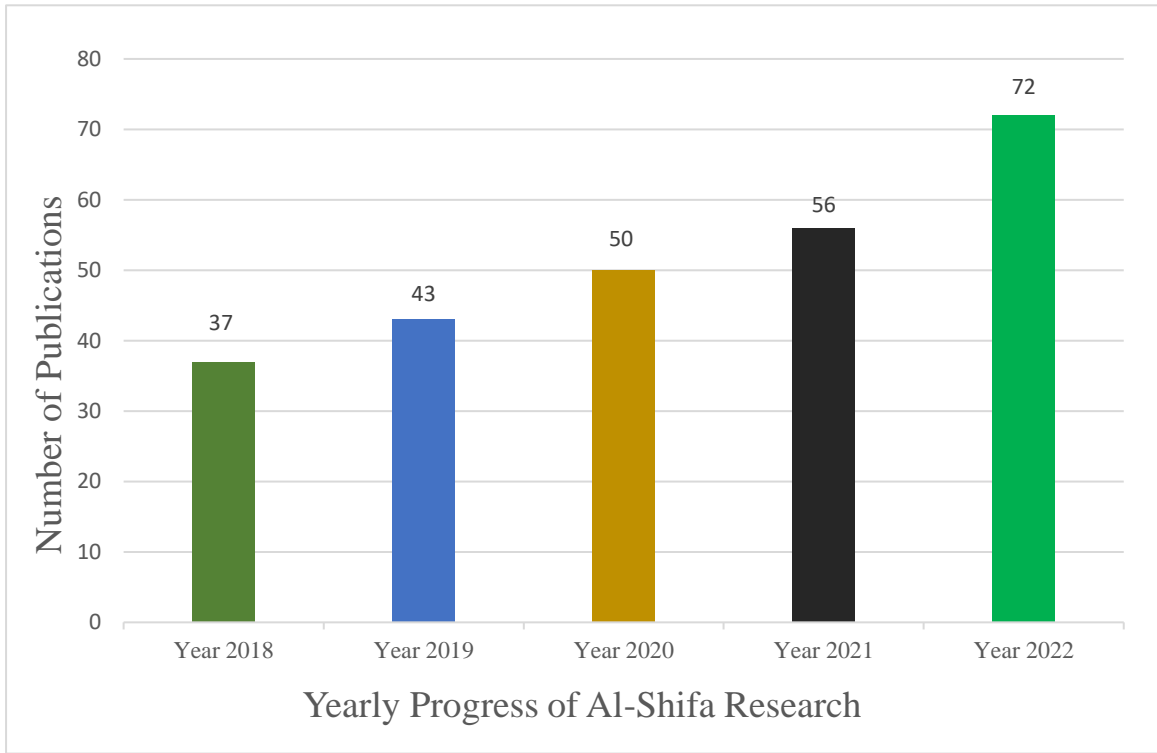




**Al-Shifa
Annual Research Report
2022 Vol.05**



**Prepared By
Al-Shifa Research Centre
Pakistan Institute of Ophthalmology
Al-Shifa Trust , Rawalpindi**



Message from President



Maj Gen Rehmat Khan (R)

At the same time as Al Shifa Trust Eye Hospital embarks on its 38th year of its mission to provide standard accessible healthcare services to rehabilitate vision in hundreds of thousands of our people, the Al Shifa Research Centre also turns a further progressive corner. With the rapid advancement of technology and bridging of international communication gaps amidst the healthcare industry following the Post-COVID19 era, Al Shifa Research Centre has solidified its stalwart position as one of the leading research organizations of not merely Pakistan but also stands as a distinguished member of the global research network.

In the face of today's multiplication of research journals, Al-Shifa Annual Research Report 2022 has created and maintained its own rightful niche and a devoted mission to carry forward the same commitment all the while staying true to its formative principles especially with the evolution of research and publication methods in the rapidly advancing healthcare interface all over the world.

I would like to commend all the faculty, staff and students who have brought forth well-structured and thought-provoking articles yet again for its fifth, Al-Shifa Annual Research Report for the year 2022. I advise you all to continue the development of original study methods and steadily contribute with innovative manuscripts in order to maintain the remarkable standard of high-quality publication herein.

Message from Dean



Prof. Dr. Wajid Ali Khan

As the year 2022 successfully concluded with a wonderful Annual Al-Shifa Research Conference, hosted by Al Shifa Research Centre, we are prepared to welcome 2023 with even more positive accolades heralded by the influx of a variety of National and International Clinical Trials.

Through the unexpected difficulties brought in by the worldwide pandemic, we have discovered our unwavering resilience and the undiscovered capabilities to take any challenge head on and see it to its remarkable completion. This hard work and consistent dedication to our field has brought about tremendous results within record time.

Our vision for the upcoming year is to transform the research landscape of Pakistan one institution at a time, into a widely-acknowledged area that not only showcases the impressionable range of skills and multidisciplinary aptitudes, but also furnish an unobstructed perspective into the vast array of knowledge and seamless synergy here at Al-Shifa Research Centre and among the collaborating scientists all across the globe.

Message from Director Research



Prof. Dr. Ume Sughra

I would like to extend a warm thank you to all the authors who have contributed to our fifth volume of the compendious annual research publication, Al-Shifa Annual Research Report 2022 comprising of over 80 original papers and encompassing a wide variety of fields pertinent to research including clinical trials, medical, pharmaceutical and public health research topics has garnered an amazing response, while further setting in motion the progress of authentic peer-reviewed publications yielding a mass of valuable information in the relevant fields of clinical and pharmaceutical sciences.

The Second Annual Al-Shifa research conference ‘Landscape of Clinical trials in Pakistan’, was held in December with stellar appearances from academic prodigies and research giants not only from Pakistan, but also featured internationally renowned scholars as special guests. It served as a significantly constructive platform for presenting new ideas and discussions on the advancement in the multimodal methods of Research and Clinical Trials.

In order to reach even higher standards of eminence, we shall continue our endeavors in the search for purposeful and apposite research and achieve further dynamic growth in the fields, both to become an individually accomplished member, as well as to become a valuable part of a wholesome team dedicated to benefit the world around us.

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Publications

1. Efficacy and safety of the RBD-dimer-based Covid-19 vaccine ZF2001 in adults

Abstract

Background: The ZF2001 vaccine, which contains a dimeric form of the receptor-binding domain of severe acute respiratory syndrome coronavirus 2 and aluminum hydroxide as an adjuvant, was shown to be safe, with an acceptable side-effect profile, and immunogenic in adults in phase 1 and 2 clinical trials.

How to cite: Dai, L., Gao, L., Tao, L., Hadinegoro, S. R., Erkin, M., Ying, Z., & Gao, G. F. (2022). Efficacy and safety of the RBD-dimer-based Covid-19 vaccine ZF2001 in adults. *New England Journal of Medicine*, 386(22), 2097-2111.

Methods: We conducted a randomized, double-blind, placebo-controlled, phase 3 trial to investigate the efficacy and confirm the safety of ZF2001. The trial was performed at 31 clinical centers across Uzbekistan, Indonesia, Pakistan, and Ecuador; an additional center in China was included in the safety analysis only. Adult participants (≥ 18 years of age) were randomly assigned in a 1:1 ratio to receive a total of three 25- μg doses (30 days apart) of ZF2001 or placebo. The primary end point was the occurrence of symptomatic coronavirus disease 2019 (Covid-19), as confirmed on polymerase-chain-reaction assay, at least 7 days after receipt of the third dose. A key secondary efficacy end point was the occurrence of severe-to-critical Covid-19 (including Covid-19-related death) at least 7 days after receipt of the third dose.

Results: Between December 12, 2020, and December 15, 2021, a total of 28,873 participants received at least one dose of ZF2001 or placebo and were included in the safety analysis; 25,193 participants who had completed the three-dose regimen, for whom there were approximately 6 months of follow-up data, were included in the updated primary efficacy analysis that was conducted at the second data cutoff date of December 15, 2021. In the updated analysis, primary end-point cases were reported in 158 of 12,625 participants in the ZF2001 group and in 580 of 12,568 participants in the placebo group, for a vaccine efficacy of 75.7% (95% confidence interval [CI], 71.0 to 79.8). Severe-to-critical Covid-19 occurred in 6 participants in the ZF2001 group and in 43 in the placebo group, for a vaccine efficacy of 87.6% (95% CI, 70.6 to 95.7); Covid-19-related death occurred in 2 and 12 participants, respectively, for a vaccine efficacy of 86.5% (95% CI, 38.9 to 98.5). The incidence of adverse events and serious adverse events was balanced in the two groups, and there were no vaccine-related deaths. Most adverse reactions (98.5%) were of grade 1 or 2.

Conclusions: In a large cohort of adults, the ZF2001 vaccine was shown to be safe and effective against symptomatic and severe-to-critical Covid-19 for at least 6 months after full vaccination. (Funded by the National Science and Technology Major Project and others; ClinicalTrials.gov number, NCT04646590. opens in new tab.)

2. Association of Severity of Diabetic Retinopathy with Levels of HbA1c

Abstract

Aim: To assess the association between the severity of retinopathy and HbA1c status in patients with diabetes mellitus.

Study design: A Cross-sectional study.

Place and duration: In the department of Ophthalmology, Al Shifa Trust Eye Hospital, Rawalpindi for six-months duration from December 2020 to May 2021.

How to cite: Khan, R. M. T., Saleem, H., Bhatti, S. A., Sadiq, M. U., & Sadiq, M. I. (2022). Association of Severity of Diabetic Retinopathy with Levels of HbA1c. *Pakistan Journal of Medical & Health Sciences*, 16(07), 790-790. DOI: <https://doi.org/10.53350/pjmhs22167790>

Publications

Methods: The study included 120 patients of both sexes with type I and type II diabetes, aged 35-80 years. Full ophthalmology examination was carried out including the slit lamp examination, best visual acuity correction, fundus examination and Goldman applanation tonometry. The diabetic retinopathy is graded from Grade 0-Grade V.

Results: Of the 120 cases, 58 (49%) were male and 52 (51%) were female. 60 ± 2.4 years was the mean age of patients with 35-80 years of age range for men and 40-75 years for women. Figure 1 is a bar graph showing the severity of diabetic retinopathy. Grade-I diabetic retinopathy was seen in 45(37.5%) patients and Grade-V was noted in 5%. The good control of glycemia was seen in 38 patients and 20.8% had Grade III glycemic control. The worst glycemic control was seen in patients with Grade-IV diabetic retinopathy having 11.8 of HbA1c.

Conclusions: This analysis found that severe diabetic retinopathy was seen in patients with poor control of glycemia in comparison to patients with better diabetes control. There is a direct relationship between the severity of diabetic retinopathy and levels of HbA1c levels.

Keywords: Diabetic retinopathy, Vitreous hemorrhage, HbA1C, Proliferative diabetic retinopathy, Non-proliferative diabetic retinopathy.

3. Comparison of Retinal Nerve Fiber Layer Thickness Between Mild to Moderately Myopic Eyes with Normal Eyes

Abstract

Aim: To access the difference between the mean thickness of the retinal nerve fiber layer (RNFL) in myopic eyes (down to -6.00 D) and the normal eye.

Study Design: An Observational and Descriptive study.

Place duration: In the department of Ophthalmology, Al Shifa Trust Eye Hospital, Rawalpindi for six-months duration from June 2020 to November 2020.

Methods: In this study, the mean comparison of RNFL among 70 myopic eyes (down to -6.00 D) and 70 normal eyes of the same age was done. 15-45 years was the patients' age range. A comprehensive eye exam was performed and thickness of RNFL was evaluated by optical coherence tomography. Data analysis was done with t-test for independent samples using SPSS 21.0; $p < 0.05$ as the significant value.

Results: The RNFL mean variation between both groups was $5.901 \mu\text{m}$ (SE: 1.930). The mean RNFL thickness in the group of people with myopia was $96.31 \pm 11.121 \mu\text{m}$ with (SE: 1.310) and mean age was 28.32 ± 7.452 years. The mean thickness of RNFL was $94.210 \pm 9.521 \mu\text{m}$ in the right eye and $99.175 \pm 11.142 \mu\text{m}$ in the left eye. The RNFL mean score of thickness for eyes with myopia distributed normally as $p < 0.04$. The RNFL mean score of

thickness for normal group was $(102.81 \pm 11.48 \mu\text{m})$ with (SE: 1.40), and the mean thickness of RNFL evaluated in healthy eyes did not show a normal distribution as $P < 0.20$. This study outcomes exhibited a statistically substantial variance between the mean thickness of RNFL assessed in myopic and normal eyes ($p < 0.003$).

How to cite: Khan, R. M. T., Saleem, H., Bhatti, S. A., Sadiq, M. U., & Sadiq, M. I. (2022). Comparison of Retinal Nerve Fiber Layer Thickness Between Mild to Moderately Myopic Eyes with Normal Eyes. Pakistan Journal of Medical & Health Sciences, 16(06), 1068-1068. DOI: <https://doi.org/10.53350/pjmhs221661068>

Publications

Conclusion: There is a significant variation in mean thickness of RNFL between normal and myopic eyes as assessed by optical coherence tomography. Appropriate understanding of data of RNFL in eyes with myopia is suggested to evade glaucoma misdiagnosis.

Keywords: Optical coherence tomography, Myopia and Thickness of the Retinal Nerve Fiber Layer.

4. One-year Visual and Refractive Outcomes of Deep Anterior Lamellar Keratoplasty (DALK) in Patients with Advanced Keratoconus

Abstract

Objective: To determine the one-year visual and refractive outcomes of deep anterior lamellar keratoplasty (DALK) in patients with advanced keratoconus (KC) using inexpensive readily available instruments.

Study Design: An observational study.

Place and Duration of Study: Department of Cornea and Refractive Surgery, Al-Shifa Trust Eye Hospital, from November 2016 to March 2021.

Methodology: The authors evaluated different types of big bubble (BB) formation and the conversion rate of intended DALK (n=120) to the penetrating keratoplasty (PK) in patients with grade 4 KC. For analysis, only those patients were included in whom DALK was completed. Main outcome measures at 1-year follow-up were best-corrected visual acuity (BCVA), maximum keratometry (Kmax) reading, spherical equivalent (SE), and topographic astigmatism (TA). All the postoperative complications were recorded.

Results: Type 1 BB was formed in 68% (n=82) of the patients. An incomplete type 1 BB and type 2 BB were observed in twenty and eighteen patients, respectively. DALK was completed successfully in 102 patients. Whereas, the conversion rate to PK was 15% (n=18). The mean preoperative BCVA improved from 1.11±0.23 logMAR to 0.46±0.20 logMAR, at 1-year follow-up. The mean Kmax, SE, and TA readings reduced from a preoperative value of 62.1±4.60 D, -11.6±2.62 D, and 4.63±1.82 D, respectively, to 49.1±3.10 D, -5.65±0.84 D, and 2.78±1.35 D, respectively, at 1-year follow-up. Stromal rejection was recorded in two patients, but it responded well to topical therapy.

Conclusion: Inexpensive readily available instruments can be used to perform DALK in patients with advanced KC with favourable visual and refractive outcomes

Key Words: Big bubble, Deep anterior lamellar keratoplasty, Keratoconus, Perforation, Penetrating keratoplas

How to cite: Moqheet, M. A., Ali, W., Khan, S. A., Zafar, A., & Mansoor, H. (2022). One-year Visual and Refractive Outcomes of Deep Anterior Lamellar Keratoplasty (DALK) in Patients with Advanced Keratoconus. Journal of the College of Physicians and Surgeons--Pakistan: JCPSP, 32(9), 1160-1164. DOI: 10.29271/jcpsp.2022.09.1160

5. Efficacy of Intravitreal Triamcinolone Acetonide in Diabetic Macular Edema

Abstract

Diabetic macular edema (ME) can be treated by intravitreal injection of Triamcinolone acetonide (TA). The scope of the study was to determine its efficacy in our setup in order to develop our local guidelines for its routine use in our setup.

Publications

Objective: To determine the effect of intravitreal Triamcinolone (TA) for the management of diabetic macular edema (ME)

Material and Methods: This descriptive case series carried out at Al-Shifa Trust Eye Hospital, Rawalpindi in 2019. Total 149 patients cases of either gender aged 40-75 years with history of DM of >10 years, VA<6/36 assessed by Snellen VA chart and who had clinically significant ME as assessed by indirect ophthalmoscopy were included in the study. 4mg/0.1 ml of TA was injected through pars plana under local anesthesia. Efficacy was determined at six week post treatment.

Results: Treatment was found to be effective in overall 40.9%(n=61) cases, 44.7%(n=38) males, 35.9%(n=23) were females, 35.1%(n=20) were between 41-50 years age, 42.9%(n=30) between 51-60 years, 50%(n=11) had >60 years, 44.5%(n=49) at baseline VA of 6/36 and 30.8%(n=12) with baseline VA of 6/60 showed improvement in VA.

Conclusion: Administration of triamcinolone acetonide (TA) intravitreal inj. is an effective modality for the treatment for diabetic macular edema, and this treatment may lead to an improvement in visual acuity

Keywords: Diabetic Retinopathy, Macular Edema (MA), Triamcinolone, Acetonide

How to cite: Khan, T. A., & Baig, T. (2022). Efficacy of Intravitreal Triamcinolone Acetonide in Diabetic Macular Edema. Pakistan Journal of Medical & Health Sciences, 16(05), 921-921. DOI: <https://doi.org/10.53350/pjmhs22165921>

6. Impact of Myopic and Hyperopic Anisometropia on Stereopsis and Contrast Sensitivity

Abstract

Background: Anisometropia is a common condition that leads to that visual problem including ARC (abnormal retinal correspondence), aniseikonia, suppression, strabismus and most importantly amblyopia. Aniseikonia causes disturbance in the fusion of two images of both eyes. Due to these problems stereopsis as well as contrast sensitivity is disturbed.

Objective: The objectives of the study were to assess the level of stereopsis and contrast sensitivity in myopic and hyperopic anisometropia and also to compare the stereopsis and contrast sensitivity in myopic and hyperopic anisometropia.

Materials and Methodology: A cross sectional study was carried out in the general OPD of Al-Shifa Trust Eye Hospital, Rawalpindi from July 2021 to December 2021. A study was conducted on 60 patients having anisometropia (myopic and hyperopic anisometropia) up to 2D or greater than 2D to evaluate its effect on stereopsis by using Titmus fly stereo test and contrast sensitivity by using the Mars contrast sensitivity chart. To achieve the objective of the study, data was collected from patients through a structured proforma after taking informed consent. CS was measured by using a Mars Contrast Sensitivity chart. Stereopsis was measured by using a Titmus fly stereo test.

Result: A total of sixty anisometropic patients were enrolled in this study, out of which 50% were myopic anisometropic and 50% were hyperopic anisometropic. Mean Stereopsis in myopic anisometropic patients was found to be 916.6 ± 1173.5 and in hyperopic anisometropic were 460 ± 700 . The mean CS of myopic anisometropia in RE was 1.40 ± 0.308

How to cite: Jamil, F., Naeem, A., Ahmad, S., Ullah, S., Asghar, M., & Qayyum, S. (2022). IMPACT OF MYOPIC AND HYPEROPIC ANISOMETROPIA ON STEREOPSIS AND CONTRAST SENSITIVITY.

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and in LE was 1.44 ± 0.32 . The mean CS of hyperopic anisometropia in RE was 1.51 ± 0.21 and in LE was 1.53 ± 0.18 . There was no statistically significant difference in stereopsis and CS was found in myopic and hyperopic anisometropia with $p > 0.05$.

Conclusion: There was no statistically significant difference in Stereopsis and Contrast Sensitivity found in myopic and hyperopic anisometropia. CS and stereopsis were affected equally in both types of anisometropia.

Keywords: Impact, Myopia, Hyperopia, Anisometropia, Stereopsis, Contrast Sensitivity.

7. Changes in the treatment plans of Glaucoma patients in a real-world situation

Abstract

Objective: To determine the changes in glaucoma prescriptions during a single visit in real-world situation at Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.

Methods: This cross-sectional descriptive study was conducted at Glaucoma Department of Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan from September 1st, 2015 to February 29th, 2016 after the ethical approval. Of total 876 consecutive participants, 868 were included in the study. Complete ocular examination was carried out for each subject including intraocular pressure (IOP) by Goldman, visual field and nerve fiber analysis if it was scheduled. Ocular and systemic co-morbidities as well as ocular surgeries were also noted. Number of topical medications including anti-glaucoma and other drugs were recorded before and after their visit. The changes in anti-glaucoma medications were then categorized as unchanged, changed, added or deleted. The results were analyzed via SPSS version-24.

Results: A total 1600 eyes of 868 patients were included in this study. Out of 868 patients, 507 (58.41%) were males and 291 (33.52%) were in 61-70 years age group. Majority of patients ($n=680/868$: 78.34%) had open-angle glaucoma. Out of 1600 eyes studied, 574 (35.87%) had moderate and 556 (34.75%) had severe stage of glaucomatous optic neuropathy. During single visit, glaucoma-related prescriptions were unchanged, changed, added and deleted in 618/868 (71.20%), 84/868 (9.68%), 95/868 (10.94%) & 71/868 (8.18%) patients respectively. In our study, 911/1600 (56.94%) eyes achieved target IOP ≤ 14 mmHg.

Conclusion: In real-world situation, most of our glaucoma patients were stable and required no changes to their prescriptions in single visit.

How to cite: Sadiq, M., Y. J. Mahsood, W. Ahmad, M. A. Khan, and F. Akhtar. "CHANGES IN THE TREATMENT PLANS OF GLAUCOMA PATIENTS IN A REAL-WORLD SITUATION". KHYBER MEDICAL UNIVERSITY JOURNAL, vol. 14, no. 1, Mar. 2022, pp. 21-6, DOI:10.35845/kmu.j.2022.21634.

8. Rule Similarity and Axis Symmetry Patterns in Young Patients with Bilateral Astigmatism

Abstract

Objective: To report rule similarity and axis symmetry patterns in young subjects with bilateral astigmatism.

Methods: The cross-sectional study was

How to cite: Mahmood, F., Sharif, H., & Ali, M. (2022). Rule Similarity and Axis Symmetry Patterns in Young Patients with Bilateral Astigmatism. Journal of the Pakistan Medical Association, 72(01), 42-46. DOI: <https://doi.org/10.47391/JPMA.20-748>

Publications

conducted at Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan, from October 1, 2018, to March 31, 2019, and comprised diagnosed cases of bilateral astigmatism of either gender aged 15-45 years. After giving detailed ophthalmic history, all the participants underwent autorefraction followed by subjective refraction. Based on refractive status, rule similarity was categorised as isorule or anisorule, while axis symmetry was categorised as direct or mirror. Data was analysed using SPSS 20.

Results: Of the 204 participants, 128(62.7%) were males and 76(37.3%) were females. The overall mean age was 26.64±8.44 years. Isorule astigmatism was present in 169(82.8%) participants, while 125(61.3%) had a mirror pattern of axis symmetry. Under the mirror and direct symmetry models, the medians of absolute difference in the axis of fellow eyes were 10

and 5 degrees respectively from exact symmetry. No significant association of rule similarity or symmetry of axis was found with age or gender ($p>0.05$), while significant association was found between rule similarity and type of astigmatism ($p<0.001$).

Conclusions: Bilateral astigmatism of isorule category was found in majority of the participants, while mirror symmetry of the axis was more common than direct symmetry.

Keywords: Astigmatism, Axis, Refractive errors, Rule similarity, Symmetry.

9. In-vivo inhibition of latanoprost induced iridal hyperpigmentation in rabbits- An investigational study

Abstract

Objectives: To evaluate the inhibitory effects of different concentrations of α -methyl-DL-tyrosine on latanoprost-induced iridal hyperpigmentation in rabbits.

Methods: We investigated 4 groups of rabbits. Both eyes of the pink, red, and blue groups were treated with latanoprost followed by 0.5%, 1%, and 2% α -methyl-DL-tyrosine (inhibitor) in the right eyes respectively and the green group received only inhibitor. We prospectively investigated the irides, estimated quantitatively total melanin contents, and studied any histopathological changes that occurred.

Results: The observers favored hyperpigmentation in the left eyes while in the right eyes they noted a decrease in pigmentation as compared to the baseline. An increase in pigmentation was noted by 93.33% of observers in the left eye of the blue group. A significant difference in the mean melanin contents was noted in the blue group (Right eye $\frac{1}{4}$

09.560 μ g/g (\pm 0.750), Left eye $\frac{1}{4}$ 3.730 μ g/g (\pm 1.062). There was no evidence of stromal malignant changes, Hemorrhage, mitosis, inflammation, and atypical melanocytes in all specimens. A moderate degree of pigmentation in the left eye of the red group was noted. Mild stromal-free melanin pigment was present in all samples of pink, red and blue groups.

Conclusions: The α -methyl-DL-tyrosine significantly inhibited latanoprost-induced iridal pigmentation without causing any histopathological changes at a 2% dose.

