthalmo 2023 (Karophth 2023)
2.	Prof. Dr. Mahmood Ali, Prof. Dr. Farah Akhtar	Factors Associated with Non-Compliance to Long Term Glaucoma Medication in A Developing Country	Asia Pacific Academy of Ophthalmology Congress, Kuala Lumpur, Malaysia
3.	Dr. Rabia Sharif	Endothelial Cell Changes in different stages of Keratoconus”	24 th Annual Congress of Ophthalmology and 2 nd POA meeting, PC Bhurban
4.	Asst. Prof. Dr. Warda Ali	Deep Anterior Lamellar Keratoplasty (Double Buble Technique)	7 th APOTS, 41 st Lahore Ophthalmology, PC. Lahore
5.	Asst. Prof. Dr. Warda Ali	Interpretation of Corneal Topography	24 th Annual Congress of Ophthalmology and 2 nd POA meeting, PC Bhurban
6.	Prof. Dr Abdul Moqeet	Visual Outcome and ocular attributes after manual ICRS	7 th APOTS, 41 st Lahore Ophthalmology, PC. Lahore
7.	Prof. Dr Abdul Moqeet	Salvaging The Globe with total corneal meltings	7 th APOTS, 41 st Lahore Ophthalmology, PC. Lahore
8.	Prof. Dr Shama Khan	Scleral Patch Graft	7 th APOTS, 41 st Lahore Ophthalmology, PC. Lahore
9.	Prof. Dr. Ume Sughra	Role of Clinical Trial Site in Drug Development “Lab to Hospital”	BioNanoCon2024, Institute of Space Technology (IST), Islamabad

Dissertations

School of Optometry
Pakistan Institute of Ophthalmology
For the Year 2023

Sr. No.	Name of Student	Title of Research	Supervisor
1.	Dr. Maheen Zafar	Frequency of keratoconus in different clinical patterns of vernal keratoconjunctivitis	Prof. Dr. Abdul Moqeet
2.	Dr. Shehroze Hasnain	Assessment of Corneal Nerve Morphology in General Population of Pakistan	Prof. Dr. Abdul Moqeet
3.	Hafsa Amir	Refractive and Biometric changes in silicone oil tamponades eyes after Pars Plana vitrectomy.	Mr. Saif Ullah
4.	Asma Munir	Characteristics of posterior corneal astigmatism in different stages of keratoconus	Mr. Saif ullah
5.	Rida Fatima	Comparison of Dry eye disease among students of Pakistan institute of ophthalmology using eye cosmetics	Mr. Saif ullah
6.	Muqaddas Shehzadi	Stereopsis in early diabetic retinopathy patients visiting tertiary eye care hospital	Mr. Saif ullah
7.	Noor e Sehar	Association between body mass index in visually impaired & Healthy subject	Mr. Saif ullah
8.	Warisha	Comparison of Metamorphosis between Amsler Grid and M chart in retinal detachment & Age-related macular degeneration	Mr. Saif ullah
9.	Rabia Faheem	Investigating the correlation between the visual acuity and contrast sensitivity in early cataract and glaucoma compared to controls	Mr. Saif ullah
10.	Iqra Tariq	Threshold value of Myopic Anisometropia causing Loss of Stereopsis at Near	Mr. Saif ullah
11	Anila Hafeez	Effect of Bagolini Striated Glasses on Horizontal Prism Fusion Amplitude.	Mr. Saif ullah
12	Iffat Nasim	Types of astigmatism and biometry associations in Pediatric Tilted Disc Syndrome	Mr. Saif ullah
13	Hafsa Mushtaq	The effect of cycloplegic agents on ocular biometric parameters in children with refractive error	Ms. Sadaf Qayyum
14	Muqaddas Noor	An Innovative Approach Utilizes Retinoscopy Assisted-Binocular Balancing in Spherical Refractive Errors	Ms. Sadaf Qayyum
15	Saman Wahid	Comparison of Cycloplegia at 20 and 30 minutes following instillation of Proparacaine and Cyclopentolate in 7-15 years old children	Ms. Sadaf Qayyum
16	Roshan	Association between Inter-Pupillary Distances and Fusional convergence and divergence amplitude	Ms. Sadaf Qayyum
17	Faiza Kanwal	Effect of cycloplegia on keratometric and biometric parameters in keratoconus and Controls	Ms. Sadaf Qayyum
18	Nisha Kaleem	Grades of binocular single vision in keratoconous..	Ms. Sadaf Qayyum
19	Mehreen Mushtaq	Comparison of RNFL thickness in smokers and non smokers having primary open angle Glucoma	Ms. Maryam Firdous