Keywords: Latanoprost, α -methyl-DL-tyrosine, Hyperpigmentation, Inhibition, Pakistan

How to cite: Sadiq, M., Ahmad, W., Bilal, M., Ali, M., Khan, M. A., & Akhtar, F. (2022). In-vivo inhibition of latanoprost induced iridal hyperpigmentation in rabbits-An investigational study. *Heliyon*, 8(11), e11485. **DOI:** 10.1016/j.heliyon.2022.e11485

Publications

10. Factors Associated with Non-Compliance to Long Term Glaucoma Medication in A Developing Country

Abstract

Purpose: To assess the level of adherence with long-term glaucoma therapy at a tertiary care center and to correlate the factors associated with non-compliance.

Study Design: Cross sectional study.

Place and Duration of Study: Al-Shifa Trust Eye Hospital (ASTEh), Rawalpindi from October 2018 to February 2019.

Methods: Two hundred patients presenting at the glaucoma clinic were recruited. An interview-based questionnaire was used to gather data. The dependent variable, adherence to long-term glaucoma treatment, was determined and independent variables were; demographic profile, socio-economic variables, ocular and medical history, personal knowledge and understanding about disease and satisfaction level of the patient. The data was analyzed using SPSS version 24. Descriptive analysis was followed by Inferential Statistics. To determine any association between independent and outcome variables, chi-square test was applied. All inferential statistics were based on a 5% significance value.

Results: A high rate (30%) of non-compliance was found. A significant correlation was present between chief complaints of patients with compliance to medication ($p < 0.05$). Knowledge about disease, education status was also found to be correlated with the compliance to glaucoma treatment ($p < 0.05$). However, age and gender had no effect on level of compliance. Eighty two percent knew that glaucoma can lead to blindness which urged them to have regular follow-up.

Conclusion: Thirty percent participants were non-compliant to glaucoma therapy. Compliance with glaucoma treatment is an important factor for preventing progression of disease. Factors leading to poor compliance can be controlled by good communication between patient and physician.

Keywords: Glaucoma, Intraocular pressure, Patient compliance, Anti glaucoma agents.

How to cite: Munir H, Sadiq M, Khan S, Zafar S, Akhtar F. Factors Associated with Non-Compliance to Long Term Glaucoma Medication in a Developing Country. Pak J Ophthalmol. 2022, 38 (3):193198. DOI:10.36351/pjo.v38i3.1417

11. A Cross-Sectional Study on Socioeconomic Status of Glaucoma Patients and Prescription Burden of Antiglaucoma Drugs in Pakistan

Abstract

Background and Objective: Glaucoma management has a very strong impact on society, especially in terms of morbidity, consultations and medical costs because glaucoma patients need to continue using medication throughout their lives. The study aimed to estimate the pattern of socioeconomic status and prescription burden of antiglaucoma drugs in glaucoma patients with comorbidities like hypertension and diabetes mellitus.

How to cite: Sadiq, M., M. Ali, Abdullah, W. Ahmad, M.A. Khan and F. Akhtar, 2022. A cross-sectional study on socioeconomic status of glaucoma patient's and prescription burden of antiglaucoma drugs in Pakistan. Int. J. Pharmacol., 18: 207-214.

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Materials and Methods: This cross-sectional study was conducted in a tertiary care eye hospital, Rawalpindi, Pakistan. Glaucoma patients were interviewed for 6 months and variables

like demographics, education level, monthly income, disease distribution, medication history, and prescription pattern were noted and monthly cost of all drugs, socioeconomic status and prescription burden were assessed from the data.

Results: Out of 876 patients, 511 were males and 38.4% were from the 40-60 years age group. The majority were jobless, dependent upon others with no formal education and 89.1% belonged to lower socioeconomic status. Comorbidities include Hypertension (27%) and Diabetes mellitus (18.8%). The mean monthly cost of ocular drugs was 599.73±491 PKR per patient and a 194% increase was noted by the addition of glaucoma drugs.

Conclusion: Our findings describe that majority of our patients were poor, elderly, illiterate, dependent, multi morbid and belonged to lower socioeconomic levels with a high prescription burden of antiglaucoma drugs.

Keywords: Socioeconomic, prescription burden, glaucoma, antiglaucoma drug, cost-of-illness, hypertension, diabetes mellitus

12. Variability in droplet count of different brands of similar glaucoma eye drops and its association with medication cost in Pakistan

Abstract:

It can be stated that a significant variation was found in drops/ml, drops/5ml, total number of bottles required and monthly or yearly cost of medication. This variation was not only significant between multinational and national brands but it was also significant amongst national brands. There was also a strong correlation with drops per ml/5ml with the number

of bottle required and moderate and negative correlation with the monthly and yearly cost. These findings reflect the impact of variation on the yearly cost of medication which may ultimately affect the total cost of glaucoma treatment. Our study will provide a sincere guideline to the prescribers, healthcare providing authorities, institutions, eye drops manufacturers and regulatory authorities to take necessary actions to control variability and medication cost.

How to cite: Sadiq, M., Ali, M., Sharif, H., Akhtar, F., Khan, M. A., & Ahmad, W. VARIABILITY IN DROPLET COUNT OF DIFFERENT BRANDS OF SIMILAR GLAUCOMA EYE DROPS AND ITS ASSOCIATION WITH MEDICATION COST IN PAKISTAN. 2021

Keywords: droplet count, variability, antiglaucoma, glaucoma, Pakistan

13. Effect of Posterior Subtenon Triamcinolone Acetonide in Refractory Diabetic Macular Edema

Abstract

Objectives: To see the effect of Posterior Subtenon Triamcinolone Acetonide (PSTT) injection in refractory Diabetic Macular Edema (DME).

Study Design: Quasi-Experimental Study.

Publications

Place and Duration of Study: Retina Clinic, Al-Shifa Trust Eye Hospital, Rawalpindi, from Jun to Dec 2018.

Methodology: Patients with Clinically Significant Macular Edema (CSME), with Central Macular Thickness (CMT) >300 microns and those who did not respond to three consecutive Intra-Vitreous Bevacizumab (IVB) injections were included.

Posterior Subtenon Triamcinolone Acetonide (PSTT) was administered by a single retina fellow using the same protocol. Each patient's best-corrected visual acuity (BCVA), Intra-ocular pressure (IOP) and Central Macular Thickness (CMT) were evaluated on the day of Posterior Subtenon Triamcinolone Acetonide (PSTT) injection and again at 1, 3 and 6 months.

Results: Out of 52 patients (104 eyes), 16 females and 36 males were present. The mean age was 57.67±9.35 years. Out of 52 right eyes, the mean Central Macular Thickness (CMT) at the first visit was 388.83±172.04 µm, 332.81 ± 144.69 µm after one month, 292.81±147.59µm after six months of Posterior Subtenon Triamcinolone Acetonide (PSTT) Injection. Similarly, for 52 left eyes mean Central Macular Thickness (CMT) at the first visit is 375.79±160.81 µm, 364.52 ± 167.95 µm after one month and 323.37±155.74 µm after six months. Similar results were observed for IOP and BCVA.

Conclusion: Posterior Subtenon Triamcinolone (PSTT) injections are effective in diabetic macular oedema, which does not respond to intravitreal anti-VEGF (IVB) therapy.

How to cite: Habib, M. K., Shafqat, R., Oozeer Khan, Z. K., Gul, A. A., Jabeen, N., & Sadiq, M. U. (2022). Effect of Posterior Subtenon Triamcinolone Acetonide in Refractory Diabetic Macular Edema. *Pakistan Armed Forces Medical Journal*, 72(4), 1211-14.
DOI:10.51253/pafmj.v72i4.

14. Comparison of Intraocular Pressure Measurement by Goldmann Applanation Tonometer and Non-Contact Airpuff Tonometer

Abstract

Objectives: To see the effect of Posterior Subtenon Triamcinolone Acetonide (PSTT) injection in refractory Diabetic Macular Edema (DME).

Study Design: Quasi-Experimental Study. Place and Duration of Study: Retina Clinic, Al-Shifa Trust Eye Hospital, Rawalpindi, from Jun to Dec 2018.

Methodology: Patients with Clinically Significant Macular Edema (CSME), with Central Macular Thickness (CMT) >300 microns and those who did not respond to three consecutive Intra-Vitreous Bevacizumab (IVB) injections were included. Posterior Subtenon Triamcinolone Acetonide (PSTT) was administered by a single retina fellow using the same protocol. Each patient's best-corrected visual acuity (BCVA), Intra-ocular pressure (IOP) and Central Macular

Thickness (CMT) were evaluated on the day of Posterior Sub Tenon Triamcinolone Acetonide (PSTT) injection and again at 1, 3 and 6 months.

Results: Out of 52 patients (104 eyes), 16 females and 36 males were present. The mean age was 57.67±9.35 years. Out of 52 right eyes, the mean Central Macular Thickness (CMT) at the first visit was 388.83±172.04 µm, 332.81 ± 144.69 µm after one month, 292.81±147.59µm after six months of Posterior Sub Tenon Triamcinolone Acetonide (PSTT)

How to cite: Shaheen, S., Ali, M., Ali, A., Sharif, H., & Afghani, T. (2022). Comparison of Intraocular Pressure Measurement by Goldmann Applanation Tonometer and Non-Contact Airpuff Tonometer. *Pakistan Journal of Ophthalmology*,38(3).**DOI:**10.36351/pj.o.v38i3.1425

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Injection. Similarly, for 52 left eyes mean Central Macular Thickness (CMT) at the first visit is $375.79 \pm 160.81 \mu\text{m}$, $364.52 \pm 167.95 \mu\text{m}$ after one month and $323.37 \pm 155.74 \mu\text{m}$ after six months. Similar results were observed for IOP and BCVA.

Conclusion: Posterior Sub Tenon Triamcinolone (PSTT) injections are effective in diabetic macular edema, which does not respond to intravitreal anti-VEGF (IVB) therapy.

15. Uncorrected Refractive Error among Male Students of Madrassas in Rawalpindi – Pakistan

Abstract

Purpose: To determine the frequency of uncorrected refractive error and its association with use of mobile and time spent indoors, among students of madrassas in Rawalpindi.

Study Design: Descriptive cross sectional study.

Place and Duration of Study: Al-Shifa Trust, Pakistan institute of Ophthalmology, from August to December 2015.

Methods: A total of 410 male students of a Madrassa in Rawalpindi were recruited for study. The data was collected through structured questionnaires and visual status of the students was found by using Snellen visual acuity chart. Students with visual acuity of $< 6/12$ were further examined and categorized into myopia, hyperopia and astigmatism. The data was analyzed by using SPSS version 20. The statistical significance was set at 0.05. All descriptive variables were analyzed in the form of percentages and frequencies. Association among the categories was found by using Chi-Square tests of significance. Binary logistic regression analysis was done to find out the best predictors of refractive errors among Madrassa students.

Results: Out of 410 students, 119 (29%) had refractive error which was 9 times more common in mobile users than those who were not using mobile phones (OR: 9.35, 95% CI: 5.01 – 17.45). Refractive error was 2 times more common in students with no outdoor activities (OR: 1.86, 95% CI: 1.09 – 3.16).

Conclusion: Use of mobile, family history of refractive errors and outdoor activities were associated with refractive errors in madrassa students. Myopia was the commonest refractive error followed by astigmatism and hyperopia.

Keywords: Refractive errors, Myopia, Hyperopia, Astigmatism.

How to cite: Rehman AU, Sughra U, Kausar S, Riaz A, Suleman M. Uncorrected Refractive Error among Male Students of Madrassas in Rawalpindi – Pakistan: Doi: 10.36351/pjo.v38i2.1327. pak J Ophthalmol [Internet]. 2022 Jun. 18 [cited 2022 Dec. 28];38(2). DOI: 10.36351/pjo.v38i2.1327

16. Quality of Life in Cataract Patients Visiting a Tertiary Care Eye Hospital

Abstract

Background: Visual impairment caused by cataract is the major cause of treatable blindness. According to the WHO prevalence of cataract is 47.9% worldwide. Quality of life is greatly affected by cataract. Quality of life means the individuals' perception of his place in life according to the contexts of culture and values, a concept often affected by individual's psychological and physical state and social relations.

How to cite: Bacha, M., Qayyum, S., Sughra, U., Gul, N., & Abbas, S. Quality of Life in Cataract Patients Visiting a Tertiary Care Eye Hospital. Al-Shifa Journal of Ophthalmology, 64. 2021

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Objectives: The main objectives of the study were to access the quality of life of individuals before and after cataract and to find the association of quality of life with their socioeconomic factors

Materials and Methods: A cross-sectional study was carried out in Al-Shifa trust eye hospital Rawalpindi from October 2020 to February 2021. Technique used for the study was convenient sampling and sample size was 206. Structured questionnaire was used with verbal consent form to collect data.

Results: 31.6% males shows poor general health as compared to females, p-value=0.000. Illiterate patients shows high difficulties with activities 31.7% p-value=0.000. People from urban areas have more difficulties in daily life activities 33.7% having p-value 0.0004. Non-working shows poor responses to vision 42.7% value=0.000. All these shows significant results while all other categories show insignificant result.

Conclusion: The results of this study indicate that cataract affects quality of life and cataract is still the major cause of blindness and many people are unaware of it. It should be treated on time before it causes blindness. Illiterates are more affected. Education is important and awareness about cataract.

17. Visual Outcomes and Complications of Phacoemulsification for Senile Cataract in a Tertiary Care Eye Hospital

Abstract

Purpose: Cataract is one of the main causes of preventable blindness in Pakistan, the purpose of this study was to evaluate the effect of phacoemulsification on visual acuity for senile cataract as well as to track record the types of complications associated with this procedure.

How to cite: Maryam, H., Tahir, Q., & Khan, S. (2021). Visual Outcomes and Complications of Phacoemulsification for Senile Cataract in a Tertiary Care Eye Hospital. *Al-Shifa Journal of Ophthalmology*, 17(2), 52-57. 2021

Study design: Cross-sectional study.

Place and duration of study: The study was conducted at General OPD of Tertiary Eye-care Hospital of Rawalpindi, Pakistan from October 2020 to March 2021.

Materials and Methods: Participants coming for follow-up who have undergone Phacoemulsification (one-week post-op) by same consultant surgeon. An interview based structured questionnaire was used with informed consent to collect the data.

Result: A total of 290 eyes of 250 participants suffering from senile cataract were included in the study. Mean age of participants was 59 ± 7.10 years, 56% (140) of the participants were male, while 110 (44%) were female. All the surgeries were carried out by the same consultant surgeon. 60.4% (151) of the eyes were right while 55.6% (139) were left. Good final visual outcome was seen in 84.4% of the cases. Postoperative complications occurred in 5.2% of the participants.

Conclusion: The result of this study showed good final visual outcome (84.4%), which is close to the WHO recommendation of best corrected good visual outcome of 90%.

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18. 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.

Method: The prospective study was conducted at the Department of Pediatric 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 >3mm. 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 analyzed 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±1.5mm. 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 phthisic. 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.

Keywords: Keratoplasty, Corneal perforation, Corneal grafting.

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, 73(54).

19. Effectiveness of Prism Spectacles in Patients with Age Related Macular Degeneration: A randomized control trial study

Abstract

Purpose: To compare between the use of prism and the spectacles without prism in improving near vision, distance vision and quality of life in patients with AMD.

Study Design: Randomized control trial.

Place and Duration of Study: Al-Shifa Trust Eye Hospital, from October 2021 to April 2022.

Methods: Eighty-eight patients with AMD were selected and 44 patients were included in intervention group and control group each. Both interventional and control groups underwent Visual acuity (VA) for distance and near. VF-25 questionnaire was filled to evaluate quality of life (VFQoL). After prescribing prisms and simple glasses without prisms, both groups were called for a follow-up after one week and one month. VF-25 questionnaire was filled again. IBM SPSS was used for statistics. Categorical variables were presented by the

How to cite: Tanveer, M., Kiran, A., Hussain, M., & Rehman, A. (2023). Effectiveness of Prism Spectacles in Patients with Age Related Macular Degeneration: A randomized control trial study. Pakistan Journal of Ophthalmology, 39(1). DOI: <https://doi.org/10.36351/pjo.v39i1.1471>

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frequencies and percentages. Continuous variables were presented by mean and standard deviation.

Results: There were 63.64% males. Mean age of subjects was 67.28 ± 8.0 . A repeated measure ANOVA determined that mean VA for distance, near (for single opto-type and continuous text) and quality of life of intervention group and control group increased from pre-intervention to one month ($p < .0005$), and from pre-intervention to one week ($p = <0.001$), but not from one week to one month ($p = >0.005$). Mean improvement in near and distance vision was significant better in intervention group than the control group ($p = < 0.001$).

Conclusion: There was statistically significant improvement in near, distance vision and quality of life with the use of prism in AMD.

20. Demographic and Socioeconomic Characteristics of Glaucoma Suspects in a Tertiary Care Center of Pakistan

Abstract

Purpose: To describe the demographic characteristics of Glaucoma Suspects (GS) presenting to the glaucoma clinic in a tertiary care settings.

Study Design: Descriptive observational study.

Place & Duration of Study: Glaucoma clinic of Al-Shifa Trust Eye Hospital, Rawalpindi, from September 2015 to February 2016.

Methods: Patients attending the glaucoma clinic were examined and intraocular pressure (IOP), iridocorneal angles, anterior and posterior segments evaluation, vertical cup-to-disc ratio (vCDR) were measured. Retinal nerve fiber (RNFL-Global) thickness was calculated by the Optical Coherence tomography machine using software version 6.0.9. Subjects qualifying as glaucoma suspects were interviewed for demographic and systemic conditions. All the information was recorded on a predesigned proforma and descriptive statistics was used for analysis.

Results: A total of 876 patients were examined. Eighty-two (9.36%) patients fulfilled the criteria of GS. There were 57.3% females and mean age of sample was 56.78 ± 12.83 (Range 40 – 70 years). Hypertension was found in 34.1% ($n = 28$) and diabetes in 25.6% ($n = 21$). Other diseases were asthma, depression, cardiac and gastric problems. Most of the patients belonged to lower or upper lower class, which represents a huge number on socioeconomic status scale. Mean IOP (both eyes) was 13.93 ± 3.23 mmHg (range 6 – 22 mmHg). Only 5% of subjects had vCDR of > 0.8 . RNFL-Global of 79 (48.2%) eyes were within normal limits

Conclusions: Majority of GS belong to lower or lower middle socioeconomic class. The health authorities must focus on this issue to provide easily accessible diagnostic facilities for reducing the economic burden of this problem.

Keywords: Socioeconomic, Glaucoma suspects, Glaucoma, Pakistan

How to Cite: Sadiq, M., Mahsood, Y. J., Ahmad, W., Khan, M. A., & Akhtar, F. (2023). Demographic and Socioeconomic Characteristics of Glaucoma Suspects in a Tertiary Care Center of Pakistan: 10.36351/pjo.v39i1.1499. Pakistan Journal of Ophthalmology, 39(1). DOI:10.36351/pjo.v39i1.1499

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21. Frequency of Hyperopia in Children between 5 to 15 Years of Age

Abstract

Aim: To determine the frequency of hyperopia in children between 5 and 15 years of age.

Study Design: Cross sectional study.

Setting and Duration of Study: Al-Shifa Trust Eye Hospital Rawalpindi between March 2015 to September 2015.

How to cite: Arshad, M. U., Zia, S., Maqbool, A., Bhatti, R. S., Iqbal, Z., & Iqbal, Y. (2022). Frequency of Hyperopia in Children between 5 to 15 Years of Age. *Pakistan Journal of Medical & Health Sciences*, 16(04), 158-158. **DOI:** <https://doi.org/10.53350/pjmhs22164158>

Methodology: 150 children between the ages of 5-15 years were included in the study. All children with eye disorders like corneal opacity, retinoblastoma, cataracts, amblyopia, chronic metabolic disorders, and hemoglobinopathies were excluded from the study. The participants were assessed for visual acuity was checked through a LogMAR visual acuity assessment chart for each eye. Those who found to have decreased visual acuity their pin-hole visual acuity was determined and then they got thorough examination by slit lamp biomicroscopy and fundoscopy to rule out causes of decreased vision other than refractive errors.

Results: A mean (SD) age of 8.57 (2.52) years with 106 (70.76%) children between 5-10 years and 44 (29.33%) were between 11-15 years of age. Males were predominant in our study with 90/150 (60%) male patients and 60 (40%) female population. The frequency of hyperopia I our study was 93 (62%). Out of 60 female patients, 35 (58.33%) had hyperopia whereas, out of the 90 male patients, 58 (64.4%) patients had hyperopia.

Conclusion: We reported that hyperopia is a very frequent refractive disorder found in children. Male are more frequently diagnosed with the disorder between the ages of 5-10 years. Further large-scale cohorts should be conducted to determine the correlating factors that increase the risk of hyperopia and prognosis.

Keywords: hyperopia, refractive disorders, strabismus, emmetropia, ocular examination, visual acuity.

22. Cardiovascular Disorders and Dietary Total Antioxidant Capacity in Adults of Twin Cities (RWP, ISB)

Abstract

Cardiovascular diseases are increasing rapidly while there is increasing evidence about dietary antioxidants protecting oxidative stress in chronic disorders including cardiovascular diseases. The objectives of the study were to find out proportion of Dietary Total Antioxidant Capacity consumed by individual's aged 25-50 years with cardiovascular disease residing in twin cities and determining relationship between Dietary Total Antioxidant Capacity and Cardiovascular disorders of population under study. It was a descriptive cross sectional study with 227

participants. The study was conducted by making two clusters of famous parks and malls within Rawalpindi and Islamabad. Adapted Food Frequency questionnaire was used to calculate daily intake which was then multiplied to assigned ORAC/FRAP values

How to Cite: Johar, U., & Tahir, Q. (2022). Cardiovascular Disorders and Dietary Total Antioxidant Capacity in Adults of Twin Cities (RWP, ISB) *International Journal of Natural Medicine and Health Sciences*, 1(3). **DOI:** <https://doi.org/10.52461/ijnms.v1i3.899>

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to get DTAC. Daily DTAC was calculated as sum of all DTAC consumed in a day. Chi-square test of association was run which showed significant association between low dietary intakes and occurrence of cardiovascular diseases ($\chi^2 = 5.122$, (1), p-value 0.024).

Keywords: Antioxidants; Cardiovascular diseases; Daily DTAC; Dietary antioxidants; DTAC; Oxidative stress.

23. Ring-shaped cataract and urinary metabolites among 2,4,6-trinitrotoluene exposed population of Pakistan

Abstract

Background: Safety protocols are usually neglected among most of the trinitrotoluene (TNT)-exposed population, therefore, rendering the community prone to various occupational hazards. The current study highlights ring-shaped cataract and urinary metabolites of TNT among TNT-exposed population ($n = 26$) against a control group ($n = 20$).

Method: An observational case-control study was carried out in two groups: subjects exposed to TNT in Dir and Bajour Agency, Pakistan, and a control group from the base hospital. We determined the presence of ring-shaped cataract and urine metabolites of TNT using slit-lamp biomicroscope and gas chromatography-mass spectrometric analysis, respectively.

Results: Results substantiate a high level of urine metabolites for exposed subjects compared to the control group ($p < 0.001$). Age had no significant effect ($p > 0.05$) on the presence of ring-shape cataract and the level of urinary metabolites of TNT, while duration of exposure showed significant effect ($p < 0.001$). Females showed high incidence of ring-shaped cataract and urinary metabolites of TNT than men ($p < 0.001$). The mean age of the exposed subjects was 51 ± 14.38 (Mean \pm SD) years. The mean year of exposure was 49 ± 5 (Mean \pm SD) years.

Conclusion: This study showed TNT as a risk factor for the presence of ring-shaped cataract among TNT-exposed group in Pakistan. It is important to screen exposed community for the presence of ring-shaped cataract, and pre-clinical identification of TNT adducts to prevent systemic complications.

Keywords: Ring-shaped cataract· TNT exposure· Urinary metabolites of TNT and 4-ADNT

How to cite: Sarwat, S., Akhtar, A., Dayan, S. F. A., Shaheen, N., Durrani, H. S., Usman, T., & Afghani, T. (2022). Ring-shaped cataract and urinary metabolites among 2, 4, 6-trinitrotoluene exposed population of Pakistan. *International Ophthalmology*, 1-6. DOI: 10.1007/s10792-022-02252-2

24. Primitive myxoid mesenchymal tumours of infancy: first case surrounding the optic nerve

Case Report

Primitive myxoid mesenchymal tumour of infancy is a rare form of sarcoma presenting in infancy. It was first described by Alaggio et al. in 2006 as a primitive mesenchymal soft tissue sarcoma without any distinctive lineage of differentiation. The tumours described initially occurred on the trunk, head, neck,

How to cite: Taimur, F., Akbar, M., Manzoor, A., Afghani, T., & Asif, M. (2022). Primitive myxoid mesenchymal tumours of infancy: first case surrounding the optic nerve. *Canadian Journal of Ophthalmology*. DOI: 10.1016/j.cjjo.2022.07.002

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extremities, chest, scalp, abdomen, back, or limbs. The tumours initially may be diagnosed as and placed under the broad umbrella of sarcomas, but immunohistochemical and genetic analyses have now categorized the tumour as a definite entity.

We are reporting here a case of primitive myxoid mesenchymal tumours of infancy surrounding the optic nerve. This is the first case reported in this location. The primitive myxoid mesenchymal tumour occurring in association with the optic nerve has not been reported before. A 1-year-old female child presented with left proptosis since birth that was progressively increasing. On initial examination, she was a healthy child achieving normal milestones. Ophthalmic examination revealed left axial proptosis of 5 mm compared with the right eye. Extraocular movement, pupillary reactions, and fundus examination were normal. Examination of the right eye was unremarkable. No abnormality was found on her systemic examination. On magnetic resonance imaging there was a large retro-ocular mass that seemed to be arising from the optic nerve, pushing the globe forward (Fig. 1). Anterolateral trans conjunctival orbitotomy was performed, and an unusual-looking dark violet-colored mass was seen, oozing with viscous fluid, and apparently surrounding the optic nerve (Fig. 2).

To the best of our knowledge, the mass was surrounding the optic nerve snugly, apparently not arising from it. The mass was removed in part. The biopsy was subjected to histopathologic examination (Fig. 3), and it showed sheets and scattered dyshesive ovoid to polygonal cells with eosinophilic cytoplasm and pleomorphic hyperchromatic nuclei in a background of myxoid stroma, suggesting soft tissue sarcoma. Immunohistochemistry showed tumour cells that were vimentin positive, the Ki-67 level was 70%, and epithelial membrane antigen staining was weakly focally positive. Immunoperoxidase stains (Fig. 4) were positive for the BCOR gene. However, molecular (cytogenetics) studies were not done. Clinical validation of BCL-6 corepressor (BCOR) was done via immunohistochemistry. The clones of antibodies used were BSB-128. Based on histopathologic examination and immunohistochemistry, a diagnosis of primitive myxoid mesenchymal tumours of infancy was made. After 8 months, patient presented with recurrence. The recurrence was more aggressive than the primary presentation. It was locally aggressive and recurred because of incomplete removal, lesser understanding of the disease, and limited treatment options, that is, local resection. It was a painful blind eye due to severe exposure keratopathy and impending perforation. Enucleation of her left globe with removal of the residual tumor was carried out. The mass removed was subjected to histopathologic examination, which was consistent with the primary diagnosis of primitive myxoid mesenchymal tumours of infancy. The occurrence of soft tissue sarcomas in infancy is rare, but the most common ones are embryonal rhabdomyosarcoma, congenital fibrosarcoma, Ewing sarcoma, and primitive sarcoma such as undifferentiated sarcoma.

The first case of primitive myxoid mesenchymal tumour of infancy in orbit was reported by Hayes et al. involving an otherwise healthy 8-month-old female with a 6-week history of progressive proptosis. The tumour was along the lateral wall of the orbit. Initially, the patient underwent debulking biopsy with the residual disease, which recurred 12 months after the first surgery. In our case, the tumour was seen to be surrounding the optic nerve, which has not been reported before.

The patient presented with regrowth 8 months after the initial surgery, which unfortunately ended up in enucleation. There was an early recurrence of the tumour in both reported cases. This indicates the aggressive behavior of the tumour and the dire need for complete excision to prevent the recurrence of the residual disease. The case presented here is unique because it is the first case of primitive myxoid mesenchymal tumours of infancy surrounding the optic nerve. To our knowledge, no other case has been reported so far. The only case of orbital

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tumour reported in 2020 was extraconal, arising in the lateral wall of the orbit and sphenoid trigone and extending into the lateral orbit. Both patients were female. In 2006 Alaggio et al. reported 6 cases of primitive myxoid mesenchymal tumours of infancy. Of these, 3 cases were congenital. These tumours occurred in the trunk, extremities, and head and neck. In 2010, Mulligan et al. reported a case with a tumor occurring on the thenar eminence. After conservative excision, the lesion recurred, necessitating partial amputation because it was unresponsive to chemotherapy.

Primitive myxoid mesenchymal tumor of infancy is a rare entity. It is a tumour of early childhood characterized by local infiltration of surrounding structures that is aggressive and has a poor response to chemotherapy, but metastases are rare. In 2019, the first case of primitive myxoid mesenchymal tumour of infancy with brain metastasis was reported by Saeed et al.

The metastasis occurred in the cerebellum, and the primary tumour was located in the extremity and had already been treated with surgery and chemotherapy. Immunohistochemistry has an important role in diagnosing different types of mesenchymal tumours. The biological insight into various tumour types is amplified by locating the genomic alteration in various mesenchymal neoplasms.

In primitive myxoid mesenchymal tumour of infancy, on immunohistochemical analysis, diffuse reactivity is seen for vimentin, whereas there is no reactivity for muscle-specific actin, S-100, desmin, or myogenin.

In the case reported here, vimentin was positive, the Ki67 level was 70%, and epithelial membrane antigen staining was weakly focally positive. All skeletal muscle markers were negative, whereas immunoperoxidase stain was positive for BCOR. The immunoperoxidase technique is one of the methods used in immunohistochemistry, and in our case, BCOR was tested using the same technique. BCOR is a gene encoding for an epigenetic regulator involved in body structure development and cell differentiation. In almost all cases of primitive myxoid mesenchymal tumours of infancy, overexpression of BCOR is seen. Primitive myxoid mesenchymal tumour of infancy is a myofibroblastic tumour with a low potential for metastasis but a high local recurrence rate.

The occurrence of this rare entity in orbit is unique; on a literature search, we found that only one other case has been reported previously. This is the second case we are reporting here. The location of the tumour in orbit is different in each case. Both patients were female, and both presented with recurrence within 1 year of the initial surgery, emphasizing the fact that complete and meticulous surgical excision is required because the response of the tumour to chemotherapy is poor and the chances of the early recurrence from the residual disease are very high.

25. Possible abnormal origin of inferior oblique from a congenital dermoid cyst: A case report

Abstract

A 4-year-old female child presented with a cystic swelling medially along the floor of the orbit with mild ipsilateral medial canthus dystopia on the left side. This swelling was present since birth with no significant orbital dystopia or any extraocular

How to cite: Sardar U, Taimur F, Manzoor A, Akbar M, Ahmad S, Afghani T. Possible abnormal origin of inferior oblique from a congenital dermoid cyst: A case report. Indian J Ophthalmol Case Rep 2022;2:531-3.
DOI: 10.4103/ijo.IJO_1926_21

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movement defects. During surgery, a trilobed yellowish cyst was found near the inferomedial wall of the orbit. Incidentally, the inferior oblique muscle was found to be originating from the medial lobe of the cyst. The cyst was removed completely, and the inferior oblique was reinserted to the inferomedial orbital margin. Histopathology was consistent with dermoid cyst. To the best of the authors' knowledge, the case of abnormal origin of inferior oblique muscle from an orbital dermoid cyst has not been reported before.

Keywords: Abnormal origin, dermoid, extraocular muscle, inferior oblique

26. Risk Perception about Communicable and Vector Borne Diseases in International Travelers at Islamabad International Airport, Pakistan. April to June 2021 / A Cross Sectional Study

Abstract

Background: Travelers are always at risk of exposure to any new communicable or vector borne disease when they travel from one geographical area to another. This study was aimed to determine the risk perception about communicable and vector borne diseases among international travelers arriving to Islamabad from different regions of the world.

Objective: Relatively little is known about how travelers know and perceive the health risks associated with travel and how they utilize preventive measures before and while traveling abroad. This study will assess the risk perception of international travelers about communicable and vector borne diseases which will help in decreasing global burden of diseases.

Methods: 426 participants were included through convenient sampling. Tool to collect information was an already validated Questionnaire. Chi square test was applied to find out any significant association between dependent and independent variables.

Results: The level of risk perception was calculated by summing scores of knowledge, attitude and practices of international travelers regarding communicable and vector borne diseases, out of 426 respondents only (53 %) had a high risk perception whereas (47%) had a low risk perception. A significant association was found between level of risk perception and gender χ^2 20.9, P-value = 0.000, level of education χ^2 42.9, P-value = 0.000, nationality χ^2 7.5, P-value = 0.006 and region of arrival of the passengers χ^2 26.2, P-value = 0.000.

Conclusions: The study results revealed that most of the travelers arrived at Islamabad Airport had a low risk perception about communicable and vector borne diseases that may lead to increase in burden on health care system in Pakistan as well as export of any new disease from Pakistan to other parts of the world where it does not exist already.

How To Cite: Saeed S, Tahir Q, Kawish AB, Malik MW, Tahir I, Khan MA, Bushra H, Ikram A Risk Perception about Communicable and Vector Borne Diseases in International Travelers at Islamabad International Airport, Pakistan. April to June 2021 / A Cross Sectional Study JMIR Preprints. 21/02/2022:37132 DOI: [10.2196/preprints.37132](https://doi.org/10.2196/preprints.37132)

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27. Mutation screening of the CYP1B1 gene reveals thirteen novel disease-causing variants in consanguineous Pakistani families causing primary congenital glaucoma

Abstract

Background: Primary congenital glaucoma (PCG) is a heterogeneous rare recessively inherited disorder prevalent in regions with high consanguinity. Disease phenotype is associated with increased intra ocular pressure and is a major cause of childhood blindness. Sequence variations in Cytochrome P450 1B1 (CYP1B1) gene are a major cause of PCG. Current study was conducted to screen CYP1B1 gene in highly consanguineous PCG affected families from Pakistani population consistent with the autosomal recessive pattern of PCG inheritance.

How to cite: Tehreem, R., Arooj, A., Siddiqui, S. N., Naz, S., Afshan, K., & Firasat, S. (2022). Mutation screening of the CYP1B1 gene reveals thirteen novel disease-causing variants in consanguineous Pakistani families causing primary congenital glaucoma. *Plos one*, 17(9), e0274335. **DOI:** 10.1371/journal.pone.0274335

Methods: For this study, patients and controls (clinically unaffected individuals of each family) from 25 consanguineous families belonging to Punjab, Baluchistan and Khyber Pakhtunkhwa, Pakistan were recruited through ophthalmologists. DNA was isolated from collected blood samples. Genetic screening of CYP1B1 gene was done for all enrolled families. In-silico analysis was performed to identify and predict the potential disease-causing variations.

Results: Pathogenicity screening revealed sequence variants segregating with disease phenotype in homozygous or compound heterozygous form in eleven out of 25 analyzed families. We identified a total of sixteen disease causing variants among which five frameshift i.e., c.629dup (p.Gly211Argfs*13), c.287dup (p.Leu97Alafs*127), c.662dup (p.Arg222Profs*2), c.758_759insA (p.Val254Glyfs*73) and c.789dup (p.Leu264Alafs*63), two silent c.1314G>A, c.771T>G and six missense variations c.457C>G (p.Arg153Gly), c.516C>A (p.Ser172Arg), c.722T>A (p.Val241Glu), c.740T>A (p.Leu247Gln), c.1263T>A (p.Phe421Leu), and c.724G>C (p.Asp242His) are previously un reported. However two frameshift c.868dup (p.Arg290Profs*37), c.247del (p.Asp83Thrfs*12) and one missense variant c.732G>A (p.Met244Ile), is previously reported. Furthermore, six polymorphisms c.1347T>C, c.2244_2245insT, c.355G>T, c.1294G>C, c.1358A>G and c.142C>G were also identified. In the intronic region, a novel silent polymorphism i.e., g.35710_35711insT was found in homozygous state. All the newly detected disease-causing variants were negative in 96 ethnically matched controls.

Conclusion: Among twenty-five screened families, eight families (PCG50, 52-54, 58, 59, 63 and 67) were segregating disease causing variants in recessive manner. Two families (PCG049 and PCG062) had compound heterozygosity. Our data confirms genetic heterogeneity of PCG in Pakistani population however we did not find molecular variants segregating with PCG in fifteen families in coding exons and intron-exon boundaries of CYP1B1 gene. Genetic counseling was provided to families to refrain from practicing consanguinity and perform premarital screening as a PCG control measure in upcoming generations.

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28. Targeted gene sequencing of FYCO1 identified a novel mutation in a Pakistani family for autosomal recessive congenital Cataract

Abstract

Background: Congenital cataract is causing one - third of blindness worldwide. Congenital cataract is heterogeneous in its inheritance patterns. The current study is aimed to explore the unknown genetic causes underlying congenital cataracts.

Methods: Blood samples from affected and normal individuals of n=25 Pakistani families identified with congenital cataracts were collected. Genomic DNA was extracted and Sanger sequencing was performed to identify novel pathogenic variants in the FYCO1 (MIM#607182) gene. Later structural bioinformatics tools and molecular dynamics simulations were performed to analyze the impact of these variants on protein structure and function.

Results: Sanger sequencing resulted in the identification of a novel splice site mutation (NM_024513.3: c.3151- 29_3151- 7del) segregating in an autosomal recessive manner. This novel variant was confirmed to be absent in the n=300 population controls. Further, bioinformatics tools revealed the formation of a mutant protein with a loss of the Znf domain. In addition, we also found a previously known (c.4127 T > C; p.Leu1376Pro) mutation in four families. We also re-report a novel heterozygous variant (c.3419G > A; p.Arg1140Gln) in another family.

Conclusions: In conclusion, we report a novel deletion (NM_024513.3: c.3151- 29_3151- 7del) in one family and a frequent homozygous missense mutation (c.4127 T > C; p.Leu1376Pro) in four Pakistani families. The current research highlights the importance of autophagy in lens development and maintaining its transparency.

Keyword: Sautophagy, autosomal recessive, congenital cataract, FYCO1, lens Funding information.

How To Cite: Saleem, R. S., Siddiqui, S. N., Irshad, S., Ashraf, N. M., Hamid, A., Khan, M. A. U., Khan, M. I., & Micheal, S. (2022). Targeted gene sequencing of jFYCO1 identified a novel mutation in a Pakistani family for autosomal recessive congenital cataract. *Molecular Genetics & Genomic Medicine*,00,e1985. <https://doi.org/10.1002/mgg3.1985>

29. Efficacy and Safety Profile of 25-Gauge Pars Plana Vitrectomy in Rhegmatogenous Retinal Detachment in Pakistan: A Multicenter Retrospective Study

Abstract

Introduction: This study aims to evaluate the primary anatomical success and visual outcomes of 25-gauge pars plana vitrectomy (25g PPV) in patients with rhegmatogenous retinal detachment (RRD) in Pakistan.

Design: This is a five-year retrospective, interventional cohort study conducted at tertiary care hospitals in Pakistan from October 2013 to October 2018.

How to cite: Awan, M. A., Hussain, S. Z. M., Shaheen, F., Humayun, M. B., Zeb, N. T., Ayub, B., & Siddiqui, M. R. (2022). Efficacy and Safety Profile of 25-G`auge Pars Plana Vitrectomy in Rhegmatogenous Retinal Detachment in Pakistan: A Multicenter Retrospective Study.*Cureus*,14(3).DOI:10.7759/cureus.s.23437.

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Methods: This is a retrospective, interventional cohort study of 418 consecutive patients with RRD who underwent 25g PPV. All surgeries were performed by two experienced surgeons at tertiary care hospitals in Pakistan. Consecutive patients who underwent 25g PPV surgery as the treatment for RRD from October 2013 to October 2018 were included. We excluded patients who had a history of previous retinal surgery or did not complete the 4-8 weeks of primary outcome visit. We used the Statistical Package for the Social Sciences (SPSS) version 23.0 (IBM Corporation, Armonk, NY, USA) for statistical analysis. A p-value of <0.05 was considered significant.

Results: We identified 452 patients through the coding system of our hospitals who underwent 25g PPV surgery for RRD during the study period. A total of 441 patient files were reviewed for the study, of which 418 patients met the criteria for final analysis. The mean age was 49 ± 15.8 years. There was a higher number of males ($n = 284$, 67.9%). In our study, 186 (44.4%) patients were phakic at the time of presentation. The macula was detached in 361 (86.4%) patients. At the primary outcome visit (4-8 weeks of follow-up), the primary anatomical success rate was 89.47%. The most common cause of failure was proliferative vitreoretinopathy (PVR) ($n = 20$), followed by missed breaks ($n = 5$).

Conclusions: The surgical outcomes of RRD with 25g PPV surgery in our study were similar to the outcomes reported in the developed world. We propose a prospective multicenter national study to prospectively evaluate the risk factors for RRD surgical failure in the Pakistani population.

30. Knowledge and Practices Regarding Self-medication of Ophthalmic Products in Rawalpindi

Abstract

Purpose: The main aim of this study was to assess the knowledge and practices regarding self-medication of ophthalmic products and to determine the factors leading to self-medication in local setting Rawalpindi, Pakistan.

How to cite: Fayyaz, A., Nabeel, K., Azam, S., Ambreen, F., & Firdous, M. Knowledge and Practices Regarding Self-medication of Ophthalmic Products in Rawalpindi. Al-Shifa Journal of Ophthalmology, 136. 2021

Materials and Methodology: A cross-sectional study was carried out at Outdoor Patient Department (OPD) of tertiary care hospital from November 2019 to December 2019. A total of 300 individuals, who first time visited tertiary care eye hospital, were interviewed using a structured questionnaire.

Results: Out of 300, 65.67% individuals had good knowledge regarding ophthalmic products while only 6.67% had good practices. Chi square test of independence was used to find association between independent variables (age, gender, education, marital status and residence) and dependent variables (knowledge and practices). Statistically significant association was found among knowledge, practices and sociodemographic factors ($p < 0.05$).

Conclusions: Individuals despite having good knowledge were poorly practicing self-medication with ophthalmic products. Knowledge about ophthalmic drugs was significantly associated with sociodemographic factors such as gender, education and residence. Young people had more good practices. Poor knowledge about side effect of drugs can have serious consequence on visual outcome.

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31. Retinoschisis-An Optometric Approach

Abstract

Retinoschisis is a rare condition that can have serious visual consequences if not managed properly. Retinoschisis is described as a separation of the neurosensory components of the retina. This case report discusses asymptomatic acquires retinoschisis as it presented within a routine diabetic examination. The patient presented in OPD for regular check-ups she only had complaints of intermittent migraines without diplopia her visual acuity was normal with routine refraction. On fundus examination, there was a bubble-like appearance of the retina in the inferior temporal quadrants of the left eye bubble-like appearance of the retina with white dots in the lesion in the inferior temporal region of the right eye. This case report explores important clinical findings, treatment options, differential diagnoses, and the optometrist's role in managing this condition.

How to cite: Sehar, N., & Ullah, F. Retinoschisis-An Optometric Approach. Al-Shifa Journal of Ophthalmology, 93.

Al-Shifa Journal of Ophthalmology 2021; 17(2):93-97. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.

32. Comprehensive overview of IRVAN syndrome: a structured review of Case Reports and Case Series

Abstract

Idiopathic retinal vasculitis, aneurysms, and neuroretinitis (IRVAN) syndrome is a rare spectrum of retinal vasculitis, aneurysms, and neuroretinitis affecting young individuals in their third decade. Most of our current knowledge is based on case reports, case series, and a handful of collaborative studies. There is much diversity in treatment approaches and outcomes in the reported literature. We have aggregated published case reports and case series into quantitative and narrative synthesis to draw evidence-based conclusions toward clinical features, atypical and rare findings, systemic associations, disease course, and treatment outcomes. The analysis suggested the disease mostly affects young individuals with a female predilection. Anterior chamber and vitreous inflammation are common than previously believed. The most prevalent pattern of retinal vasculitis in IRVAN eyes is mixed vasculitis, followed by arteritis and phlebitis. Most eyes at the time of presentation have capillary no perfusion and require treatment. Most eyes retain good visual acuity; however, treatment is required to maintain visual function. Intravitreal anti vascular endothelial growth factors administered as an adjunct to retinal laser photocoagulation are more likely to improve visual outcomes. Besides, we have discussed the different hypotheses on the etiopathogenesis of the disease and stronger evidence suggests an inflammatory origin of the disease.

How to cite: Khan, H. A., Khan, Q. A., Shahzad, M. A., Awan, M. A., Khan, N., Jahangir, S., ... & Saatci, A. O. (2022). Comprehensive overview of IRVAN syndrome: a structured review of Case Reports and Case Series. Therapeutic Advances in Ophthalmology, 14, 25158414211070880. DOI: org/10.1177/25158414211070880

Results: Demographics and Clinical Features Total 116 eyes from 60 patients, 35 (58.3%) females, were included for baseline and demographic analysis. Mean \pm SD age was 30.284 \pm 15.28 years. Table 1 shows baseline clinical features across genders. Baseline visual acuity

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ranged from hand motion to 20/12. There was no difference between genders in terms of visual acuity. Fifty-five patients, 33 females, had bilateral disease, while four patients (two females) had unilateral disease. Of 116 eyes, there were mild cells and/or flare in 23 (19.2%) and the anterior chamber (AC) was quiet in 90 (75%) eyes. While the status of AC was not reported for three eyes, anterior chamber.

Keywords: anti-VEGF, IRVAN syndrome, neuroretinitis, posterior uveitis, retinal aneurysms, retinal vasculitis

33. Role of Ultrasonography in Detecting the Posterior Segment Pathologies in Pre-operative Cataract Patients

Abstract

Objectives: To study the role of B scan in detecting the posterior segment pathology in preoperative cataract patients.

Study design: A cross sectional descriptive study
Place and Duration of Study: The study was carried out at Department of Clinical Ophthalmology, Khyber

girl's medical college, Hayatabad Medical Complex (HMC), Peshawar from 15th August 2019 to 15th February 2020.

Materials and Methods: This was a cross-sectional descriptive study. There were 317 eyes of 260 patients and both male and female were included in the study. First the visual acuity and detail slit lamp examination of all the patients was carried out in the OPD. Then ultrasonography was performed in all the patients with dense cataract to evaluate the posterior segment pathology and the findings was documented in proforma.

Results: In this study, we evaluated 317 eyes of 260 patients who present with dense cataract to the OPD of eye department. Among 260 patients, 58 (22.3%) patients develop cataract after a history of trauma while 202 (77.7%) have no history of trauma. On ultrasound examination 215 (67.8%) patients have no posterior segment pathology but in 102 (32.2%) patients a significant posterior segment pathology was detected. Posterior vitreous detachment (PVD) and vitreous opacities was the most common pathology among the dense cataract eyes which was 7.6% and 5.7% respectively. Which was followed by retinal detachment (4.7%) and vitreous hemorrhage in 4.7% eyes of dense cataract.

Conclusions: It was concluded that in the preoperative dense cataract patients, the two-dimensional ultrasonography was the most effective tool in detecting the posterior segment pathology. It will also affect the strategy of the surgical procedure, outcome of the surgery and postoperative visual prognosis.

Al-Shifa Journal of Ophthalmology 2021; 17(3):103-108. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.

How to cite: Karim, S., ur Rehman, H., & Ahmad, A. Role of Ultrasonography in Detecting the Posterior Segment Pathologies in Pre-operative Cataract Patients. Al-Shifa Journal of Ophthalmology, 103.

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34. Study to Determine the Outcomes of Congenital Cataract Surgery

Abstract

Objective: The aim of this study is to determine the outcomes of congenital cataract surgery. Place and Duration: Ophthalmology department of Hayatabad Medical complex Peshawar and Al-Shifa Trust Eye Hospital Rawalpindi for the duration from January 2022 to June 2022.

Methods: A total of 200 eyes of 130 patients aged 3 to 8 with visually significant congenital cataracts (diameter ≥ 3 mm) were included in the interventional study. In all cases, posterior capsulotomy and anterior vitrectomy were performed. All patients were followed-up for six months. At follow-up; the patients' surgical complications were managed along with treatment of amblyopia and visual acuity assessment was done. After six-months of follow-up; final outcome of congenital cataract surgery in relation of visual acuity was evaluated.

Results: At the conclusion of the study, good vision was achieved in 52% of patients, and the better visual outcome was higher significantly in the younger age groups. The communal complication in our analysis was the fibrinous reaction.

Conclusions: This study shows that early surgery for congenital cataract is beneficial and safe practice to obtain good visual acuity.

Keywords: Congenital Cataract, Amblyopia, Visual Outcomes.

How to cite: Zahir, K. K., Bhatti, S. A., Khan, M. A., Rafe, A., Saleem, H., & Aziz, A. (2022). Study to Determine the Outcomes of Congenital Cataract Surgery. *Pakistan Journal of Medical & Health Sciences*, 16(10), 584-584. **DOI:** <https://doi.org/10.53350/pjmhs221610584>

35. COVID-19 Pandemic: A Cross-sectional study among Eye Care Practitioners

Abstract

Purpose: To access knowledge, attitude, and practices of Eye care practitioners (ECPs) towards COVID-19 guidelines and to determine their knowledge about use of Personal Protective Equipment (PPE).