20	Faiza	A Comparative analysis of photo-stress recovery time in normal, diabetic individuals with and without retinopathy while assessing contrast sensitivity function	Ms. Maryam Firdous
21	Ayesha Sarfaraz	Effects of latent strabismus on stereo-acuity	Ms. Maryam Firdous
22	Asif Tufail	Comparison between Mohindra and Cycloplegic Retinoscopy in 5 to 15years children	Ms. Maryam Firdous
23	Rida Ramzan	Assessment of stereoscopic Visual Acuity in strabismic and anisometropic amblyopia	Ms. Maryam Firdous
24	Hadia Sabahat	Effect of type and amount of ocular deviation on contrast sensitivity	Ms. Fareeha Ayyub
25	Amen Akbar	Effect of uncorrected mild astigmatism on stereoacuity	Ms. Fareeha Ayyub
26	Qurat-ul-ain shahid	Effect of Repeated Low Level Red light therapy on myopic eyes	Ms. Fareeha Ayyub
27	Sharqa Fatima	Awareness, utilization and barrier in accessing assistive technology among patient at low Vision clinic	Ms. Fareeha Ayyub
28	Musferah Munawar	Assessment of visual and cognitive functioning among patients with stargardts disease	Ms. Fareeha Ayyub
29	Ammara	Effect of astigmatic defocus on binocular contrast sensitivity	Dr. Ayesha Babar
30	Maheer Qureshi	Association Between Body Mass Index and Intraocular Pressure In Adults	Dr. Ayesha Babar
31	Sidra Sarfaraz	Assessment of Dry Eyes Diseases among traffic warden in Kamalia City	Dr. Khizar
32	Noor-ul-Hawa	Short term effect of swimming goggles on Intra-ocular pressure and axial length	Dr. Khizar
33	Qurat ul Ain Younis	Bidirectional refractive compensation for “with the rule” and “against the rule” astigmatism in young adults	Ms. Rimsha Tanveer
34	Sidra Waheed	Comparison of Cycloplegic Autorefraction and Cycloplegic Retinoscopy in Children	Ms. Rimsha Tanveer
35	Shrook Umer	Comparison of Stereoacuity resulting from Experimental setup in Myopic and Hyperopic Anisometropia	Mr.Hassan Ansari
36	Usama Haneef	Comparative study between contact & non-contact Tonometry along with Pachymetry & Kertometry readings	Mr. Hassan Ansari

"Academic success depends on research and publications"

Philip Zimbardo

Projects

Sr. No.	Name	Sponsor	Investigator
1	A Multi-center, Randomized, Blinded, Placebo-controlled, Phase 3 Clinical Study to Evaluate the Efficacy, Safety and immunogenicity of SARS-CoV-2 Bivalent mRNA Vaccine (LVRNA021) as Booster in Participants Aged 18 Years and Older who Completed Primary/1 Booster Dose(s) of SARS-CoV-2 Vaccination	AIM Vaccine Co., Ltd. Ningbo Rongan Biological Pharmaceutical Co., Ltd. LiveRNA Therapeutics Inc.	Prof. Dr. Ume Sughra
2	A Phase 3, randomized, double-blind, placebo-controlled study to evaluate the effect of Bi-26 (strain of Bifidobacterium longum, B. infantis) supplementation versus placebo on weight gain in underweight infants	Bill & Melinda Gates Medical Research Institute	Prof. Dr. Ume Sughra
3	A Phase 3 Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of Bemnifosbuvir in High-Risk Outpatients with COVID-19	Atea Pharmaceuticals, Inc. USA	Prof. Dr. Ume Sughra
4	A phase III, Randomized, Comparator-Controlled, Double-Blind, Multicenter Study to Evaluate the Immunogenicity, Safety and Lot to Lot Consistency of Three Lots of a PIKA Rabies Vaccine (Vero cell) for human use, freeze-dried in Healthy Adults using a Post-Exposure Prophylaxis schedule	Yisheng Biopharma (Singapore) Pte. Ltd.	Prof. Dr. Ume Sughra



Study Title: A Multi-center, Randomized, Blinded, Placebo-controlled, Phase 3 Clinical Study to Evaluate the Efficacy, Safety and immunogenicity of SARS-CoV-2 Bivalent mRNA Vaccine (LVRNA021) as Booster in Participants Aged 18 Years and Older who Completed Primary/1 Booster Dose(s) of SARS-CoV-2 Vaccination

Sponsor: AIM Vaccine Co., Ltd., Ningbo Rongan Biological Pharmaceutical Co., Ltd., LiveRNA Therapeutics Inc.

Project Achievements:

2,356

Subjects Screened

2,000

Subjects Enrolled

15 Days

Recruitment Duration



BILL & MELINDA GATES MEDICAL RESEARCH INSTITUTE

Study Title: A Phase 3, randomized, double-blind, placebo-controlled study to evaluate the effect of Bi-26 (strain of Bifidobacterium longum, B. infantis) supplementation versus placebo on weight gain in underweight infants

Sponsor: Bill & Melinda Gates Medical Research Institute, USA

Project Achievements:

17

Subjects Screened

15

Highest Number
Enrolled

4 Months

Recruitment Duration



Study Title: A Phase 3 Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of Bemnifosbuvir in High-Risk Outpatients with COVID-19

Sponsor: Atea Pharmaceuticals, Inc. USA

Project Achievements:

250

Subjects Screened

5

Subjects Enrolled

3 Months

Recruitment Duration



Study Title: A phase III, Randomized, Comparator-Controlled, Double-Blind, Multicenter Study to Evaluate the Immunogenicity, Safety and Lot to Lot Consistency of Three Lots of a PIKA Rabies Vaccine (Vero cell) for human use, freeze-dried in Healthy Adults using a Post-Exposure Prophylaxis schedule

Sponsor: Yisheng Biopharma (Singapore) Pte. Ltd.

Project Achievements:

1004

Subjects Screened

889

Subjects Enrolled

1 Month

Recruitment Duration

741

Top recruiting Site
Globally for Group 2





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