Methods: A cross-sectional study was conducted in Tertiary eye hospitals of Rawalpindi and Islamabad, from October 2020 to March 2021. A total of 270 Eye care practitioners currently working in public and private hospitals were included in this study. Non-probability convenient sampling technique was used. Data was collected from individuals through an interview-based questionnaire after taking consent. Data was coded and analyzed by using SPSS version 26. The Chi-square test was used for further analysis.

Results: Mean age of participants was 29.85 ± 7.482 years, ranging from 18 to 65 years. Females (67%) were slightly outnumbered than males of the total sample. Moreover, 50% of the respondents had adequate knowledge about COVID-19 while only 39.3% had a positive attitude towards COVID-19. Hours of practice and years of experience had an association with knowledge. Good practices were observed by only 43.3% of the total sample. Practices had an association with the department of work of ECPs.

How to cite: Shakeel, H., Ayyub, F., Kausar, S., Gul, N., & Khalid, B. (2023). COVID-19 Pandemic: A Cross-sectional study among Eye Care Practitioners: 10.36351/pjo.v39i1.1501. *Pakistan Journal of Ophthalmology*, 39(1). **DOI:** <https://doi.org/10.36351/pjo.v39i1.1501>

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Conclusion: There is scarcity of knowledge among ECPs about COVID-19 and its preventive measures. Less than 50% ECPs with positive attitude and good practices towards COVID-19 indicate a dire need to train them for use of PPEs.

36. Predictors of late presentation of diabetic retinopathy: a missed opportunity for health systems in Pakistan

Abstract

Diabetic retinopathy is one of the most common complications of diabetes which can lead to visual impairment or even blindness. However, early detection and prompt treatment can reduce the risk of visual impairment significantly. Therefore, it is important to detect the socioeconomic predictors of late presentation of diabetic retinopathy which was the objective of this study.

How to cite: Khan, S. A., Syed, A. N., Nasim, M., Naqvi, S. A. H., & Masud, H. (2022). PREDICTORS OF LATE PRESENTATION OF DIABETIC RETINOPATHY: A MISSED OPPORTUNITY FOR HEALTH SYSTEMS IN PAKISTAN. *Canadian Journal of Applied Sciences*, 12, 1-9. DOI: <https://doi.org/10.21065/1925-7430.12.1>

37. Risk Factors Involved in Recurrence of Pterygium Excision after Surgical Excision

Abstract

Aim: To determine the effect of the type and size of growth, sex and patients age, and the application of mitomycin-C intraoperatively and its application duration effect on pterygium recurrence afterwards excision.

Study Design: A retrospective and descriptive case series.

How to cite: Waseem, M., Bhatti, S. A., Khan, M. A., Babar, Z. U., Rafe, A., & Saleem, H. (2022). Risk Factors Involved in Recurrence of Pterygium Excision after Surgical Excision. *Pakistan Journal of Medical & Health Sciences*, 16(11), 479-479. DOI: <https://doi.org/10.53350/pjmhs20221611479>

Place and Duration: In Al-Shifa Trust Eye Hospital, Rawalpindi and the department of Ophthalmology CMH, Lahore for the duration from November 2022 to April 2022.

Methods: Data files from 80 patients (80 eyes) who underwent bare sclera technique surgery with MMC at 0.2 mg / ml (0.02%) and application time ranging from 1 to 5 mints. The study included 60 males and 20 females with 46.4 years of mean age (16 to 60 years). Cases were classified according to sex, age, pterygium type and size and MMC application time. The main outcome measures were to compare the eye affected by the pterygium for any type of recurrence after at least 1-year of follow-up.

Results: In our case series, the rate of pterygium recurrence was 10% in the mean follow-up of 1 year. The influencing factors like younger age at admission (<50 years), secondary pterygium ($p = 0.330$) was suggestively related with pterygium recurrence. There was a clear tendency of less rate of recurrence with smaller pterygium size, with MMC administration times greater than 3 minutes. However, it was not possible to obtain statistical significance due to the smaller sample size.

Conclusions: This study results propose that younger age < 50-years, a history of multiple recurrences, increased size and a duration of MMC administration < 3 mints are risk factors for postoperative recurrence of pterygium.

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38. Association between Central Corneal Thickness and Intra Ocular Pressure in Management of Primary Open Angle Glaucoma

Abstract

Purpose: To assess the differences between intraocular pressure measured by Goldman Applanation Tonometer and adjusted value of intraocular pressure (IOP) based on central corneal thickness (CCT) and emphasize the significance of use of this adjusted value IOP based on central corneal thickness for management of Glaucoma.

How to cite: Ali, S., Haider, M. A., Usman, N., & Rasheed, H. U. Association Between Central Corneal Thickness and Intra Ocular Pressure in Management of Primary Open Angle Glaucoma. Al-Shifa Journal of Ophthalmology, 109. 2021

Methodology: Patients of primary open angle glaucoma meeting the criterion coming to glaucoma clinic Mayo Hospital Lahore were included in the study. After taking informed consent patients were examined on slit lamp, IOP by GAT was taken with & without CCT (done by pachymeter). Probe of pachymeter after sterilization touched the center of the cornea and average of five consecutive readings in micrometer with standard deviation of three were taken. The adjusted IOP and target IOP was calculated. Visual field (VF) and Optical Coherence Tomography (OCT) were performed and previous treatment noted and change in treatment made according to adjusted IOP. Comparison was seen between the both treatment strategies that is treatment on bases of IOP without CCT and with CCT.

Results: Out of 105 patients, 40.9% males and 59% females were included in this study. The male corneas were found to be thinner in the range 445-617 micrometer with the mean 523 micrometers than females in the range of 475-650 micrometers with the mean of 552 micrometers. In our study it was found that there is a positive relationship between adjusted IOP based on CCT and treatment according to it where $r = 0.723$ and $p = 0.000$, which is less than $p = 0.05$ and shows significant results. Pearson correlation results shows positive direct relationship by adjusting IOP based on CCT and treatment affect according to adjusted IOP.

Conclusion: Exact/adjusted IOP help in accurate assessment and management of glaucoma and imparts less financial burden on the society. Al-Shifa Journal of Ophthalmology 2021; 17(3):109-116. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.

39. Assessment of Tear Film Stability in Patients with Pterygium

Abstract

Objectives: To assess tear film instability in pterygium patients and to compare tear film stability in different grades of pterygium.

How to cite: Kiran, A., Abbas, S., Gul, N., Jabbar, M., & Qayyum, S. Assessment of Tear Film Stability in Patients with Pterygium. Al-Shifa Journal of Ophthalmology, 123.

Methodology: Descriptive cross-sectional study was carried out from October 2017 to May 2018 at Madina Teaching Hospital, Faisalabad Ophthalmology Department. Pterygium patients of all

grading with age ranging from 30 to 60 years were included. Total population of 30 subjects of both genders was included. Slit lamp examination was performed to assess ocular surface pathologies and tear breakup time test was measured with fluorescein strips. Data analysis was done, using SPSS 20 software. To compare tear film stability in different grades of pterygium, the association was determined using chi-square test.

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Results: Total 30 subjects; there were 20 (66%) males and 10 (33%) females. Tear film instability was noted in majority of pterygium patients with TBUT < 10 seconds. The results were significant with level of significance 0.001. The mean of TBUT test value was 5.567 ± 2.956 seconds. In total 20 right eye cases, 7(35%) had Grade-I pterygium, 3 (15%) had GradeII pterygium and 10(50%) patients had Grade III pterygium. In total 10 left eye cases, 2(20%) cases had Grade I pterygium, 7(70%) cases had Grade II and 1(10%) case had present Grade III.

Conclusion: The result showed that there was significantly tear film instability present in pterygium patients and mostly patient reported in grade 3 showed that as disease worsens TBUT also decreases.

Al-Shifa Journal of Ophthalmology **2021**; 17(3):123-127. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.

40. Laparoscopic Cholecystectomy in a Rare Case of Situs Inverses Totalis Laparoscopic Cholecystectomy in Left Sided Gallbladder

Abstract

Situs inversus is a rare congenital anomaly with an abnormally positioned gall bladder to the left side. Normally these patients live up to their normal life expectancy but in a few with cardiac abnormalities, it might be reduced. The formation of gallstones in these patients is a fairly common condition. The condition may be asymptomatic but can often produce epigastric or left hypochondrial pain associated with nausea. The following report is a rare case of left sided gallbladder with mirror image anatomy of abdominal viscera. Mostly these patients are managed with open cholecystectomies but we performed Laparoscopic Cholecystectomy in this case.

How to cite: Imran, M., Khan, A., Sughra, U., Bhatti, S. I., & Taimur, M. (2022). Laparoscopic Cholesystectomy in a Rare Case of Situs Inversus Totalis: Laparoscopic Cholesystectomy in Left Sided Gallbladder. Foundation University Medical Journal, 5(1), 30-31.

41. Frequency of asthenia symptoms among tailors of Rawalpindi: A cross-sectional survey

Abstract

Introduction: Textile experts perform extensive close labor in small, densely packed workstations, exposing themselves to a variety of ocular and vision-related issues.

Objectives: To find the frequency of asthenopic symptoms among tailors and to associate their asthenopia with their working environment profile which includes many factors such as lighting conditions, position blubs, working hours, working days, and taking breaks during work.

How to cite: Zafar, A., Ahmad, S., Ali, K. N., Khalid, B., & Ayyub, F. (2022). Frequency of asthenopia symptoms among tailors of Rawalpindi: A cross-sectional survey. Journal of Shifa Tameer-e-Millat University, 5(1), 32-36.
DOI:
<https://doi.org/10.32593/jstmu/Vol5.Iss1.191>

Methodology: This cross-sectional study was conducted over five months from October 2018 to February 2019 and it included 325 sewing professionals of garments (tailors) from the tailoring market of Rawalpindi. Study subjects were interviewed through a structured

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questionnaire that included demographic, working profiles, and symptoms of asthenopia. Data were analyzed by using SPSS version 21. The Chi-square test was used to check the association of dependent and independent variables.

Results: A total of 325 subjects were included in this study. In the current study total of 48% of the asthenopia is present in tailors. Almost every patient presented with more than one complaint. The most frequent asthenopic symptoms were headache 54.5% followed by watering of the eyes 44.6% and blurriness of vision 44.3%. A significant association was

found between asthenopia and lighting conditions with a p-value of 0.01. The working days and spectacle-wearing were also significantly associated with asthenopia.

Conclusion: This study showed a relatively high frequency of asthenopia among subjects and it is strongly associated with the lighting conditions and working hours of the subjects.

Keywords: Asthenopia, sewing professionals, Tailors, Visual Discomfort, Refractive error

42. Peripheral Neuropathy in Beta-Thalassemia: Corneal Confocal Microscopy-Based Study

Abstract

Background: Peripheral neuropathy is a controversial but serious complication of beta-thalassemia (β -Th). Although few studies have reported no relationship between neuropathy and thalassemia, many have linked it with increasing age, iron overload, and iron chelator toxicity. This study aims to investigate the presence of neuropathy in β -Th using corneal nerve fibers.

How to cite: Khan S A, Naqvi S H, Saeed A, et al. (December 01, 2022) Peripheral Neuropathy in Beta-Thalassemia: Corneal Confocal Microscopy-Based Study. *Cureus* **14(12)**: e32122. doi:10.7759/cureus.32122. DOI: 10.7759/cureus.32122

Methodology: A cross-sectional study was conducted using corneal confocal microscopy on individuals with intermediate and major β -Th who were compared to healthy individuals. The main outcome variables were corneal main nerve and branch nerve densities which were calculated using Image J software. The comparison between groups was done using the independent-samples F-test and Bonferroni post-hoc analysis.

Results: There was reduced corneal main nerve and branch nerve density in β -Th intermediate and major patients compared to the control group, and the results were statistically significant (p-value <0.05). However, a significant correlation was not observed between serum ferritin levels and corneal nerve parameters.

Conclusions: The reduction in corneal nerve parameters in β -Th patients compared to healthy controls can be an indication of peripheral neuropathy in β -Th. Further work is needed to confirm these findings.

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43. Tripartite Analysis A Data Analysis Technique for Convergent Mixed-Methods Designs

Abstract

Background: Effective data integration is a daunting task in mixed methods research. Several frameworks for data integration exist, but the choice of and the technique for integration depend upon the research question and design. Innovative integration techniques continuously need to be developed to tackle the integration challenge and provide alternative ways for researchers to generate plausible mixed meta-inferences

How to cite: Younas, A., & Sundus, A. (2022). Tripartite Analysis: A Data Analysis Technique for Convergent Mixed-Methods Designs. *Nursing Research*, 71(4), 313-321. **DOI:** 10.1097/NNR.0000000000000584

Objectives: The purpose of this study was to describe a new data analysis technique, tripartite analysis (TriPA), and illustrate its use in a convergent mixed-methods study.

Methods: This technique was developed based on a convergent mixed-methods study underpinned by dialectical pluralism aimed to understand Pakistani nursing students' perspectives about compassion and compassionate care and how these perspectives are consistent with the conceptualizations of compassion in nursing literature.

Results: TriPA entails analysis and integration using joint displays at three levels: case-by-case integrated analysis, separate and then merged quantitative and qualitative analysis, and comparative and integrated analysis of Levels I and II findings.

Discussion: TriPA can enable researchers to develop a more nuanced understanding of a given phenomenon through integration at various levels by identifying linkages within cases and across the whole data set and recognizing relational connections and emerging patterns.

44. Intoxicant Use in Undergraduate Medical Students of Islamabad, Pakistan

Abstract

Intoxicant use and subsequent substance abuse is the leading health problem in younger age groups in contemporary times, and across the globe. It contributes to morbidity, mortality and economic loss. It also disturbs the social system of a community and creates a serious threat to global health. The aim

How to cite: Imran, M., Khan, H., Ali, S. B., & Shabbir, A. Intoxicant Use in Undergraduate Medical Students of Islamabad, Pakistan. **DOI:** 10.32368/FJSS.20220113

of this study was to determine the use of intoxicants among medical college students of Islamabad and to identify the associated factors with intoxicant use. A cross-sectional research design was used to gather survey data from two private medical colleges. Data from a final sample of 310 respondents was analyzed using descriptive statistics. It was found that smoking was the most prevalent intoxicant used amongst the participants (21.9%). The other most common prevalent use of intoxicants included alcohol (6.1%), Naswar (powdered tobacco dip) (6.8%) and Heroin (3.9%). The male gender and need for mental relaxation were found to be statistically significant with cigarette smoking. Most of the students indicated that they did not feel guilty about using intoxicants. It is important that medical college administration develops policies to control intoxicant use among students, including and not limited to awareness campaigns, counseling and support for stress relief.

Key words: Medical students, Intoxicant use, Islamabad, Pakistan, Cigarette smoking

45. The Global Retinoblastoma Outcome Study: a prospective, cluster-based analysis of 4064 patients from 149 countries

Abstract

Background: Retinoblastoma is the most common intraocular cancer worldwide. There is some evidence to suggest that major differences exist in treatment outcomes for children with retinoblastoma from different regions, but these differences have not been assessed on a global scale. We aimed to report 3-year outcomes for children with retinoblastoma globally and to investigate factors associated with survival.

How to cite: Fabian, I. D., Abdallah, E., Abdullahi, S. U., Abdulqader, R. A., Abdulrahman, A. A., Abouelnaga, S., ... & Ghassemi, F. (2022). The Global Retinoblastoma Outcome Study: a prospective, cluster-based analysis of 4064 patients from 149 countries. *The Lancet global health*, 10(8), e1128-e1140.

Methods: We did a prospective cluster-based analysis of treatment-naive patients with retinoblastoma who were diagnosed between Jan 1, 2017, and Dec 31, 2017, then treated and followed up for 3 years. Patients were recruited from 260 specialised treatment centres worldwide. Data were obtained from participating centres on primary and additional treatments, duration of follow-up, metastasis, eye globe salvage, and survival outcome. We analysed time to death and time to enucleation with Cox regression models.

Findings: The cohort included 4064 children from 149 countries. The median age at diagnosis was 23.2 months (IQR 11.0–36.5). Extraocular tumour spread (cT4 of the cTNMH classification) at diagnosis was reported in five (0.8%) of 636 children from high-income countries, 55 (5.4%) of 1027 children from upper-middle-income countries, 342 (19.7%) of 1738 children from lower-middle-income countries, and 196 (42.9%) of 457 children from low-income countries. Enucleation surgery was available for all children and intravenous chemotherapy was available for 4014 (98.8%) of 4064 children. The 3-year survival rate was 99.5% (95% CI 98.8–100.0) for children from high-income countries, 91.2% (89.5–93.0) for children from upper-middle-income countries, 80.3% (78.3–82.3) for children from lower-middle-income countries, and 57.3% (52.1–63.0) for children from low-income countries. On analysis, independent factors for worse survival were residence in low-income countries compared to high-income countries (hazard ratio 16.67; 95% CI 4.76–50.00), cT4 advanced tumour compared to cT1 (8.98; 4.44–18.18), and older age at diagnosis in children up to 3 years (1.38 per year; 1.23–1.56). For children aged 3–7 years, the mortality risk decreased slightly ($p=0.0104$ for the change in slope).

Interpretation: This study, estimated to include approximately half of all new retinoblastoma cases worldwide in 2017, shows profound inequity in survival of children depending on the national income level of their country of residence. In high-income countries, death from retinoblastoma is rare, whereas in low-income countries estimated 3-year survival is just over 50%. Although essential treatments are available in nearly all countries, early diagnosis and treatment in low-income countries are key to improving survival outcomes.

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46. Assessment of Secondary Traumatic Stress in Health Care Professionals Working in Tertiary Care Hospitals of Islamabad

Abstract

Health care professionals are at a higher risk of developing secondary traumatic stress due to various factors related to the nature of their job.

Objectives: To assess the level, severity & factors associated with secondary traumatic stress symptoms among health care professionals working with trauma victims in tertiary care hospitals of Islamabad.

Methods: A cross-sectional study was carried out in which 170 healthcare professionals participated from both public and private tertiary care hospitals of Islamabad. Data were collected by using STS Scale, TIPI and demographics. Analyses was done using independent t-test, ANOVA and Pearson's Correlation Coefficient.

Results: The results showed, 94(55.3%) and 71(41.7 %) little and mild to moderate level of STS in healthcare professionals respectively. Female gender was significantly associated with STS ($p = 0.01$) along with MBBS graduates ($p = 0.02$) and junior doctors ($p = 0.01$) showed symptoms of STS. Those who were exposed to trauma multiple times had significant association STS. Emotionally stable personality trait of the healthcare professionals had an indirect relation with the development STS symptoms ($r = -0.46$).

Conclusions: The results emphasized hospital administration to take measures in order to reduce stress level especially among female HCWs, junior doctors and those who had multiple exposure of trauma. If necessary steps are not taken, this stress may lead to worse mental health of this target population.

Keywords: Healthcare professionals, Secondary traumatic stress, Emergency department, Pakistan.

How to cite: Chaudhry, M., Sharif, H., Shah, S. M., Javed, S., & Mangrio, S. (2022). Assessment of Secondary Traumatic Stress in Health Care Professionals Working in Tertiary Care Hospitals of Islamabad: Assessment of Secondary Traumatic Stress in Health Care Professionals. *Pakistan Journal of Health Sciences*, 36-40. **DOI:** <https://doi.org/10.54393/pjhs.v3i06.270>

47. Patient Satisfaction with Clinical Laboratory Services in Public Health Sector Hospitals of Azad Kashmir, Pakistan.

Abstract

Objectives: To determine patient satisfaction and factors affecting patient satisfaction with laboratory services in Azad Jammu & Kashmir (AJK). Study Design: Cross-sectional study.

Place and Duration of Study: Seven District Headquarter Hospitals, DHQ Neelum, DHQ Hattian Bala, DHQ Pallandari, DHQ Bagh, DHQ Kotli, DHQ Bhimber and DHQ Mirpur, Kashmir Pakistan from Dec 2019 to Feb 2020.

Methodology: The patients who were referred from the Outdoor Patient Department of the hospital for undergoing investigative tests were included, and patients of age less than 18 and critically ill patients were excluded.

Results: The total number of respondents included in the study was 400, with the median score of patient satisfaction with laboratory services being 59 (19), ranging from 32 to 100.

How to cite: Khalid, B., Ayyub, F., Nasim, M., Babar, A., & Khan, S. A. (2022). Patient Satisfaction with Clinical Laboratory Services in Public Health Sector Hospitals of Azad Kashmir, Pakistan. *Pakistan Armed Forces Medical Journal*, 72(4).

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Statistically significant disparities in client satisfaction were observed in different DHQ hospitals (p-value=0.01) with Mirpur (63) and Pallandri (40) showing the extreme variation. Residential area, age, and education level were also identified as statistically significant determinants of patient satisfaction (p-value <0.05).

Conclusion: patient satisfaction with laboratory services in public hospitals of AJK was very low, and targeted strategies are needed to improve the overall quality of these services.

48. Association of IGF1 polymorphisms with exotropia in a Pakistani cohort

Abstract

Purpose: Strabismus (STBMS) is a multifactorial ocular disorder in children that leads to misalignment of the eyes. Insulin-like growth factor 1 (IGF1) has been shown to be involved in the development of extraocular muscles and myopia; however, data are limited on the genetic associations of IGF1 with STBMS in Pakistan.

How to cite: Zehra, Z., Khan, N., Nadeem, M., Siddiqui, S. N., von Bartheld, C. S., Azam, M., & Qamar, R. (2022). Association of IGF1 polymorphisms with exotropia in a Pakistani cohort.

Methods: Two hundred seventy-four STBMS cases and 272 unaffected controls were recruited, and their DNA was extracted. Two IGF1 single nucleotide polymorphisms, rs6214 and rs5742632, were genotyped using PCR–restriction fragment length polymorphism. Univariate logistic regression analysis was performed to determine the association of these single nucleotide polymorphisms with STBMS, and the results were adjusted for age and sex. In addition, 26 extraocular muscle tissues were collected from patients with STBMS undergoing squint correction surgery, along with 3 deceased control samples. IGF1 mRNA expression was measured by quantitative PCR; the Mann–Whitney U test was applied, and fold change was calculated. Logistic regression analysis was applied to determine the association of RNA expression and fold change with genotype.

Results: Multivariate logistic regression analysis revealed that rs5742632 (odds ratio [95% confidence interval] = 1.05[1.01–1.06], p = 0.03) is associated with STBM. Moreover, rs6214 (1.03[1.01–1.05], p = 0.03) and rs5742632 (1.09[1.04–1.11], p = 0.04) were associated with exotropia. Statistically, no significant difference in IGF1 mRNA expression in the extraocular muscles between the STBMS cases and the controls was observed.

Conclusions: IGF1 polymorphisms rs5742632 (A>G) and rs6214 (C>T) are plausible risk factors for the development of exotropia. However, the physiologic mechanism requires further evaluation.

49. Estimates, trends, and drivers of the global burden of type 2 diabetes attributable to PM2.5 air pollution, 1990–2019: an analysis of data from the Global Burden of Disease Study 2019.

Abstract

Background: Experimental and epidemiological studies indicate an association between exposure to particulate matter (PM) air pollution and increased risk of type 2 diabetes. In view of the high and increasing prevalence of diabetes, we aimed to quantify the burden of type 2 diabetes attributable to PM2.5 originating from ambient and household air pollution.

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Methods: We systematically compiled all relevant cohort and case-control studies assessing the effect of exposure to household and ambient fine particulate matter (PM_{2.5}) air pollution on type 2 diabetes incidence and mortality. We derived an exposure–response curve from the extracted relative risk estimates using the MR-BRT (meta-regression—Bayesian, regularized, trimmed) tool. The estimated curve was linked to ambient and household PM_{2.5} exposures from the Global Burden of Diseases, Injuries, and Risk Factors Study 2019, and estimates of the attributable burden (population attributable fractions and rates per 100 000 population of deaths and disability-adjusted life-years) for 204 countries from 1990 to 2019 were calculated. We also assessed the role of changes in exposure, population size, age, and type 2 diabetes incidence in the observed trend in PM_{2.5}-attributable type 2 diabetes burden. All estimates are presented with 95% uncertainty intervals.

How to cite: Burkart, K., Causey, K., Cohen, A. J., Wozniak, S. S., Salvi, D. D., Abbafati, C., ... & Nangia, V. (2022). Estimates, trends, and drivers of the global burden of type 2 diabetes attributable to PM_{2.5} air pollution, 1990–2019: an analysis of data from the Global Burden of Disease Study 2019. *The Lancet Planetary Health*, 6(7), e586–e600.

Findings: In 2019, approximately a fifth of the global burden of type 2 diabetes was attributable to PM_{2.5} exposure, with an estimated 3.78 (95% uncertainty interval 2.68–4.83) deaths per 100 000 population and 167 (117–223) disability-adjusted life-years (DALYs) per 100 000 population. Approximately 13.4% (9.49–17.5) of deaths and 13.6% (9.73–17.9) of DALYs due to type 2 diabetes were contributed by ambient PM_{2.5}, and 6.50% (4.22–9.53) of deaths and 5.92% (3.81–8.64) of DALYs by household air pollution. High burdens, in terms of numbers as well as rates, were estimated in Asia, sub-Saharan Africa, and South America. Since 1990, the attributable burden has increased by 50%, driven largely by population growth and ageing. Globally, the impact of reductions in household air pollution was largely offset by increased ambient PM_{2.5}.

Interpretation: Air pollution is a major risk factor for diabetes. We estimated that about a fifth of the global burden of type 2 diabetes is attributable PM_{2.5} pollution. Air pollution mitigation therefore might have an essential role in reducing the global disease burden resulting from type 2 diabetes.

50. Awareness Regarding Dengue Prevention and Control in Periurban Union Councils of Tehsil Rawalpindi

Abstract

Dengue infection is a challenging disease to treat, because of its multisystem, varied, unique, and even life-threatening symptoms. Knowledge of these atypical manifestations aids in early discovery, right diagnosis, prompt intervention, and appropriate treatment.

Objectives: The study was aimed to assess the awareness for dengue prevention and control in Periurban union councils of Tehsil Rawalpindi and to find out the association between awareness regarding dengue prevention and socio-demographic variables through a detailed questionnaire.

How to cite: Akhtar, N., Kawish, A. B., Tahir, Q., Butt, A. M., & Hameed, S. (2022). Awareness Regarding Dengue Prevention and Control in Periurban Union Councils of Tehsil Rawalpindi. *Pakistan BioMedical Journal*, 290-295. **DOI:** <https://doi.org/10.54393/pbmj.v5i1.237>

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Methods: A cross-sectional study was designed to assess the awareness levels in 413 respondents and association between dengue prevention and socio demographic variables for six months duration by applying chi square.

Results: The included general public had an adequate level of Dengue control knowledge 250 (60.5%), attitudes 261 (63.2%), and practices 138 (66.6%) as well as a willingness to support dengue control efforts. The knowledge towards dengue prevention 250 (60.5%) have adequate and 163 (39.5%) respondents have inadequate knowledge. The attitude toward dengue respondents are positive are 261 (63.2%) and the attitude toward dengue respondents negative are 152 (36.8%). The practices toward dengue respondents are good are 66.6% and the practices toward dengue respondents poor are 33.4%. The chi-square test shows significant relationship between awareness and age, occupation. On the other hand the relationship between awareness and gender, race, material status, qualification, income and family are non-significant.

Conclusion: Results shows that the respondents had a good understanding of Dengue prevention, behaviors, and knowledge. With further campaigns, the general public's technical understanding might develop even more.

Keywords: Dengue Infection, Awareness, Prevention, KAP, Periurban

51. Visual Outcome after Suprachoroidal Injection of Triamcinolone Acetate in Cystoid Macular Edema of Different Pathology

Abstract

Aim: To analyze visual outcome after suprachoroidal injection of triamcinolone acetate in cystoids macular edema of different pathology.

Study design: Prospective interventional study. Place and duration of study: Department o Ophthalmology, Niazi Medical & Dental College Sargodha from 1st July 2021 to 31st December 2021.

Methodology: Fifty patients were suffering from uveitis (Intermediate uveitis) most common, diabetic macular edema resistant to other treatments like maximum anti-vascular endothelial growth factor injections, vascular occlusion disorders were included. All participants were followed-up at 1-week, 1-month 3 and 6 months and best corrected visual acuity and intraocular pressure was also recorded. All procedure done in the main operation theatre under full sterilization condition and consider it as a part of major procedure.

Results: Females appeared to be more in number than to males. In mostly patients the cause of cystoids macular edema was uveitis (Intermediate type) (n=30) followed by vascular disorder (n=10). There was a significant improvement after treatment on visual acuity according to the given results.

Conclusion: Common cause of cystoids macular edema in the present study was uveitis followed by vascular disorders. There was a significant improvement after treatment on visual acuity according to the given results. Most patients achieve good visual activity after treatment.

Keywords: Uveitis, Supra-choroidal injection, Cystoid macular edema, Treatment

How to cite: Munir, M. S., Rehman, R., Nazir, S., Sharif, N., Chaudhari, M. Z., & Saleem, S. (2022). Visual Outcome after Suprachoroidal Injection of Triamcinolone Acetate in Cystoid Macular Edema of Different Pathology. *Pakistan Journal of Medical & Health Sciences*, 16(05), 164-164. **DOI:** <https://doi.org/10.53350/pjmhs22165164>

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52. Knowledge, attitude and practices towards eye care, among primary health care workers in District Chakwal.

Abstract

Introduction: Despite the fact, that an estimated 80% of worldwide blindness is preventable or treatable, the number of individuals living with blindness or impaired vision is on a rise. According to epidemiological data, worldwide over 2.2 billion people are blind or have impaired vision and 90% of them live in underdeveloped countries. A large number of people consult primary health care workers for their health issues, whether it is general illness or eye problems.

How to cite: Tariq, M., Kawish, A. B., Wajahat, M., Tariq, A., & Mahmood, T. (2022). Knowledge, attitude and practices towards eye care, among primary health care workers in District Chakwal. *International Journal of Natural Medicine and Health Sciences*, 1(4). **DOI:** <https://doi.org/10.52461/ijnms.v1i4.941>

Objectives: To assess the Knowledge, Attitude, and Practices (KAP) of Primary Health Care workers with regard to Primary Eye Care (PEC) in District Chakwal, Pakistan.

Methodology: A Quantitative Cross-sectional study design, using a Random Sampling technique was employed. Participants in the study were given a standardized semi-structured questionnaire to fill out. The questionnaire included questions on primary health care providers' knowledge, attitudes, and practices about PEC. The data were analyzed by using the statistical package for social sciences (SPSS) version 26.

Results: Among the total of 232 Primary Health Care workers 73.7% were below 40 years of age. The majority of primary health care workers were female (60.8%). About 40.9% were having diplomas. The majority of workers (58.6%) had less than 5 years of experience as a Primary Health Care worker. Most of them (60%) had sufficient knowledge about the causes of eye diseases or injuries and (40.8%) had knowledge about conditions that may result in eye illnesses or injuries. The attitude toward referral of patients to medical doctors was 51.2%. The practices regarding method and approach for the treatment of eye diseases, of the majority of workers (58.9%) were not satisfactory.

Conclusion: Knowledge regarding causes of eye diseases, diagnosis, and methods of treatment were not satisfactory amongst the primary health care workers. A positive attitude was noted for the will to improve the knowledge of eye care. The research revealed, the requirement for a training program for primary health care workers regarding modern primary eye care.

53. Assessing Psychosocial Morbidity And The Inverse Impact Of Psychological Distress On Quality Of Life Among Cancer Patients In Pakistan

Abstracts

Purpose of the study was to find out the frequency psycho social morbidity (Perceived social support, and Psychological distress) while evaluating the personal satisfaction, quality of life among cancer patients in Pakistan. The research design of the present study was cross sectional conducted between January and June 2022. The study sample was a total

How to cite: Riaz, M. K., Gillani, M. S. Z., Nisar, M. A., & Bukhari, S. R. (2022). Assessing Psychosocial Morbidity And The Inverse Impact Of Psychological Distress On Quality Of Life Among Cancer Patients In Pakistan. *Webology* (ISSN: 1735-188X), 19(3).

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of 100 participants (cancer patients) using the purposive sampling method to collect data. Results showed a significant linear regression equation was found ($F(1, 98)$

$=22.596$, $p < .000$ with an R^2 of $.187$. R^2 adjusted = $.179$. Psychological distress and quality of life have an inverse relationship. Results reported high frequencies of both perceived social support and psychological distress.

Keywords: Mental Health, Psychological Distress, Social Support, Cancer

54. Determining The Impact of Resilience On Psychological Distress And General Health Of Shelter Women.

Abstract

The aim of the study was to determine the impact of resilience on psychological distress, and general health of shelter women. The study intended to understand the level of resilience in women living in shelters and how it influences their psychological health and general health. The study sample comprised of a total 100 participants of women living in shelters of Islamabad and Rawalpindi cities in Pakistan. The tools used to collect the data were Brief Resilience Scale, DASS - 21, and general health questionnaire. This study is quantitative research in which a correlational research design was used to analyze the data using the regression analysis in SPSS. The results of the analysis indicated that when the resilience is high, general health gets better, however, there is a negative significant correlation between the variables of psychological distress and resilience. Further, the results showed that there are no significant mean differences among any of the demographic variables analyzed in the study, which may have made a difference in shelter women's resilience level, their psychological health or general health. More research into shelter women's resilience will allow for a better understanding of their strengths as well as human response to traumatic life events.

How to cite: Gillani, M. S. Z., Bukhari, S. R., Riaz, M. K., & Nisar, M. A. (2022). Determining The Impact of Resilience On Psychological Distress And General Health Of Shelter Women. *Journal of Positive School Psychology*, 362-372.

55. Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019

Abstract

Background: Reducing the burden of death due to infection is an urgent global public health priority. Previous studies have estimated the number of deaths associated with drug-resistant infections and sepsis and found that infections remain a leading cause of death globally. Understanding the global burden of common bacterial pathogens (both susceptible and resistant to antimicrobials) is essential to identify the greatest threats to public health. To our knowledge, this is the first study to present global comprehensive estimates of deaths associated with 33 bacterial pathogens across 11 major infectious syndromes.

How to cite: Ikuta, K. S., Swetschinski, L. R., Aguilar, G. R., Sharara, F., Mestrovic, T., Gray, A. P., ... & Dhingra, S. (2022). Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 400(10369), 2221-2248.

Methods: We estimated deaths associated with 33 bacterial genera or species across 11 infectious syndromes in 2019 using methods from the Global Burden of Diseases, Injuries,

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and Risk Factors Study (GBD) 2019, in addition to a subset of the input data described in the Global Burden of Antimicrobial Resistance 2019 study. This study included 343 million individual records or isolates covering 11 361 study-location-years. We used three modelling steps to estimate the number of deaths associated with each pathogen: deaths in which infection had a role, the fraction of deaths due to infection that are attributable to a given infectious syndrome, and the fraction of deaths due to an infectious syndrome that are attributable to a given pathogen. Estimates were produced for all ages and for males and females across 204 countries and territories in 2019. 95% uncertainty intervals (UIs) were calculated for final estimates of deaths and infections associated with the 33 bacterial pathogens following standard GBD methods by taking the 2.5th and 97.5th percentiles across 1000 posterior draws for each quantity of interest.

Findings: From an estimated 13.7 million (95% UI 10.9–17.1) infection-related deaths in 2019, there were 7.7 million deaths (5.7–10.2) associated with the 33 bacterial pathogens (both resistant and susceptible to antimicrobials) across the 11 infectious syndromes estimated in this study. We estimated deaths associated with the 33 bacterial pathogens to comprise 13.6% (10.2–18.1) of all global deaths and 56.2% (52.1–60.1) of all sepsis-related deaths in 2019. Five leading pathogens—*Staphylococcus aureus*, *Escherichia coli*, *Streptococcus pneumoniae*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*—were responsible for 54.9% (52.9–56.9) of deaths among the investigated bacteria. The deadliest infectious syndromes and pathogens varied by location and age. The age-standardised mortality rate associated with these bacterial pathogens was highest in the sub-Saharan Africa super-region, with 230 deaths (185–285) per 100 000 population, and lowest in the high-income super-region, with 52.2 deaths (37.4–71.5) per 100 000 population. *S aureus* was the leading bacterial cause of death in 135 countries and was also associated with the most deaths in individuals older than 15 years, globally. Among children younger than 5 years, *S pneumoniae* was the pathogen associated with the most deaths. In 2019, more than 6 million deaths occurred as a result of three bacterial infectious syndromes, with lower respiratory infections and bloodstream infections each causing more than 2 million deaths and peritoneal and intra-abdominal infections causing more than 1 million deaths.

Interpretation: The 33 bacterial pathogens that we investigated in this study are a substantial source of health loss globally, with considerable variation in their distribution across infectious syndromes and locations. Compared with GBD Level 3 underlying causes of death, deaths associated with these bacteria would rank as the second leading cause of death globally in 2019; hence, they should be considered an urgent priority for intervention within the global health community. Strategies to address the burden of bacterial infections include infection prevention, optimised use of antibiotics, improved capacity for microbiological analysis, vaccine development, and improved and more pervasive use of available vaccines. These estimates can be used to help set priorities for vaccine need, demand, and development.

56. Glaucoma Detection Using Optical Coherence Tomography Images: A Systematic Review of Clinical and Automated Studies

Abstract

Glaucoma is a progressive and degenerative optic neuropathy that causes severe visual impairment or even blindness if left untreated. Glaucoma is majorly caused due to stress which increases intraocular pressure that leads towards optic nerve degeneration. The degenerative optic nerve then causes irreversible loss of peripheral vision which may lead to

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complete blindness. Although the progression of glaucoma can harshly affect the vision, it can be prevented if diagnosed in the early stages. However, optical coherence tomography (OCT) imagery is widely used by ophthalmologist for early glaucoma diagnosis and progression tracking. Owing to this objective screening capacity of the OCT imagery, many researchers have used it as an examination procedure to verify their clinical studies or to train their autonomous systems for mass-screening glaucomatous pathologies. In this paper, we present a systematic review of the recent studies that have proposed various solutions to mitigate glaucomatous progression using OCT imagery. Initially, we have presented a review of clinical studies that looked at glaucomatous diseases in OCT images. Furthermore, this paper presents a detailed survey of the state-of-the-art techniques for glaucoma detection and grading. In future directions, ganglion cell layer as well as macular analysis and its automation will improve the diagnostic power of OCT for the early glaucoma detection and especially monitoring its progression.

How to cite: Raja, H., Akram, M. U., Hassan, T., Ramzan, A., Aziz, A., & Raja, H. (2022). Glaucoma Detection Using Optical Coherence Tomography Images: A Systematic Review of Clinical and Automated Studies. IETE Journal of Research, 1-21.

Keywords: Ganglion cell layer (GCL), Glaucoma Macula Optic never head (ONH), Optical coherence tomography (OCT), Retinal never fiber layer (RNFL), Visual field defects

57. Effect of chemotherapy induced hair-loss on distress levels among cancer patients visiting public and private hospitals of Punjab

Abstract

Chemotherapy is an essential part of a multimodal strategy in the treatment of many cancers. Chemotherapy-induced hair loss is believed to affect 65 percent of people. According to the study, chemotherapy-induced hair loss has been associated to anxiety, depression, a poor body image, low self-esteem, and a decreased sense of health.

Objectives: To find out chemotherapy-induced alopecia distress levels among cancer patients' in Punjab's public and private hospitals. To find out the relationship between demographic variables and chemotherapy induced alopecia distress.

Methods: A cross sectional study was conducted in public and private hospitals of Punjab, over the duration of 6 months, from October 2021 to March 2022. A sample of 323 respondents with the age range 19-54 was obtained. Data collection tool was adapted version of chemotherapy-induced alopecia distress scale (CASD). Frequencies and percentages of categorical variables were reported and Chi-square test was used to find out associations.

Results: High distress level was 61% (n=196) while low distress level was 39% (n=127). Majority of the sample population consisted of participants belonging to age group 18-34 (n=146, 45.2%). Most of them were male 53% (n=173). Respondents diagnosed at stage2 had low distress level (54%) as compare to respondents who were diagnosed at stage3 and stage 4. Significant association (p-value ≤ 0.05) was found between Gender, family income, employment status, disease stage at diagnosis, number of chemotherapy cycles received and current active treatment.

How to cite: Ali, M., Tahir, Q., Khizar, M., Munawar, M., & Saif, A. (2022). Effect of chemotherapy induced hair-loss on distress levels among cancer patients visiting public and private hospitals of Punjab: Effect of chemotherapy induced hair-loss on distress levels among cancer patients. Pakistan BioMedical Journal, 336-339.
DOI: <https://doi.org/10.54393/pbmj.v5i6.536>

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Conclusion: Chemotherapy-induced alopecia distress was associated with all of five domains i.e. physical, emotional, daily activities, relationships and treatment. To reduce the suffering caused by alopecia in cancer patients, appropriate therapies must be developed.

Keywords: Chemotherapy induced hair- loss, Distress levels, Public and Private Hospitals, Punjab.

58. Efficacy of Retro bulbar versus Topical Anesthesia in Cataract Surgery

Abstract

Aim: To monitor the effect of retrobulbar versus topical anesthesia in cataract surgery patients by comparing different parameters such as: intraocular pressure akinesia and analgesia parameters.

Study type: Interventional case series. Place and duration of study: Department of Ophthalmology, Niazi Medical & Dental College Sargodha from 1st October 2020 to 31st October 2021.

Methodology: One hundred patients who underwent cataract surgery were enrolled. Study participants were divided into two groups and each group contain fifty 50 participants. Group one give retrobulbar block and group two treated by topical anesthesia. Complete ocular and systematic examinations and relevant examinations like clotting time, blood pressure, blood sugar, complete blood examination and bleeding time were done before starting the surgery.

Results: 80% were males and 20% were females. During topical local anesthesia, 47(94%) patients experienced pain free surgery whereas in retrobulbar anesthesia, only 38(76%) patients experienced pain free surgery. In retrobulbar anesthesia group, complete akinesia was observed in 25(50%) patients. In retrobulbar group, significant increase in intraocular pressure was noted 41(82%) upto 30 mmHg after the administration of local anesthesia as compared to topical anesthesia group.

Conclusion: Topical anesthesia is more safe and effective approach for cataract patients in contrast to retrobulbar group. It prevents many life and sight threatening implications like globe perforation and brain stem anesthesia.

Keywords: Efficacy, Retrobulbar, Topical anesthesia, Surgery

How to cite: Munir, M. S., Arshad, M., Nazir, S., Sharif, N., & Chaudhari, M. Z. (2022). Efficacy of Retrobulbar versus Topical Anesthesia in Cataract Surgery. *Pakistan Journal of Medical & Health Sciences*, 16(04), 107-107. **DOI:** <https://doi.org/10.53350/pjmhs22164107>

59. Comparison of Critical Thinking among undergraduate medical students of Conventional and Integrated curricula in Twin Cities

Abstract

Objectives: To compare critical thinking of undergraduate medical students of institutes following traditional and integrated curriculum at Twin cities.

Methods: The current cross-sectional study was conducted in medical colleges of Twin Cities from February 2021 till August 2021. Two medical

How to cite: Sughra, U., & Usmani, A. (2022). Comparison of Critical Thinking among undergraduate medical students of Conventional and Integrated curricula in Twin Cities. *Pakistan Journal of Medical Sciences*, 38(6), 1453.

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colleges one with conventional and other with integrated mode of curriculum were included. One hundred medical students were selected by simple random sampling from each conventional and integrated medical college. Free critical thinking test tool was used for data collection. The tool was composed of five sections, Arguments, Assumptions, Deductions, Inferences and interpreting information. Data entry and analysis was done by using SPSS version 20. Chi-Square test of independence was run to determine the association of critical thinking with type of curriculum. Independent sample t-test was applied to find out the mean difference in the critical thinking of medical students following the two different curriculums.

Results: In current study 200 students were included. Majority were females (n= 155, 77.5%). The overall percentage of good critical thinking was found to be 49%. Majority of the students (n=57, 58.2%) having good critical thinking were found associated with integrated curriculum (p < 0.024, OR= 0.524, 95% CI= 0.3 - 0.92). There was statistically significant difference of critical thinking between institutes following two different curriculum strategies. Total critical thinking score was also found statistically significantly [MD= 5.00, 95% CI, (-1.05-8.96), p<0.013], more with integrated curriculum (133.48±15.6) as compared to conventional curriculum (128.47 ± 11.43).

Conclusion: Critical thinking was found high among the students with the integrated curriculum as compared to the conventional.

Keywords: Critical thinking, Conventional, Integrated, Curriculum, Undergraduate, Medical, students

60. Mapping development and health effects of cooking with solid fuels in low-income and middle-income countries, 2000–18: a geospatial modelling study

Abstract

Background: More than 3 billion people do not have access to clean energy and primarily use solid fuels to cook. Use of solid fuels generates household air pollution, which was associated with more than 2 million deaths in 2019. Although local patterns in cooking vary systematically, subnational trends in use of solid fuels have yet to be comprehensively analyzed. We estimated the prevalence of solid-fuel use with high spatial resolution to explore subnational inequalities, assess local progress, and assess the effects on health in low-income and middle-income countries (LMICs) without universal access to clean fuels.

How to cite: Frostad, J. J., Nguyen, Q. P., Baumann, M. M., Blacker, B. F., Marczak, L. B., Deshpande, A., ... & Kapoor, N. (2022). Mapping development and health effects of cooking with solid fuels in low-income and middle-income countries, 2000–18: a geospatial modelling study. *The Lancet Global Health*, 10(10), e1395-e1411.

Methods: We did a geospatial modelling study to map the prevalence of solid-fuel use for cooking at a 5 km × 5 km resolution in 98 LMICs based on 2.1 million household observations of the primary cooking fuel used from 663 population-based household surveys over the years 2000 to 2018. We use observed temporal patterns to forecast household air pollution in 2030 and to assess the probability of attaining the Sustainable Development Goal (SDG) target indicator for clean cooking. We aligned our estimates of household air pollution to geospatial estimates of ambient air pollution to establish the risk transition occurring in

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LMICs. Finally, we quantified the effect of residual primary solid-fuel use for cooking on child health by doing a counterfactual risk assessment to estimate the proportion of deaths from lower respiratory tract infections in children younger than 5 years that could be associated with household air pollution.

Findings: Although primary reliance on solid-fuel use for cooking has declined globally, it remains widespread. 593 million people live in districts where the prevalence of solid-fuel use for cooking exceeds 95%. 66% of people in LMICs live in districts that are not on track to meet the SDG target for universal access to clean energy by 2030. Household air pollution continues to be a major contributor to particulate exposure in LMICs, and rising ambient air pollution is undermining potential gains from reductions in the prevalence of solid-fuel use for cooking in many countries. We estimated that, in 2018, 205 000 (95% uncertainty interval 147 000–257 000) children younger than 5 years died from lower respiratory tract infections that could be attributed to household air pollution.

Interpretation: Efforts to accelerate the adoption of clean cooking fuels need to be substantially increased and recalibrated to account for subnational inequalities, because there are substantial opportunities to improve air quality and avert child mortality associated with household air pollution

61. Prompt Detection and Management of Globe Perforation due to Retro bulbar Anesthesia

Letter to the Editor

Sir,

Globe perforation is a known complication of retro bulbar anesthesia with varying incidence of 1 in 1300 to 1 in 12,000.^{1,2} The complication occurs mostly in patients with deep orbits, high myopes, posterior staphylomas, thin sclera, and cases which require repeated injections.³ We report a case of a 29-year old myopic male whose cataract surgery was planned under local anesthesia because of his unwillingness to undergo the procedure under topical anesthesia. Preoperatively, retro bulbar injection of 2cc of Lidocaine HCl 2% and 2 cc Bupivacaine 0.5% was administered. No resistance was felt during administration of injection and the globe was gently felt before the start of surgery to assess rigidity. There was no change in fundal glow, hence phacoemulsification was proceeded. At the end of procedure, the globe felt softer than usual despite proper anterior chamber formation. It raised the suspicion of globe perforation during retro bulbar anesthesia.

How to cite: Habib, M. K., Oozeerkhan, Z. K., & Ali, M. (2022). Prompt Detection and Management of Globe Perforation due to Retrobulbar Anaesthesia. *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP*, 32(7), 958-959.

Fundus examination on the following day revealed an entry wound slightly post-equatorial near inferotemporal vascular arcade at 8 o'clock and an exit wound more posteriorly within the same clock hour 4.5 disc diameters away from fovea with mild hemorrhage (Figure 1). A laser barrage around the breaks was performed before discharging the patient. At subsequent visits, the patient had an uncorrected visual acuity of 6/9 with a flat retina and adequate laser marks around the breaks (Figure 2).

Figure 1: Fundus picture showing entry and exit sites of needle during retro bulbar anesthesia.

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Figure 2: Fundus photograph at follow up showing laser marks around the entry and exit sites and a flat retina. In this case, the most likely cause of globe perforation was long axial length (25.32 mm) and suspicion of globe perforation arose after completion of the surgery, so a thorough retinal evaluation was planned on first post-operative day. Laser barrage was preferred with a wide field contact lens as view of the breaks was adequate for laser application.

A few techniques have been developed over the years to minimize risk of this complication like keeping the bevel towards the globe, entering the orbit as far temporal as possible near orbital floor, displacing the globe with finger, maintaining a tangential orientation of needle in relation to the globe, using per bulbar instead of retro bulbar anesthesia, and checking horizontal extraocular motility prior to pushing the plunger of syringe.⁴ Pre-operative assessment for whether the patient is a candidate for topical or general anesthesia should also be performed.

Early recognition of scleral penetration should warrant the surgeon to immediately measure intraocular pressure, look for any change in fundal glow and perform a detailed retinal examination. Should there be confirmation of globe entry, the surgery should be postponed; and an appropriate management should be proceeded with.⁴ For a peripheral break, cryotherapy can be done around the break while in cases of extensive sub retinal hemorrhage and vitreous hemorrhage, a more invasive approach such as pars plana vitrectomy may be required.

62. Philanthropy and Socio-economic Development: The Role of Large Indigenous Voluntary Organizations in Bridging Social Divides in Pakistan

Abstract

Extant research has focused on the role of philanthropy in the socio-economic development of western countries, but little is known about the role of indigenous voluntary organizations in bridging social divides in the developing world. To help redress this imbalance, we present findings on the motivations, strategies, methods, and impact of five large philanthropically funded voluntary organizations in Pakistan. We ask how and why such organizations are formed and gain traction to provide valuable services for large numbers of poor people in a society riddled with inequalities. Although differing considerably in their relations to markets and philanthropy, we find that success in all cases followed from commitment to Islamic philanthropy and the ideal of social inclusion, social innovation, exploitation of social capital, and scaling-up. Our contribution is to demonstrate how in developing countries philanthropy and social entrepreneurship together can play a decisive role in realizing a more just society.

How to cite: Khan, M. S. M., Harvey, C., Price, M., & Maclean, M. (2023). Philanthropy and Socio-economic Development: The Role of Large Indigenous Voluntary Organizations in Bridging Social Divides in Pakistan. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 1-12.

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63. Prevalence of acute renal colic presenting in emergency department of a tertiary care hospital

Abstract

Objective: To determine frequency of acute renal colic presenting in emergency department of a tertiary care hospital.

Methodology: This cross-sectional study was conducted at department of surgery, POF hospital, Wah Cantt from November 2018 to April 2019. Patients were selected through consecutive method (non-probability sampling) and were observed for acute renal colic. Data were analyzed using SPSS version 24. Post stratification chi-squares statistical test was applied. $p \leq 0.05$ was reported as significant.

Results: Out of 195 patients with renal stones, there were 95 (48.7%) males and 100 (51.3%) females. Mean age was 37.9 ± 9 years. Frequency of acute renal colic was 18%. Most common symptoms of acute renal colic were flank pain ($p = 0.000$), abdominal pain ($p = 0.000$), groin pain ($p = 0.000$) and painful urination ($p = 0.000$) and lower quadrant tenderness ($p = 0.000$).

Conclusion: Acute renal colic is serious pain pattern with a moderate prevalence in our emergency department. There is need to develop guidelines for acute renal colic management in developing countries like Pakistan.

Keywords: Acute renal colic, emergency service, flanks pain

How to cite: Azhar, M., Kalwar, M. T., Akhtar, N., & Altaf, A. (2022). Prevalence of acute renal colic presenting in emergency department of a tertiary care hospital. *Rawal Medical Journal*, 47(1), 152-152.

64. Myopia Progression during COVID19 Pandemic at a Tertiary Care Hospital

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

How to cite: Shah, M., Ullah, S., Khan, S. A., & Naroo, S. A. (2022). Myopia Progression During COVID19 Pandemic at a Tertiary Care Hospital. *Malaysian Journal of Medical Research (MJMR)*, 6(3), 19-29. **DOI:** <https://doi.org/10.31674/mjmr.2022.v6i03.003>

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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.

65. Effect of Screen Time on Behavior of Preschoolers in Islamabad: Descriptive Cross-sectional Study

Abstract

Background: The early years of childhood form the basis of intelligence, personality, social behavior, and the capacity to learn and nurture oneself as an adult. It is increasingly recognized that early and longer exposure to screens has adverse effects on the development of children. This research was significant in finding out the effects of screen time on the behavior of preschoolers, which could provide scientific grounds to the control of digital screen time.

How to cite: Please cite as: Suleman M, Sughra U Effect of Screen Time on Behavior of Preschoolers in Islamabad: Descriptive Cross-sectional Study iproc 2022;8(1):e36568 DOI: 10.2196/36568

Objective: We aimed to determine the effect of electronic exposure on the behavior, emotional development, and sleep quality of preschoolers and determine the average number of hours preschoolers spend with electronic devices in Islamabad.

Methods: A cross-sectional survey was conducted in 4 private preschools of Islamabad. A sample of 200 children aged 3 to 5 years was selected through multistage random sampling. The sociodemographic characteristics and screen time of the children were acquired by using parental questionnaires. Children were grouped based on a daily screen time of ≤ 60 minutes or > 60 minutes. An analysis was conducted based on the results of the Child Behavior Checklist for children aged 1.5 to 5 years. The Cronbach α coefficient was found to be .925. It was analyzed by using SPSS version 22 (IBM Corporation). A chi-square test, an independent sample t test, and multilinear regression were applied to determine the associations and significance levels between the variables.

Results: The study results indicate that increased screen time was found to be statistically significant with regard to a child's age, their education level, and the employment status of mothers. It was observed that preschoolers with a screen time of > 60 minutes (mean 11.94, SD 3.91; $P = .01$) tend to more commonly experience withdrawn syndrome than those with a screen time of ≤ 60 minutes (mean 10.72, SD 3.01). Similarly, sleep problems were also more commonly observed in preschoolers with a screen time of > 60 minutes (mean 10.97, SD 3.20; $P = .01$) when compared to those with a screen time ≤ 60 minutes (mean 9.90, SD 2.59). It was also observed that increased screen time had an association with autism spectrum problems among preschoolers with a screen time of > 60 minutes (mean 17.66, SD 5.89; $P = .047$) when compared to those among preschoolers with a screen time of ≤ 60 minutes (mean 16.17, SD 4.58). The strongest predictor of the outcome variable was found to be mothers' education level ($\beta = 21.53$).

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Conclusions: The findings reveal that excessive screen time is a deleterious factor associated with the behavioral problems of preschoolers. Parents must also think about their child's screen time. This requires parents' active engagement and constant attention, so that the development and growth of their children are not affected adversely.

Keywords: preschoolers, screen time, withdrawn syndrome, autism spectrum problems, Child Behavior Checklist

66. Endophthalmitis Postintravitreal Bevacizumab Injections: Incidence, Management, and Visual Outcome in Tertiary Care Center in Pakistan

Abstract

Purpose: The purpose is to study the incidence, characteristics, management, and visual outcome of endophthalmitis postintravitreal bevacizumab (Avastin®) injections.

Methods: Retrospective cohort study conducted at Fauji Foundation Hospital that is a tertiary care center in Rawalpindi, Pakistan. The study duration was from January 1, 2015 to March 31, 2020. A total of 2321 eyes of 1407 patients were treated with Intravitreal bevacizumab (IVB) in a minor operation theater using standard aseptic measures. We studied the incidence, clinical characteristics, treatment, and visual outcomes of endophthalmitis post-IVB.

Results: Seven eyes (0.30%) out of 2321 eyes developed post-IVB endophthalmitis during the study period. Three eyes (42.8%) were culture positive and four eyes (57.2%) were culture negative. Five eyes (71.4%) showed visual improvement and two eyes (28.6%) did not show visual improvement.

Conclusion: Prompt intravitreal antibiotic along with vitreous tap in cases of postintravitreal endophthalmitis may prevent vision loss which provides a useful alternative to immediate pars plana vitrectomy that requires more expertise, equipment, and an operation theater.

Keywords: Antivascular endothelial growth factor; Avastin; bevacizumab; endophthalmitis; intravitreal injection.

How to cite: Rizwan A, Asghar A, Sughra U, Yasmin N. Endophthalmitis Postintravitreal Bevacizumab Injections: Incidence, Management, and Visual Outcome in Tertiary Care Center in Pakistan. *Oman J Ophthalmol.* 2022 Mar 2;15(1):2024.**DOI:**10.4103/ojo.ojo_103_21.**PMID:**35388253;**PMCID:** PMC8979382.

67. Willingness to Change Health Behaviors During the COVID-19 Pandemic in the Population of Rawalpindi City, Pakistan

Abstract

Background: During the COVID-19 pandemic, despite the Pakistan government's precautionary policies, people are not practicing the standard preventive measures. People need to change their health behaviors to control the transmission of the disease. The purpose of this study is to assess the willingness of people in Rawalpindi city to change/adapt their health behaviors during the

How to cite: Zain ul Abdein F, Sughra U Willingness to Change Health Behaviors During the COVID-19 Pandemic in the Population of Rawalpindi City, Pakistan *iproc* 2022;8(1):e36550 **DOI:**10.2196/36550

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pandemic and to associate this willingness with their various demographic variables during the pandemic. Willingness was determined through respondents' knowledge, risk perceptions, attitudes, and practices during the COVID-19 pandemic.

Objective: The main objectives of this study are to assess the general population's willingness to change their health behaviors during the COVID-19 pandemic in Rawalpindi city, Pakistan, and to determine the association between demographic variables and the willingness to change health behaviors.

Methods: A cross-sectional study was conducted in Rawalpindi city, Pakistan. A community household survey was conducted in 4 randomly selected union councils of Rawalpindi city. The survey was done via the systemic sampling of the households. A structured questionnaire was used for data collection, and it was made based on the guidelines of the National Institute of Health, Pakistan. It comprises 66 questions consisting of 5 sections. A Cronbach α of .92 was calculated with SPSS (IBM Corporation).

Results: The results of the study showed that 89.2% of the respondents showed a willingness to change their health behaviors during the COVID-19 pandemic. A chi-square test of association revealed that 7 demographic characteristics were statistically significant, including age, gender, marital status, income, occupation, number of children, and the diagnosed comorbidities of respondents. A regression analysis showed that the monthly income of the respondents was the true predictor, with an odds ratio of 8.69.

Conclusions: The respondents with higher scores for knowledge, risk perceptions, attitudes, and practices during the COVID-19 pandemic showed a high willingness to change their health behaviors in Rawalpindi city, Pakistan.

Keywords: willingness, health behaviors, attitudes, risk perceptions, practices, pandemic, household community survey

68. Assessment of Knowledge and Utilization of Maternal and Neonatal Health services in Public Hospitals of district Dera Ghazi Khan

Abstract

Background: Poor utilization of healthcare services during pregnancy, child delivery, and postpartum is a significant cause of maternal and child mortality. Antenatal and postnatal care is the most effective intervention for maternal and infant mortality and morbidity, especially in areas where women's general health is poor.

Objectives: This study was conducted to find out the mother's knowledge about maternal and neonatal services to determine the utilization of maternal and neonatal services in public hospitals of District Dera Ghazi Khan.

Methodology: A cross-sectional study was conducted in a public hospital in Dera Ghazi Khan. A structured questionnaire was used to collect data about the knowledge and utilization of antenatal care services among pregnant women.

How to cite: ul Haq, E., Kawish, A. B., & Fayaz, M. (2022). Assessment of Knowledge and Utilization of Maternal and Neonatal Health services in Public Hospitals of district Dera Ghazi Khan. *International Journal of Natural Medicine and Health Sciences*, 1(2).
DOI:
<https://doi.org/10.52461/ijnms.v1i2.847>

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Results: The findings of the present study showed that 58.4% of respondents have good knowledge of antenatal care, while 41.6% showed poor ability. Among total respondents, 46.32% showed positive utilization of ANC services, while 53.68% showed poor utilization. A statistically significant difference has been found between respondents' income and ANC knowledge ($p=0.02$). A statistically significant difference was found between respondents' education and ANC knowledge ($p=0.01$). Among respondents who have their first pregnancy, 45(72.58%) have good ANC service utilization ($p=0.002$). Among respondents who were satisfied with the ANC services, 81(89.01%) were utilizing early ANC, whereas 10 (10.98%) were utilizing late ANC services ($p=0.01$).

Conclusion: Overall findings of this research have shown that respondents' knowledge and utilization of ANC were not satisfactory. For more improvement, there is a need to educate women and provide them with adequate facilities to utilize maternal and neonatal care services.

Keywords: Antenatal care, Neonatal Health, KAP Survey, Maternal Health, Dera Ghazi Khan, Pregnancy.

69. Achieving Inclusive and Respectful Maternity Care

Abstract

A basic constituent of quality maternal and newborn care is access to care that is safe, inclusive and respectful, and enables women to have dignity, determination & control. Women and their families also need to feel included and engaged in order to

How to Cite: Kawish, A. (2022). Achieving Inclusive and Respectful Maternity Care. Pakistan Armed Forces Medical Journal, 72(3), 728-30

optimize access to, and use of, available health services and facilities. Never the less, this is not always what women experience—a lack of respectful maternity care is a key reason why many women do not choose to access health facilities for care during childbirth. According to global estimates for 2017, nearly 295,000 maternal deaths occurred worldwide. Thus, approximately 810 women die every day due to pregnancy-related complications. This burden of maternal deaths in LMICs is primarily due to poor healthcare service utilization, as indicated by relatively low rates of institutional deliveries and skilled-birth attendance (SBA).

70. Functional Gastrointestinal Diseases and Dietary Practices among Pakistani Children—A Schools Based Cross-Sectional Study

Abstract

Background: Functional gastrointestinal diseases (FGIDs) are an important yet highly under explored area among public health issues. FGIDs' complex etiology makes them of interest along with their prevalence in children steadily increasing, especially in the developing world. We aimed to determine the burden FGIDs pose on school-going children, and to determine its association with the dietary intake patterns in Pakistani children.

How to cite: Malik, Z. I., Umer, M. F., Ali, K. N., Kawish, A. B., Arshed, M., Zofeen, S., & Farid, A. (2022). Functional Gastrointestinal Diseases and Dietary Practices among Pakistani Children—A Schools Based Cross-Sectional Study. Diseases, 10(4), 103.

Methodology: The study included 385 school- children from public and private schools in Pakistan through multistage random sampling, from March to August 2022. We used the

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Food Frequency Questionnaire (FFQ) and Rome IV Criteria for a comprehensive exploration of the issue. Associations between the FGIDs and dietary factors were analyzed using chi-square and Fischer's exact tests in SPSS version 26.0.

Results: Females constituted 77.4% (n = 298) of all respondents, while 44.9% (n = 173) of the total reported a family history of gastrointestinal diseases. FFQ analysis showed varying consumption frequencies for different food groups. Functional abdominal pain and irritable bowel syndrome (IBS) were the highest reported FGIDs with a prevalence of 38.7% (n = 149) and 24.9% (n = 96), respectively. Statistical associations were found between different FGIDs and gender, age, household income, family members, and dietary variables such as fruit, vegetable, beverage and pulse consumption.

Conclusion: FGIDs were found to be associated with a number of socio-demographic and dietary factors which calls for small scale and large scale attention to the issue. Results from the current study and further studies may help develop guidelines to manage these disorders in Pakistan. Keywords: diet; functional gastrointestinal diseases; FFQ; gut disorders; nutrition; Rome IV criteria; school children

71. Depression, Anxiety and Stress in Young Female Doctors is Associated with High Sexual Harassment Scores

Abstract

Background: Sexual harassment, a known cause of stress in females, makes them vulnerable to mental health issues and affects their professional performance. The objectives of the study were to assess the frequency of sexual harassment among female doctors based on age, designation, marital status, and household income, and to find out the association between sexual harassment and depression, anxiety, and stress in female doctors.

How to cite: Mughal, F. A. R., Sharif, H., Mughal, A. M., Kawish, A. B., Khan, N., & Rehman, A. Depression, Anxiety and Stress in Young Female Doctors is Associated with High Sexual Harassment Scores.

Methods: A cross-sectional study was conducted at three tertiary care hospitals of Rawalpindi. on n=328 female doctors including House officers, Post Graduate Trainees, Senior Registrars, Assistants, Associates and Full Professors. We used the Sexual Harassment Experience Questionnaire and the Depression, Anxiety and Stress Scale to assess sexual harassment and depression, anxiety and stress scores, p-value <0.05 was considered statistically significant.

Results: The mean age of 301 female doctors was 30.12±7.8 years, equally represented from public and private hospitals. Mostly were married 154 (51.2%), working as House Officers 126(41.9%), The mean score on the Sexual Harassment Experience Questionnaire was 48.23±14.84, with higher scores (52.83±16.2) in unmarried females (≤30 years), working in junior levels in public sector hospitals (p=0.001). A significant positive correlation (0.471) between the Sexual Harassment Experience Questionnaire and Depression Anxiety and Stress Scale scores was observed.

Conclusion: The incidences of sexual harassment were seen more in younger, unmarried junior female doctors. Higher Depression, Anxiety and Stress were found positively associated with higher Sexual Harassment scores. Hospitals should develop policies to

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protect female health-care workers especially junior doctors, to minimize workplace sexual harassment negativity on mental health.

Keywords: Sexual Harassment; Depression; Anxiety; Female; Hospitals.

72. Assessment of Patient-Centered Care with Reference to Minimum Service Delivery Standards in District Headquarter Hospitals of Azad Jammu Kashmir

Abstract

Objective: To assess the existing healthcare and delivery services and to evaluate the factors that affect the effectiveness of the care of patients. Study Design: Cross-sectional study.

Place and Duration of Study: Seven Districts Headquarter Hospitals of Azad Jammu and Kashmir Pakistan from Dec 2020 to May 2021.

Methodology: The data were collected using a questionnaire based on the Material Safety Data Sheet (MSDS) set standards by Punjab Healthcare Commission (PHC) for monitoring and evaluating the services delivery at the hospitals. Data were collected by observing every department of the hospital, interviewing the concerned person of every department, and checking the medical record of the hospital.

Results: All the seven DHQ hospitals including DHQ Neelum, DHQ Hattian Bala, DHQ Pallandari, DHQ Bagh, DHQ Kotli, DHQ Bhimber, and DHQ Mirpur were working throughout the week and service delivery was ensured for 24 hours in all health facilities. It was observed in this study that the management of medication was the area with the highest degree of compliance (76.2%). On the other hand, the area involving patient rights and education showed the lowest level of compliance with an average score of 6 and a percentage compliance of 25%.

Conclusion: The compliance of health delivery services with respect to MSDS was very low in district headquarter hospitals of AJK. Targeted strategies are needed to improve the overall quality of the service delivery.

Keywords: Azad Jammu Kashmir, DHQ hospital, MSDS, Patient-centered, Service delivery.

How to Cite: Khalid, B., Babar, A., Ahmad, S., Ayyub, F., & Bukhtawer, N. (2022). Assessment of Patient-Centered Care with Reference to Minimum Service Delivery Standards in District Headquarter Hospitals of Azad Jammu Kashmir. Pakistan Armed Forces Medical Journal (PAFMJ), 72(4), 1449-56.

73. The Impending threat of Monkeypox: Responsiveness of Pakistan's Health System EDITORIAL

Monkeypox is a viral zoonotic disease, with symptoms much similar to smallpox. The term monkeypox was coined when the virus was first discovered in monkeys in a Danish laboratory in 1958. The first known human case was identified in a child in the Democratic Republic of the Congo in 1970. The causative agent is a virus belonging to orthopoxvirus genus of the Poxviridae family. The virus is transmitted through direct contact and also through droplet transmission.

How to cite: Abdullah M A. The Impending threat of Monkeypox: Responsiveness of Pakistan's Health System. J Islamabad Med Dental Coll. 2022; 11(2):60-61. DOI: <https://doi.org/10.35787/jimdc.v11i2.892>

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In a recent surge of cases in non-endemic countries, most but not exclusively the disease has occurred in homosexual men.

Monkeypox disease starts with a prodrome of symptoms, which include fever, lymphadenopathy, headache, and muscle aches followed by development of a characteristic rash climaxing in firm, deep-seated, well-circumscribed and sometimes umbilicated lesions. The rash usually starts from the face or the oral cavity and progresses through several corresponding stages on each affected area and concentrates on the face and extremities, including lesions on the palms and soles.

Since the COVID 19 pandemic, the world has become more cautious about infectious diseases. In a recent turn of events, since May 2022 monkeypox outbreaks have been reported in 12 non-endemic countries namely; Australia, Belgium, France, Germany, Italy, Spain, Sweden, USA, UK, Netherlands, Portugal and Canada. The disease has been known to be endemic mostly in African countries, which include; Benin, Cameroon, the Central African Republic, the Democratic Republic of the Congo, Gabon, Ghana (identified in animals only), Ivory Coast, Liberia, Nigeria, the Republic of the Congo, Sierra Leone, and South Sudan.

The COVID 19 pandemic has taught us many things. The modern transportation systems created by humans, don't only carry people and goods, they also carry diseases. Countries with weaker health systems are at a greater threat of crumbling under pressure when faced with epidemiological emergencies. Pakistan has a weak health system, especially in terms of infectious disease monitoring, surveillance and control. We have been unable to eliminate Polio, important concepts like contact tracing and partner notification are almost non-existent even for easily traceable diseases such as HIV and Syphilis, and the data we gather as evidence is often non-trustworthy.

Pakistan is a low middle income country, with inequitable distribution of scarce resources. In the year 2021, the government spent 1.2 percent of the GDP on health, this amount is far less than the WHO recommendation of Five percent. The responsiveness of the health system is another major issue, added on by a reactive instead of a proactive approach, we usually identify problems when they have already been complicated. The same holds true when we are faced with disasters of varying intensity.

In conclusion the health system of Pakistan needs a major paradigm shift, in order to tackle disease outbreaks. The infectious disease burden of Pakistan is immense, as we are persistently struggling to reduce the burden caused by chronic communicable diseases like viral hepatitis, tuberculosis and HIV. The constant impending threat of emerging infectious diseases has the potential to force the health system to redirect the already scarce resources from already existent health needs and problems, towards newer challenges. A health systems approach is imperative to simultaneously deal with our long list of public health problems.

74. The role playing by social media in COVID-19 to exacerbate anxiety and depression among Pakistani community

Abstract

Introduction: The purpose of the worldwide lockdown was to impede the spread of this virus

How to cite: Khan, S. Y., Rashid, F., Ansari, S. K., Khalid, S., Abdullah, A., Farhin, S., & Yasir, S. S. S. D. S. (2022). The role playing by social media in COVID-19 to exacerbate anxiety and depression among Pakistani community. *Journal of Rawalpindi Medical College*, 26(4).

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via social distancing. WHO detected symptoms like anxiety, stress, fear which have affected people's psychology across the globe due to loneliness,

substance abuse, depression and constant fear? With the surge of information regarding COVID-19 on social media (myths and beliefs), it certainly played a major role for communities' psychology all around the globe.

Methods: A cross sectional study design was chosen with convenient sampling size of 800 via online. Questionnaire shared through online social media platforms. Statistical analysis was done through SPSS version 21 and responses were taken as frequencies, percentages and chi-square test.

Results: There was a significant association between highly educated peoples and social media usage with p-value less than 0.000 suggestive of myths generating decline of mental health.

Conclusion: COVID-19 information available over social media was used by everyone and considered as authentic. Therefore, control measures and legislation should be applied on them to restrict the ambiguity.

Keywords: Social media; COVID-19; Myths; life worth; save humanity; Attitude

75. Barriers to disclosure and coping strategies of domestically abused women: a qualitative phenomenological study.

Abstract

It is undoubtedly a fact that domestic violence and its relationship in domestic settings is not much visible in any society. This research study is an essay to dig out the facts and narratives of the domestically abused women and the difficulties they face in their relationships with perpetrator and with family.

Feministic approach is a tool used to dig the very essence of incumbent responsibilities performed by the survivors remaining in the relationship with the perpetrator and the coping strategies they adopt to satisfy their inner conscious too live in the same abusive relationship. In depth interviews are conducted to account for the lived experiences of the women survivors. Semi-structured interviews were conducted with 6 women who identified themselves as victims and survivors of domestic violence perpetrated by their husbands. There were seven themes identified in the study. The analysis of the results revealed that women were hesitant to disclose about their abusive relation with their husbands as family honor, lack of family support and social pressures were identified as main hindrances. There were seven major themes extracted from the interviews few are Mental agony, comprised relationship, social pressures, catharsis. Therefore, religious path and employment were recognized as sources of solace.

How to cite: Idrees, F., & Waqar, S.
BARRIERS TO DISCLOSURE AND
COPING STRATEGIES OF
DOMESTICALLY ABUSED
WOMEN: A QUALITATIVE
PHENOMENOLOGICAL STUDY.

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76. Assessment of Preoperative anxiety among patients of Open-Heart Surgery at Cardiac Centres of Rawalpindi and Islamabad

Abstract

Anxiety is a complex emotional condition that is often described as a noxious internal disturbance that is accompanied by restlessness.

Objectives: To determine the prevalence of preoperative anxiety and to find out main risk factors among patients waiting for open heart surgery.

Methods: A cross-sectional study was carried out at cardiac centers of Rawalpindi. A total of 180 respondents who were admitted in hospital for open heart surgery were consecutively selected for the purpose of the study. APAIS and STAI were used to collect data regarding preoperative anxiety. Adjusted odd ratios were determined for the major risk factors.

Results: Majority were males (64.4%) and were 20-46 years of age (48.3%). It can be seen that patients who presented low levels of preoperative anxiety were slightly higher in number as compared to those who presented high levels of anxiety. Females, patients of younger age group (20-46 years) and those undergoing valvular surgeries were more prone to develop all subtypes of preoperative anxiety (p value<0.05). While surgery schedule is also a main predictor of anxiety due to anesthesia and procedure (p value<0.05).

Conclusions: Majority of the patients undergoing open heart surgery presented low levels of preoperative anxiety while females, younger patients and those undergoing valvular surgeries were considered more susceptible of developing preoperative anxiety.

How to cite: Javed, S., Waqar, S., Sharif, H., Chaudhry, M., & Kiyani, Y. F. (2022). Assessment of Preoperative Anxiety Among Patients of Open-Heart Surgery at Cardiac Centres of Rawalpindi and Islamabad: Preoperative Anxiety among Patients of Open-Heart Surgery. *Pakistan Journal of Health Sciences*, 126-130.

77. Association between stress and acne among patients visiting THQ Gujar Khan, Rawalpindi

Abstract

Background: Acne vulgaris characterized by papules, pustules, nodules or comedones, rarely leading to abscess/ cysts is a common and chronic dermatological condition, which typically affects face, upper chest and back. Scarring/psychological impact regardless of severity or grading of acne are among the complications of acne.¹Even mild acne may be significantly disabling having social and psychological effects including: lack of self-confidence, lack of social interactions with others, anxiety, even suicidal tendencies and depression. Acne and depression often occur together that's why are correlated. It is often reported that acne flares are often triggered by stress including depression.²

How to cite: Ali, B., Waqar, S., Ali, C. T., & Ali, M. (2023). Association between stress and acne among patients visiting THQ Gujar Khan, Rawalpindi. *Journal of Pakistan*

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Objective: To find out the prevalence of acne and stress, the association between acne and stress and the effect of stress management in patients with acne visiting THQ Hospital Gujar Khan.

Methods: Non-Probability Sampling Technique “Consecutive Sampling” was used to collect the sample at Dermatology Out Patient Department at THQ Gujar Khan Rawalpindi by selecting individuals who came for their acne treatment who were 15 years/above and those with depression due to other reasons and pregnant or lactating mothers were excluded. The sample size calculated was 280 (JPS. Volume 13 No 1. May 2021). Global Acne Grading System was used to grade acne severity. Data collection was done by using a questionnaire “Perceived Stress Scale”, where independent variables were: age, gender, and educational level, socioeconomic and marital status. Dependent variable was: stress.

Results: Collected data was analyzed using SPSS version 21.0. After applying the tests, following results were obtained: Acne was more common in females of 18 years. Moderate stress is seen more commonly among patients who were single, went to college/university, belonged to middle class families and there was significant association between acne and stress.

Conclusion: Acne and stress are significantly correlated therefore patients with acne should also be assessed for the stress they are facing so that stress can be actively managed along with acne as an effective counseling will help in reducing the stress and number of visits among the sufferers. Psychologist, dermatologist, family members and teachers can provide a helping hand in counseling the sufferers, as proper guidance and management is needed in our society and is the right of each and every patient.

78. Exploring Patterns of Self-control and the Relationship with Home-rearing Environment among Preschoolers

Abstract

Home-rearing environment (HRE) at an early age has a longitudinal effect on the development of children’s self-control. Some evidence has articulated this relationship; however, few studies have addressed heterogeneous patterns in self-control. This study aimed to identify a typology of self-control among preschoolers and examine its relationship with HRE.

A total of 430 children from the Child Care Cohort study in Japan were included to assess their HRE and self-control over 2 years. Latent class analysis was carried out to identify self-control patterns, and the relationship between HRE and different classes was explored using multinomial regression analyses. Three latent classes were found, characterized as high, moderate, and low levels. In addition, two HRE items were associated with preschoolers’ self-control over 2 years. Children who often met peers of a similar age and whose parents often received others’ help to care for them were more likely to have a higher level of self-control. This study indicated different patterns of self-control among preschoolers and highlighted the significance of HRE, particularly in peer involvement and co-parenting, in helping children develop high self-control.

How to cite: Zhu, Y., Jiao, D., Tanaka, E., Tomisaki, E., Watanabe, T., Sawada, Y., ... & Anme, T. (2022). Exploring Patterns of Self-control and the Relationship with Home-rearing Environment Among Preschoolers. *Early Childhood Education Journal*, 1-9.

Publications

79. Measurement invariance and country difference in children's social skills development: Evidence from Japanese and Chinese samples

Abstract

The diversity of child social skills development is not well detected among Asian countries. Culturally validated assessments are needed for practitioners to evaluate child social skills. This study tested the measurement invariance of the Social Skill Scale (SSS) across Japanese and Chinese samples and explored country differences in child social skills development. The SSS utilizes a widely used factor structure (assertion, self-control, and cooperation subdomains) and has established Japanese and Chinese versions. We conducted investigations with an identical process and materials with different language versions, collecting data from 931 Japanese kindergarten children ($M_{age} = 4.35$, $SD_{age} = 1.07$; 53.6% boys) and from 1130 Chinese kindergarten children ($M_{age} = 4.47$, $SD_{age} = 1.00$; 52.3% boys). We used multiple confirmatory factor analysis to test measurement invariance of the SSS and established the validity, reliability, and scalar measurement invariance for the first-order factor structure of the SSS across the two country samples. We also examined country differences on the associations between demographics, parenting practice, and child social skills development. We found that, compared to the Chinese sample, cooperation skills significantly increased more with age among the Japanese sample. However, spanking was negatively related to self-control skills development in both countries. Our findings contribute to the demonstration of the diversity of child social skills development and have important implications for assessing and developing child social skills using culture-specific strategies.

How to cite: Zhu, Z., Jiao, D., Li, X., Zhu, Y., Kim, C., Ajmal, A., ... & Anne, T. (2022). Measurement invariance and country difference in children's social skills development: Evidence from Japanese and Chinese samples. *Current Psychology*, 1-12.

80. Assessment of health-related risks among adolescents living in shelter homes of Islamabad.

Abstract

Shelter homes are a mean of providing accommodation to the disadvantaged people of different age ranges. The aim of the study was to assess the risks associated with the health of adolescents living in shelter homes of Islamabad. The demographic variables which have association with these risks were also evaluated. For this purpose, a cross-sectional survey was carried out at 4 shelter homes of Islamabad. A total of 400 respondents were selected through multistage sampling. A questionnaire consisting of socio-demographic and modified HRA (Health Risk Assessment) Model was used for data collection. Data was analyzed by using SPSS version 26. Pearson Chi-square test was applied to find factors associated with risk behaviors and p value less than 0.05 was considered significant. Results showed that 82% of the study population was male. Majority of the respondents lie between 13-15 years of age group. It was found that nearly 51% of the respondents were on health risk. Gender, age, education level, family structure and no. in

How to cite: Rubab, I., Ali, K. N., & Ahmad, M. (2022). ASSESSMENT OF HEALTH-RELATED RISKS AMONG ADOLESCENTS LIVING IN SHELTER HOMES OF ISLAMABAD. *Pakistan Journal of Social Research (PJSR)*, 4(3), 924-932.

Publications

siblings have significant association with health risk behaviors ($p < 0.05$). It can be concluded that adolescents living in shelter homes are prone to develop health risk behaviors with girls at more risk.

Keywords: Adolescents, Health related risks, HRA model, Islamabad, Physical activity, Shelter homes.

81. To Determine the Sensitivity and Specificity of Retinoscopy in Diagnosis of Keratoconus

Abstract

Background: Keratoconus is a common ectatic disease of the cornea results in deterioration in the quality of vision. Corneal topography is currently considered the gold standard test for diagnosing keratoconus. At present, corneal tomography machines are found only in specialized eye clinics, are expensive and require expert interpretation. When it comes to population based screening for the disease, there is a need for a cheap, accessible, portable, and simple tool. All of these prerequisites are fulfilled by retinoscopy.

How to cite: Bibi, A., Naeem, A., Ahmad, S., Ullah, S., Firdous, M., Hamza, M., Qayyum, S., (2022). To Determine the Sensitivity and Specificity of Retinoscopy in Diagnosis of Keratoconus. Indian Journal of Scientific & Engineering Research (IJSER), 13(6), 638-644.

Objectives: To determine the sensitivity and specificity of retinoscopy in diagnosis of keratoconus using the Galeli G4 Dual Scheimpflug as the Gold Standard comparison.

Methods: A Cross-Sectional study done in patients of age between 10-30 years, referred to OPD with keratoconus, keratoconus suspect, eye discomfort, frequent change of glasses, or with astigmatism or refractive surgery, were screened for the presence of scissoring reflex. Patient then underwent corneal topography. Diagnosis of keratoconus was made by calculating KISA% index using corneal topography indices. The results of retinoscopy and Galeli Topography were compared to assess the sensitivity and specificity of the test.

Results: A total of 61 patients with a mean age of 19.55 ± 5.786 (range 10-30 years) comprising 120 eyes were included. There were 62 eyes diagnosed with keratoconus and using the Amsler-Krumeich classification, 43.5%, 41.9%, 11.3%, and 3.2% of the eyes had stage I, II, III, and IV, respectively. Sensitivity, specificity, positive predictive value, and negative predictive value of retinoscopy were 91.9%, 75.9%, 80.3%, and 89.8%, respectively.

Conclusion: Retinoscopy appears to be a highly sensitive diagnostic tool for detecting keratoconus. Such a test could be implemented in population based screening for keratoconus.

Keywords: keratoconus, retinoscopy scissor reflex, screening, epidemiology, corneal topography.

Publications

82. Effect of glycemic control on color vision in diabetic patients without clinical visible diabetic retinopathy

Abstract

Background: Diabetes mellitus (DM) is an important health problem that induces severe complications. Ocular problems of diabetes mellitus are progressive and rapidly becoming the world's most major cause of morbidity. Diabetic retinopathy is the most common microvascular complication of diabetes mellitus and the prevalence of diabetic retinopathy increases with the duration of diabetes mellitus and poor glycemic control.

How to cite: Saeed, R., Iqbal, I., Mudassar, A., Qayyum, S., & Wahab, Z. (2022). EFFECT OF GLYCEMIC CONTROL ON COLOR VISION IN DIABETIC PATIENTS WITHOUT CLINICAL VISIBLE DIABETIC RETINOPATHY. Asian Journal of Allied Health Sciences (AJAHS), 7(2).

Objective: The objective of current research is to check the effect of glycemic control on color vision in diabetic patients without clinically visible diabetic retinopathy.

Methodology: This research was conducted at Al-Nafees Medical College Hospital, Islamabad. It was a descriptive cross-sectional study. Two hundred patients fulfilling the inclusion criteria were selected for this study. An informed consent was taken from every individual. Visual acuity of each subject was measured and recorded on researcher administered questionnaire; distance vision was assessed with LCD Snellen chart and near vision was checked by using Roman chart. After the visual acuity measurement subjective refraction was performed to obtain the best corrected visual acuity. After the best corrected visual acuity color vision of the individual was assessed with Ishihara 24 plate's chart then dilated fundus examination was performed with +90 D lens to rule out diabetic retinopathy.

Results: The frequency of females was and males were with the mean age of 46.41 ± 3.17 years. Out of 200 patients 68% (n=136) patients showed normal color vision, had reduced color vision and 8% (n=16) of the subjects had color vision impairment. Controlled diabetes was observed in 64.5% (n=129) while 35.5% (n=71) patients showed uncontrolled diabetes. Chi-square test shows a highly significant association of glycemic control on color vision in patients with diabetic mellitus.

Conclusion: Our result concludes that the glycemic control has a statistically significant relationship to color vision.

Keywords: BCVA, Color vision, Diabetic retinopathy, Diabetes mellitus, Glycemic control.

83. Physician's satisfaction with clinical laboratory services of District Headquarter hospitals of Azad Jammu & Kashmir

Abstract

Introduction: For proper patient management, clinical services and physician decisions are heavily reliant on laboratory test results. As a result, physician satisfaction with laboratory services is a critical

How to cite: Khalid B, Ayyub F, Rehman A, Sughra U, Nabeel K. Physician's satisfaction with clinical laboratory services of District Headquarter hospitals of Azad Jammu & Kashmir. JSTMU [Internet]. 3Sep.2022 [cited 18Jan.2023];5(1):37-2.

Publications

indicator of service quality, emphasizing the importance of improving laboratory services to benefit patients.

Objectives: To determine physician satisfaction and factors affecting physician satisfaction with laboratory services in Azad Jammu & Kashmir (AJK).

Methodology: Data were collected in all the seven DHQs of AJK over three months. Data was collected through a structured questionnaire from (N=202) physicians using a non-probability convenient sampling technique. Chi-Square tests were used to determine the factors which showed a statistically significant relationship with outcome.

Results: A total (N=202) of respondents included in the study with an overall mean score of physician's satisfaction with clinical lab services was 38 ± 9.6 ranging from a minimum score of satisfaction 22 to a maximum of 56. A statistically significant association was found between the age of the Physicians, area of residence, and their level of education with a satisfaction level of lab services with the p-value= 0.013, 0.013, and 0.001 respectively.

Conclusion: It is concluded that physician satisfaction with laboratory services in public hospitals of AJK was very low, more than 50% of the patients showed dissatisfaction with the services. The main factors which affect the overall satisfaction of physicians with laboratory services were the absence of the assistance handbook, laboratory request form, and turnover time of the reports.

84. Assessment of Corneal High Order Aberrations by Scheimpflug Placido Topography among Children with Myopia

Abstract

Objective: The purpose of the study was to evaluate the characteristics of high order aberrations among children with mild, moderate, and high myopia.

How to cite: Fareeha Ayyub, Nimra Gul, Sohail Ahmad, Bilal Khalid, Zahid Siddiq International Journal of Scientific & Engineering Research Volume 13, Issue 6, June-2022 275 ISSN 2229-5518

Materials and Methods: This cross-sectional study was carried out at Al-Shifa trust children's eye hospital over six months from January 2022 to June 2022. A total of 360 patients have myopia of either mild (0-3Ds), moderate (3-6Ds), or high (>6Ds) were included in this study. The data was collected using clinical perform which include demographic characteristics, ocular parameter, and the details of Zernike coefficients. Corneal anterior, posterior curvature, CCT, and high-order aberrations were measured using Scheimpflug-Placido topography (Galilei).

Results: A total of 360 patients were included in this study out of which the majority 216(60%) were male with a mean education of (7.16 ± 3.18) years. Trefoil aberrations were statistically significant when compared with the myopia of all groups $p < 0.05$. It was highest in high myopia (0.185 ± 0.13) followed by moderate and mild myopia (0.152 ± 0.09) and (0.151 ± 0.09) respectively. High-order aberrations showed a statistically significant negative correlation with the central corneal thickness ($r = -1.97$, $p = 0.001$) and mean posterior corneal curvature ($r = -0.14$, $p = 0.001$). Spherical aberrations were statistically significant

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when compared with all groups of myopia and it was maximum in moderate myopia (0.241 ± 0.06) followed by high myopia (0.230 ± 0.12).

Conclusion: The corneal third-order, fourth-order, and coma aberrations were predominant along with spherical aberrations in myopia. The high order aberrations increase with the increase of refractive error. The corneal posterior curvature plays a compensatory role in the reduction of aberrations.

Keywords: Cornea, Corneal Topography, High order Aberrations, Myopia, RMS, Zernike Polynomial, Zernike Coefficients

85. Development of a protocol for conducting a randomized control trial on effects of artificial intelligence on nutritional status of children post cardiac surgery

Abstract

Objectives: To assess the effect of diet-related mobile application based on artificial intelligence on the nutritional status of children post-cardiac surgery, and to compare their diet-related problems with their counterparts having the usual diet.

How to cite: Zahid, M., & Sughra, U. (2022). Development of a protocol for conducting a randomized control trial on effects of artificial intelligence on nutritional status of children post cardiac surgery. JPMA, 72(908).

Method: The two-arm double-blind randomised controlled trial will be conducted at a tertiary care hospital in Rawalpindi, Pakistan, over an expected duration of 6 months from March to August 2021. Intervention group A will be given a diet-related mobile application based on artificial intelligence, while usual-care group B will be handed a pamphlet with instructions related to post-operative diet on discharge.

Results: The findings will improve perception about the influence of artificial intelligence on nutritional status of children post-cardiac surgery. If proven to be effective, this mobile application can be used in other hospitals.

Conclusion: The study protocol will give an indication that whether diet-related mobile application can contribute to improving the nutritional status of children post-cardiac surgery. As the pandemic has forced people to minimize hospital visits, this is the right time to evaluate the utility of such an application.

Keywords: Artificial intelligence, Diet-related mobile application, Nutritional status, Children post-cardiac surgery, randomised controlled trial.

86. The Effect of Artificial Intelligence on the Nutritional Status of Children After Cardiac Surgery: Randomized Controlled Trial

Abstract

Background: Malnutrition is the most common problem in congenital heart disease patients. Health-based mobile apps play an important role in the

How to cite: Zahid, M., & Sughra, U. (2022). The Effect of Artificial Intelligence on the Nutritional Status of Children After Cardiac Surgery: Randomized Controlled Trial. proceedings, 8(1), e36480.

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planning and tracking of diet for better nutritional status.

Objective: The aim of this paper was to assess the effect of artificial intelligence on the nutritional status of children after cardiac surgery in comparison to the usual care group. We also aimed to assess the usefulness of a diet-related mobile app in comparison to the usual care group.

Methods: This is a two-arm randomized controlled trial, which was conducted at a tertiary care hospital, Rawalpindi. The study duration was 6 months from February 2021 until July 2021. The sample size was calculated to be 88. The intervention group was given a diet-related mobile app, and the usual care group was handed a pamphlet with diet instructions on discharge.

Results: 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 calories 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 proteins consumed by the usual care group was 34.3 (SD 12.5) grams and 39 (SD 6.4) grams by the intervention group after 8 weeks of discharge. At the end of the intervention, the preferred diet planning tool for 79% of the participants was mobile app. At the 8th week, 93% of the participants considered the visual cues useful, 80% thought that the mobile app's language was understandable, 79% thought nutritional goal setting is a useful feature in the mobile app, and 55% thought the recipes provided in the app were useful.

Conclusions: 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, as the intervention period was limited.

Keywords: Artificial intelligence; diet-related mobile app; nutritional status; children; post-cardiac surgery; randomized controlled trial

Dissertation

S/NO	Name of Student	Title of Research	Supervisor
1.	Attig Ur Rehman	Awareness and preventive practices regarding dengue fever among people visiting public tertiary care hospitals in Rawalpindi and Islamabad.	Dr. Saman Waqar
2.	Tauqeer Hayat	Knowledge and perception of mothers regarding vitamin-A supplementation in children under 5 years of age.	Dr. Ume Sughra
3.	Muhammad Saad Sarfraz	Prevalence of musculoskeletal disorders and quality of life among bike riders in Rawalpindi.	Dr. Khizar Nabeel Ali
4.	Rabia Sundus	Electronic devices usage with Musculoskeletal complaints among university students of Rawalpindi/Islamabad.	Dr. Ume Sughra
5.	Aliya Iqbal	Parental support for physical activity and healthy diet among preschoolers in Karimabad, Hunza.	Ms. Qandeel Tahir
6.	Ayesha Nisar	Assessment of Physical activity behavior and mental health in Covid-19 Post-Lockdown among university students of capital city, Islamabad.	Dr. QuratUl Ain
7.	Suzzana Akbar Khan	Awareness of parents regarding eye diseases and eye care needs among children of tehsil Babuzai, District Sawat.	Dr. Khizar Nabeel Ali
8.	Siddiq Batool	Dietary transition and its determinants among residents of Skardu city.	Dr. Khizar Nabeel Ali
9.	Mahnoor Khalil	Association of Post-Partum mental health and breastfeeding practices of mothers visiting MCH centers of Rawalpindi and Islamabad: A mixed method study.	Dr. Ayesha Babar
10.	Minahil Ahmed	Effect of Covid-19 pandemic on academic performance of medical students in government colleges of AJK.	Dr. Ume Sughra
11.	Faiza Jamshaid	Health related quality of life among women with Poly cystic Ovarian Syndrome visiting tertiary care hospitals of Rawalpindi.	Ms. Qandeel Tahir
12.	Rabbia Yousaf	Effect of nutritional education on the knowledge of diabetic patients using the health belief model in Rawalpindi city: Quasi Experimental study.	Dr. Ayesha Babar
13.	Zoha Imtiaz Malik	Functional Gastrointestinal disease and dietary habits among children-a cross-sectional school based study in Rawalpindi and Islamabad, Pakistan.	Dr. Khizar Nabeel Ali

Dissertation

14.	Areeba Tayyab	Prevalence of PCOS and its Association with Psychological disorders among women of Reproductive age visiting Rehab facilities of Islamabad.	Dr. Saman Waqar
15.	Amaila Rustam	Association of oral health related quality of life with dietary patterns among Geriatrics visiting dental hospital of Rawalpindi.	Dr. Ume Sughra
16.	Nimra Inayat	Association of diet with depression among Type-2 diabetic patients visiting tertiary care hospitals in Rawalpindi city.	Ms. Qandeel Tahir
17.	Faiza Ashraf	Assessment of self-rated skin tone on self-esteem among university students of Gujrat.	Dr. Khizar Nabeel
18.	Najm Us Sabah	Assessment of Psychological well-being doctors working in public and private hospitals of Gilgit.	Dr. Ayesha Babar
19.	Bushra Kanwal	Assessment of metabolic syndrome and its knowledge among adults visiting fitness and rehab centers, Rawalpindi.	Dr. Khizar Nabeel Ali
20.	Gulalai Rehman	Infant and young child feeding practices among mothers of children aged 0-23 months in rural areas of Quetta.	Dr. Saman Waqar
21.	Samia Nazir	Assessment of barriers in seeking healthcare and awareness of health risks in transgender of Punjab.	Dr. Ume Sughra
22.	Tahreen Ahmad Siddiqui	Quality of life in patients with Osteoporotic fractures in tertiary healthcare facilities of Rawalpindi and Islamabad.	Dr. Ayesha Babar
23.	Rao Khawar Islam	Patient's perception of pharmaceutical services in community pharmacy of rural Hyderabad, Pakistan.	Dr. Ayesha Babar
24.	Ziad Bin Akhter	Assessment of empathy among doctors working at tertiary care hospitals of Rawalpindi city.	Dr. Khizar Nabeel Ali
25.	Syed Hussain Shah Tirmzi	Assessment of protocols for disinfection and sterilization of operation theatre equipment in tertiary care hospitals of Rawalpindi city.	Ms. Hina Sharif
26.	SabiraJaved	Assessment of quality of life among cardiac patients with Co-Morbid Depression visiting cardiac centers of Rawalpindi city.	Dr. Khizar Nabeel Ali
27.	Nida Nasir	Prescriber's experience and satisfaction regarding standard treatment guideline for the diabetes mellitus type 2.	Ms. Hina Sharif
28.	Mahnoor Awais	Parenting stress among mothers of children with Autism in Rawalpindi.	Dr. QuratUl Ain
29.	Mehwish Ali	Awareness of contraceptive use in married women of district Gilgit, Gilgit Baltistan.	Ms. Qandeel Tahir

Dissertation

30.	Fatima Tu Zahra	Association of Jaw clenching with tooth wear among occupational workers in heavy mechanical factory Taxila, Pakistan.	Ms. Hina Sharif
31.	Chaudry Tahir Ali	Prevalence of anxiety and depression amongst liver cancer patients of twin cities of Pakistan.	Dr. Ume Sughra
32.	Imrana Rubab	Assessment of health related risks among adolescents living in shelter homes of Islamabad.	Dr. Khizar Nabeel Ali
33.	Bazala Ali	Association between stress and acne among patients visiting THQ Gujar Khan, Rawalpindi.	Dr. Saman Waqar
34.	Arooj Batool	Burnout level in healthcare providers working in Ayub teaching hospital.	Dr. Khizar Nabeel Ali
35.	Shahzad Farid Khan	Assessment of stunting and its associated factors in children under 2 years of age in Tehsil Umerkot.	Dr. Ume Sughra
36.	Warda Wazir	Effect of health education regarding awareness of breast cancer among school going adolescents in Rawalpindi city: A Qusai experimental study.	Dr. Ayesha Babar
37.	Hajra Arshad Abbasi	Assessment of mental health literacy among healthcare professionals working at primary health care units, district Muzaffargarh.	Dr. Ayesha Babar
38.	Izza Maryam	Assessment of macular parameter changes in patients with Keratoconus	Mr. SaifUllah
39.	Mashal Naeem	Residual Stereopsis and its impact on vision-related abilities in patients	Ms. Sadaf Qayyum
40.	Naseebain	Association of Dry Eye with Sleep quality	Ms. Sadaf Qayyum
41.	Azka Amjad	Corneal Nerve analysis in patients with Dry Eyes using Invivo Confocal Microscopy	Ms. Fareeha Ayyub
42.	M. Junaid Iqbal	Comparison of Contrast Sensitivity in Diabetics with Non-Proliferative Diabetic Retinopathy	Ms. Maryam Firdous
43.	Minahil Majid	Effect of excessive screen time on ocular functions among students	Ms. Fareeha Ayyub
44.	AzkaNaseer	Assessment of Contrast Sensitivity and Higher Order Aberrations in Dry Eye	Ms. Maryam Firdous
45.	Zaib-un-Nisa	Choroidal Thickness in different Refractive Errors	Mr. SaifUllah
46.	Ahmad Masood	Effect of Intrinsically Photosensitive Retinal Ganglion Cells Stimulation on Axial Length changes to imposed optical defocus in young Emmetropic adults	Mr. SaifUllah

Dissertation

47.	Ahmad Sardar	Comparison of Macular Thickness and Foveal volume between Anisometropia with and without amblyopia	Mr. SaifUllah
48.	Mirza. M. Khizar Baig	Correlation of Axial Length and Corneal Curvature with Diopters in eyes of adults having Anisometropia	Ms. Maryam Firdous
49.	Hina Safeer	Influence of refractive status of patients on corneal High Order Aberration.	Ms. Sadaf Qayyum
50.	Iqra Javed	Comparison of Macular, Choroidal and Retinal Nerve Fiber Layer Thickness in Smokers and Non-smokers	Ms. Fareeha Ayyub
51.	Momina Zaheer	Comparison of Effect of Corneal High Order Aberrations on Contrast Sensitivity in Myopic and Hyperopic Eyes	Ms. Maryam Firdous
52.	Urwa Ahmed	Effect of Body Mass Index on Retinal Nerve Fiber Layer Thickness in adults	Ms. Fareeha Ayyub
53.	Aqsa Prince	Effect of Amblyopia on Contrast Sensitivity, Color Vision, and Stereo Acuity	Ms. Sadaf Qayyum
54.	Zahra Batool	Effect of Base out Prisms during Smartphone use on near Vergence and Accommodation	Mr. SaifUllah
55.	Aneesha Kanwal	Effect of induced monocular and binocular Astigmatism on near Stereoacuity	Ms. Sadaf Qayyum
56.	Aneera Arshad	Corneal Endothelial Parameters in patients having Dry Eye disease	Dr. Ayesha Babar Ms. Maryam Firdous
57.	Areeba Fatima	Photostress Recovery time after treatment in Diabetic Macular Edema in Tertiary Eye Care Hospital	Ms. Maryam Firdous
58.	Warda Rafique	Comparative study of Endothelial Cell Count and Central Corneal Thickness between Emmetropes and high Myopes	Mr. SaifUllah
59.	Iqra Hussain	Measurement Of Stereopsis, Color Vision, and Contrast in Glaucoma patients.	Ms. Sadaf Qayyum

Conferences & Webinars

S/NO	Participating Faculty	Title
1.	Dr. Ayesha Babar Kawish	Strengthening Health systems which are inclusive following maternal, newborn, adolescent approach. Webinar attended arranged by MONHSRC and WHO on 2 nd February 2022
2.	Dr. Ayesha Babar Kawish	Master trainer in Promoting Health care knowledge and practices among adolescent girls and young women. Training of trainers done arranged by Fatema Jinnah Women University and University of Manitoba, Canada. 9 th February 2022.
3.	Dr. Ayesha Babar Kawish	Workshop sessions taken on Biostatistics for medical students arranged by Army Medical college, NUMS. 10 th February 2022.
4.	Dr. Ayesha Babar Kawish	Training of Health care providers for Communicable diseases arranged by Punjab Health facilities in District Rawalpindi. 17 th February 2022.
5.	Dr. Ayesha Babar Kawish	Attended Seminar on Prevention of heart diseases in women by Go red organization in Al-Shifa Trust eye Hospital. 19 th February 2022.
6.	Dr. Tayyab Afghani	“Unusual features of the tumors of the lacrimal gland” presented at Khyber Eye Conference 25-27 February, 2022, Peshawar, Pakistan.
7.	Dr. Ayesha Babar Kawish	Participation on PTV program as Public Health Consultant for Ending Polio arranged by MONHSRC. 1 st March 2022.
8.	Dr. Ayesha Babar Kawish	Participation and speaker in webinar for Ideation workshop on uptake of Covid 19 vaccination in Pakistan: prioritization of Interventions arranged by Gallup International and International Research workforce. 2 nd March 2022.
9.	Dr. Ayesha Babar Kawish	Participation in World Health Day: Our planet our Health arranged by FUSH, community medicine Department. 8 th April 2022.
10.	Dr. Ume Sughra	Participation in World Health Day: Our planet our Health arranged by FUSH, community medicine Department. 8 th April 2022.
11.	Dr. Asmaa Riaz	Participation in World Health Day: Our planet our Health arranged by FUSH, community medicine Department. 8 th April 2022.
12.	Dr. Marriam Suleman	Participation in World Health Day: Our planet our Health arranged by FUSH, community medicine Department. 8 th April 2022.
13.	Dr. Ayesha Babar Kawish	Training of Trainers: Integration of essential Nutrition services at Primary Health care level through Universal Health Coverage approach in Umarzai Charsada arranged by WHO and MONHSRC. 14 th April 2022.
14.	Dr. Ayesha Babar Kawish	Participation in Health advocacy TV program Sehat Zindagi on Perceptions and barriers in giving mothers feed: simple Interventions. 15 th April 2022.

Conferences & Webinars

15.	Dr. Ayesha Babar Kawish	Participation in Selection of Need base scholarships as Senior consultant for Ehsas Undergraduate Scholarships project, Institutional Scholarships Award Committee (ISAC) meeting. 28 th April 2022.
16.	Dr. Ayesha Babar Kawish	Participation in Seminar on International Day of Midwife 2022 in MCH center, PIMS arranged by MONHSRC and WHO. 9 TH May 2022.
17.	Dr. Ayesha Babar Kawish	Master trainer in three day training workshop on Integrated nutrition package into PHC through UHC Approach for ICT PHC facilities, MONHSRC and WHO. 9 th -11 th May 2022.
18.	Dr. Ayesha Babar Kawish	Conducted and participated in Facility building workshops of Hospital staff on Patient Facilitation by Al-Shifa School of Public Health, PIO and Administration of Al-Shifa Trust Eye Hospital RWP. 17 th May 2022.
19.	Dr. Ayesha Babar Kawish	Speaker and participation in strengthening community action SBCC COP, Pathfinder International & Health services Academy, Islamabad. 7 th June 2022.
20.	Dr. Ayesha Babar Kawish	Participation in webinar on “WHO guidelines for self care for health and well being in fragile health settings arranged by WHO. 14 th July 2022.
21.	Dr. Ume Sughra	Training on Protocol Overview for Protocol V130_14 by IQVIA, DrugDev Spark on August, 2022.
22.	Dr. Asmaa Riaz	Training on Protocol Overview for Protocol V130_14 by IQVIA, DrugDev Spark on August, 2022.
23.	Dr. Marriam Suleman	Training on Protocol Overview for Protocol V130_14 by IQVIA, DrugDev Spark on August, 2022.
24.	Dr. Ume Sughra	Training on Vaccine, Administration, Transportation and storage for Protocol V130_14 by IQVIA DrugDev Spark on August, 2022.
25.	Dr. Asmaa Riaz	Training on Vaccine, Administration, Transportation and storage for Protocol V130_14 by IQVIA DrugDev Spark on August, 2022.
26.	Dr. Mahmood Ali	Diode Laser Cycloablation Karophth 2022 / 4th International Glaucoma Congress in August 2022:
27.	Dr. Marriam Suleman	Training on Vaccine, Administration, Transportation and storage for Protocol V130_14 by IQVIA DrugDev Spark on August, 2022.
28.	Dr. Ume Sughra	Training on Study collection and Transportation of Laboratory Samples by IQVIA, DrugDev Spark on August, 2022.
29.	Dr. Asmaa Riaz	Training on Study collection and Transportation of Laboratory Samples by IQVIA, DrugDev Spark on August, 2022.
30.	Dr. Marriam Suleman	Training on Study collection and Transportation of Laboratory Samples by IQVIA, DrugDev Spark on August, 2022.
31.	Dr. Ume Sughra	Training on Reporting Adverse Events (SAEs) for Protocol V130_14 by IQVIA, DrugDev Spark on August, 2022.
32.	Dr. Asmaa Riaz	Training on Reporting Adverse Events (SAEs) for Protocol V130_14 by IQVIA, DrugDev Spark on August, 2022.

Conferences & Webinars

33.	Dr. Marriam Suleman	Training on Reporting Adverse Events (SAEs) for Protocol V130_14 by IQVIA, DrugDev Spark on August,2022.
34.	Dr. Ayesha Babar Kawish	Panel discussant “step up breast feeding” arranged by Scaling up nutrition Civil Society Alliance and Nutritional International.28 th August 2022.
35.	Dr. Ume Sughra	Training on Completion of GCP Site Responsibilities for Protocol V130_14 by IQVIA, DrugDev Spark on August 2022
36.	Dr. Asmaa Riaz	Training on Completion of GCP Site Responsibilities for Protocol V130_14 by IQVIA, DrugDev Spark on August 2022
37.	Dr. Marriam Suleman	Training on Completion of GCP Site Responsibilities for Protocol V130_14 by IQVIA, DrugDev Spark on August 2022
38.	Dr. Ume Sughra	Investigator Meeting for Protocol Seqirus V130_14, IQVIA on September,2022.
39.	Dr. Asmaa Riaz	Investigator Meeting for Protocol Seqirus V130_14, IQVIA on September,2022.
40.	Dr. Marriam Suleman	Investigator Meeting for Protocol Seqirus V130_14, IQVIA on September,2022.
41.	Dr. Ume Sughra	Attended conference on World Patient Safety Day at COMSTECH on September 17, 2022.
42.	Dr. Asmaa Riaz	Attended conference on World Patient Safety Day at COMSTECH on September 17, 2022.
43.	Dr. Marriam Suleman	Attended conference on World Patient Safety Day at COMSTECH on September 17, 2022.
44.	Dr. Ayesha Babar Kawish	Panel Discussant in Sehat Zindagi program, PTV on Infant nutrition.30 th September 2022.
45.	Dr. Ume Sughra	Training on Medidata Rave TRSM: Shipping to Return Depots and Destroying Items at Site by IQVIA, Medidata Academy on October 2022.
46.	Dr. Asmaa Riaz	Training on Medidata Rave TRSM: Shipping to Return Depots and Destroying Items at Site by IQVIA, Medidata Academy on October 2022.
47.	Dr. Marriam Suleman	Training on Medidata Rave TRSM: Shipping to Return Depots and Destroying Items at Site by IQVIA, Medidata Academy on October 2022.
48.	Dr. Ume Sughra	Training on Medidata Classic Rave: EDC Essential for Clinical Research Coordinators by IQVIA , Medidata Academy on October 2022.
49.	Dr. Asmaa Riaz	Training on Medidata Classic Rave: EDC Essential for Clinical Research Coordinators by IQVIA , Medidata Academy on October 2022.

Conferences & Webinars

50.	Dr. Marriam Suleman	Training on Medidata Classic Rave: EDC Essential for Clinical Research Coordinators by IQVIA , Medidata Academy on October 2022.
51.	Dr. Tayyab Afghani	“Targeted therapies for Eye Cancers” presented at annual conference of the Nepalese Society of Oculoplastic surgeons at Kathmandu, Nepal in October, 2022.
52.	Dr. Tayyab Afghani	“Chemotherapy and radiation therapy for eye cancer” presented at annual conference of the Nepalese Society of Oculoplastic surgeons at Kathmandu, Nepal in October, 2022.
53.	Dr. Tayyab Afghani	“Cancers of the eye at birth” presented at annual conference of the Nepalese Society of Oculoplastic surgeons at Kathmandu, Nepal in October, 2022.
54.	Dr. Ume Sughra	Training on Medidata Rave RTSM Logistics for Site Users by IQVIA, Medidata Academy on October, 2022.
55.	Dr. Asmaa Riaz	Training on Medidata Rave RTSM Logistics for Site Users by IQVIA, Medidata Academy on October, 2022.
56.	Dr. Marriam Suleman	Training on Medidata Rave RTSM Logistics for Site Users by IQVIA, Medidata Academy on October, 2022.
57.	Dr. Ayesha Babar Kawish	Participation in Role of Health care professional for improving maternal nutrition@ Regional R 2 Action Conference on SRHR in Health services Academy.1 st November 2022.
58.	Dr. Ume Sughra	Investigator Meeting for Protocol Alvotech, AVT06, IQVIA on November, 2022.
59.	Dr. Asmaa Riaz	Investigator Meeting for Protocol Alvotech, AVT06, IQVIA on November, 2022.
60.	Dr. Marriam Suleman	Investigator Meeting for Protocol Alvotech, AVT06, IQVIA on November, 2022.
61.	Dr. Ume Sughra	Training for transportation and shipping of dangerous goods by Mayo Clinic Laboratories on 14 November, 2022.
62.	Dr. Asmaa Riaz	Training for transportation and shipping of dangerous goods by Mayo Clinic Laboratories on 14 November, 2022.
63.	Dr. Marriam Suleman	Training for transportation and shipping of dangerous goods by Mayo Clinic Laboratories on 14 November, 2022.
64.	Dr. Ume Sughra	Training for the handling / offering for transportation of dangerous goods on Mayo Clinic Laboratories on November, 2022.
65.	Dr. Asmaa Riaz	Training for the handling / offering for transportation of dangerous goods on Mayo Clinic Laboratories on November, 2022.

Conferences & Webinars

66.	Dr. Marriam Suleman	Training for the handling / offering for transportation of dangerous goods on Mayo Clinic Laboratories on November, 2022.
67.	Dr. Tayyab Afghani	“Congenital Cancers of the Orbit” presented at Afro Asian Congress of Ophthalmology 7-11 Dec. 2022, Lahore, Pakistan
68.	Dr. Tayyab Afghani	“Adjuvant therapies for eye cancer” presented at Afro Asian Congress of Ophthalmology 7-11 Dec. 2022, Lahore, Pakistan
69.	Dr. Ayesha Babar Kawish	Speaker on Universal Health Coverage Day: Build the world we want: A healthy nation arranged by Fatima Jinnah Women University. 12 th December 2022.
70.	Dr. Mahmood Ali	Micropulse Diode Laser Cycloablation for Refractory Glaucoma SAARC Academy of Ophthalmology Congress (SAOCON 2022):
71.	Dr. Hira Muazzam	Neovascular Glaucoma Aqueous Misdirection Syndrome 20th Congress of Afroasian Council of Ophthalmology in December 2022:
72.	Dr. Mahmood Ali	Visual Field Interpretation at a Glance Islamabad and Quetta Congress of Ophthalmology 2022:
73.	Dr. Hira Muazzam	Management of Glaucoma in Pregnancy Islamabad and Quetta Congress of Ophthalmology 2022:
74.	Dr. Mahmood Ali	Presentation Neovascular Glaucoma 20th Congress of Afroasian Council of Ophthalmology in December 2022.

Clinical Trials

1. A Phase III Randomized, Double-blind, Placebo-controlled Clinical Trial in 18 Years of Age and Above to Determine the Safety and Efficacy of ZF2001, a Recombinant Novel Coronavirus Vaccine (CHO cell) for Prevention of COVID-19.
2. A Phase III, Randomized, Observer-blind, Multicenter Study to Evaluate the Efficacy, Immunogenicity and Safety of Seqirus' Cell-Based Quadrivalent Subunit Influenza Virus Vaccine (QIVc) Compared to a Non-Influenza Vaccine when Administrated in Healthy Subjects aged 6 Months through 47 Months.
3. A Randomized, Double-masked, Parallel-group, Multicenter Clinical Study to Evaluate the Efficacy and Safety of AVT06 Compared with EU-Eylea® in Subjects with Neovascular (wet) Age-related Macular Degeneration (ALVOEYE).

Clinical Trials



1. STUDY TITLE:

A Phase III Randomized, Double-blind, Placebo-controlled Clinical Trial in 18 Years of Age and Above to Determine the Safety and Efficacy of ZF2001, a Recombinant Novel Coronavirus Vaccine (CHO cell) for Prevention of COVID-19.

SPONSOR

Anhui Zhifei Longcom Biopharmaceutical Co., Ltd China

Principal Investigator:

Prof. Dr. Ume Sughra

STATUS

Closed Out



Clinical Trials



2. STUDY TITLE:

A Phase III, Randomized, Observer-blind, Multicenter Study to Evaluate the Efficacy, Immunogenicity and Safety of Seqirus' Cell-Based Quadrivalent Subunit Influenza Virus Vaccine (QIVc) Compared to a Non-Influenza Vaccine when Administrated in Healthy Subjects aged 6 Months through 47 Months.

SPONSOR

Seqirus Inc./Seqirus UK Limited

Principal Investigator:

Prof. Dr. Ume Sughra

INITIATION:

16th November 2022

STATUS

Ongoing



TRIAL ACHIEVEMENTS



Highest Number of Subject Vaccinated: 188

V130_14 Weekly updates for NH2022/23 Investigators and Study Team-week 7-

Dear V130_14 Investigators and Study Team,

We have enrolled 468 subjects as of today.

We should like to highlight our top enrolling sites last week:

- **Dr Sughra 58601, Al Shifa Research Centre**
- **Dr Zareen 58605, Avicenna**
- **Dr Grigore 64202, Spitalul Municipal Caracal**

Thank you very much for getting us closer to our enrollment goal of 1000 subjects by **16th of December 2022!**

In the interest of our subjects' safety, we encourage you to schedule the randomization visits **as early as possible** to get ahead of questions regarding enrollment, do reach out to your assigned IQVIA CRA.

The target enrollment breakdown per site can be found below for your convenience.

Country/Site #	PI Name	Enrolment vs. Target	Target enrolment	Actual enrolled
Pakistan			398	125
58601	Dr Sughra	100%	80	80
58602	Dr Khan	5%	60	3
58604	Dr Fatima	5%	100	5
58605	Dr Zareen	25%	100	25
58607	Dr Zaman	21%	58	12



3. STUDY TITLE:

A Randomized, Double-masked, Parallel-group, Multicenter Clinical Study to Evaluate the Efficacy and Safety of AVT06 Compared with EU-Eylea® in Subjects with Neovascular (wet) Age-related Macular Degeneration (ALVOEYE).

SPONSOR

Alvotech Swiss AG

Principal Investigator:

Prof. Dr. Ume Sughra

INITIATION:

30th December 2022

STATUS

Ongoing



TRIAL ACHIEVEMENTS



Top Recruiting Site



Highest Number of Subject Vaccinated: 15

RECRUITMENT STATUS

As of 31-Mar-2023, 427 patients have been screened and 175 patients have been randomized & dosed. Among them, only 16 subjects are participating to the PK sub-study.

Congratulation to **Lithuania, Latvia and Pakistan**, best countries with the higher recruitment rate above 0.9 subject/site/month.

Best recruiter sites with respectively 46 or 20 subjects screened and 15 or 14 subjects randomized, **Dr Ume Sughra** (Rawalpindi-Pakistan) **Dr Kristine Baumann** (Riga-Latvia) and **Dr Kaspars Ozols** (Ventspils-Latvia).

Table 1. Top 14 - Best recruiters

Principal Investigator (City / Country)	Site Number	Total Screened	Total Randomized	Screening Failure
Dr Ume Sughra (Rawalpindi / Pakistan)	2501	46	15	30
Dr Kristine Baumann (Riga / Latvia)	2001	20	15	4
Dr Kaspars Ozols (Ventspils / Latvia)	2004	20	14	6
Dr shalva skhirtladze (Tbilisi / Georgia)	1603	13	8	4
Dr Jurgita Kazlauskaitė (Klaipėda / Lithuania)	2702	12	8	3
Pablo Franco (Buenos Aires / Argentina)	1109	9	5	3
Dr Bartłomiej Kaluzny (Bydgoszcz / Poland)	2101	8	5	3
Hernan Gras (Mendoza / Argentina)	1117	7	5	0
Dr Andrius Cimbalas (Vilnius / Lithuania)	2701	6	5	1
Dr Laganovska Guna (Riga / Latvia)	2003	10	4	6
Dr Iakob Jikia (Kutaisi / Georgia)	1601	8	4	4
Dr Michał Nowak (Łódź / Poland)	2103	7	4	2
Dr Mikheil Omiadze (Tbilisi / Georgia)	1606	6	4	1
Dr Maria Hurcikova (Trebisov / Slovakia)	2301	4	4	0

“Research: The Distance between an Idea and its realization”

David Sarnoof

Event Highlights

2nd International Al-Shifa Research Conference 2022

Al-Shifa Trust Eye Hospital, Al-Shifa Research Centre on Monday, December 26th, 2022 hosted the 2nd International Research Conference titled ‘Landscape of Clinical Trials in Pakistan’, focusing on collaboration and integration for the rise of the clinical trial industry in Pakistan.

The conference’s purpose, held at Al-Shifa Eye Hospital, Rawalpindi, was to provide a comprehensive forum for experts and participants from the industry to exchange ideas and present a way forward for the promotion of clinical trial research in Pakistan. Chief guest Prof Dr Muhammad Iqbal Choudhary, Director at the International Centre for Chemical and Biological Sciences (ICCBS), Karachi and Coordinator General COMSTECH, highlighted the importance of promotion of the clinical trial industry which will lead to the development of the indigenous pharmaceutical sector and innovative medical devices shortly.

He pointed out that instead of being a service provider, “We can be innovators in this field with both economic benefits as well as health sector sustainability for our country.” Dr Iqbal said that China had adopted the same model, particularly in its fight against the Covid-19 pandemic.

President Al-Shifa Trust Eye Hospital Maj Gen (R) Rehmat Khan shed light on the performances of the Al-Shifa Research Centre and highlighted the implication of clinical trials. He briefed how the trust worked in bringing the clinical trials industry to Pakistan under Dr Ume Sughra.

President Al-Shifa Trust also mentioned services of the trust in recent floods, including a donation of Rs60 million to the flood victims and providing primary medical care through free medical camps.

Dean and Chief of Medical Services Al-Shifa Trust Eye Hospital, Prof. Dr. Wajid Ali Khan, thanked Dr. Choudhary for showing the way forward with Al-Shifa becoming a Clinical Trial site as Pakistan was being recognized in the international market for conducting clinical trials, which was previously limited to India in the region. Seasoned researchers, including Prof. Dr. Shahzad Ali Khan, VC and Dean Health Services Academy, Islamabad, Prof. Dr. Tanwir Khaliq, Vice-Chancellor PIMS Dr. Sadia Asim, Director, Dow University of Health Science and Prof. Dr. Saima Saeed, director Indus Hospital delivered keynote speeches.



Event Highlights



Maj Gen (Retd) Rehmat Khan
President
Al-Shifa Trust Eye Hospital



Prof. Dr. Wajid Ali Khan
Dean and Chief of Medical Services
Head of Cornea Department
Al-Shifa Trust Eye Hospital



Chief Guest
H.E Prof. Dr. Muhammad Iqbal Choudhary
Hilal-e-Imtiaz, Sitara-e-Imtiaz, Tamgha-e-Imtiaz
Mustafa (PBUH) Prize Laureate
Distinguished National Professor
UNESCO Chair on Medicinal and Bio-organic Natural Product Chemistry
Director ICCBS H. E. J Karachi,
Coordinator General COMSTECH Islamabad



Prof. Dr. Ume Sughra
Director Research
Al-Shifa Trust Eye Hospital

Event Highlights



Prof. Dr. Shahzad Ali Khan
Vice Chancellor
Health Services Academy Islamabad



Prof. Dr. Tanwir Khaliq
Vice Chancellor
Shaheed Zulfikar Ali Bhutto Medical
University, Islamabad



Dr. Saima Saeed
Director , Lung Health Program
Indus Hospital and Health Network



Dr. Sadia Asim
Director IBBPS , Head of CRO , SMO
And BA / BE study centre at DOW

Event Highlights



Mr. Asim Munir
General Manager | Commercial and
Operations at DRK Pharma Solutions
GmbH



Dr. Madeeha Malik
Cyntax Health Project PVT Ltd.



Dr. Hassan Mumtaz
Senior Clinical Research Associate



Dr. Adnan Zia Shamsi
Manager – Business and Portfolio
Development Metrics



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