

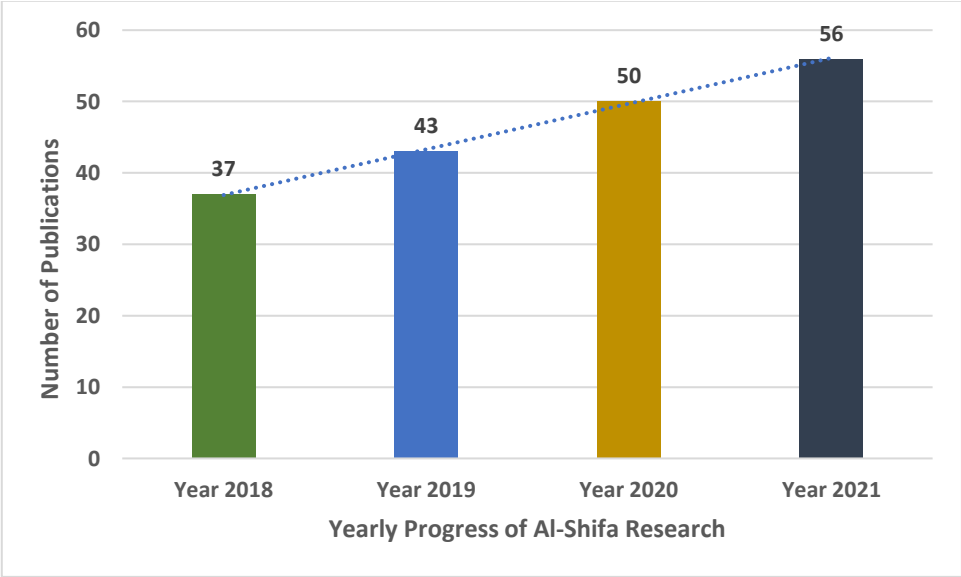


# **AL-SHIFA** **ANNUAL** **RESEARCH** **REPORT**

## **2021**

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



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## Message from President

Avoiding sickness and addressing health concerns have been our topmost priorities since inception. Throughout the COVID-19 pandemic we remained resolute in our mission to be a Centre of Excellence for healthcare, leading impactful research and delivering world-class teaching. Our achievements would not have been possible without the expertise, professionalism, passion, hard work and commitment of our Al-Shifa faculty and staff.



**Maj Gen Rehmat Khan (R)**

We launched a number of new research initiatives and activities during year 2021. Upgradation of Al-Shifa Research Centre to Clinical Trial Site and becoming part of International multicentred Phase III Clinical trials reiterates our research-intensive nature and a match to areas of research excellence at Al-Shifa.

This pandemic has highlighted even more significantly the value and importance of research. Al-Shifa faculty continues to bring quality research and innovations to address the constantly evolving needs of our patients and community at large. I am pleased to see that they all remained highly productive and innovative during year 2021. They continued to focus their work on progressing equality, diversity, and inclusion in healthcare to build a healthier, collaborative and responsible community.

There is much reason for sanguinity and optimism, as our research at Al-Shifa continues to impress and make a positive impact during COVID pandemic. We made strategic decisions to carryout International Phase III Clinical Trials of COVID-19 vaccine and became a part of global efforts to combat this challenge. Moreover, we also facilitated our community in routine COVID-19 vaccinations by opening government approved adult vaccination centre in our hospital. It is heartening to see how it progressed and helped community thoroughly to face the varied impact of COVID-19.

I take pride in writing that our researchers are finding ways to improve lives globally by conducting a diverse range of research activities from descriptive to clinical trials. Our research profile brings together the strengths of all our clinical and academic disciplines to tackle the greatest issues faced by humanity. We are driving change in the health sector by turning transformative, interdisciplinary, and translational research into real world solutions to work through testing times.

As we are moving further, I expect Al-Shifa team would continue to progress in the research paradigm in bringing new discoveries and innovations to cater the diverse range of healthcare needs of our society.

## Message from Dean

One of the objectives to establish a Research Centre at Al-Shifa was to become a Clinical Trial Centre. Year 2021 saw that objective being achieved in a record time and with high colours.

While writing for our fourth Annual Research Report-2021, I feel particularly satisfied and delightful to note that this year not only our centre was recognized as a Clinical Trial Centre, but we started a Phase-III multicentre International clinical trial for COVID-19 vaccine with a Chinese company. Dr Ume Sughra and her team deserve special praise for their untiring and disciplined efforts. Due to their commitment and dedication Al-Shifa was rated one of the best centres in Pakistan.

This year also saw a record number of publications in national and international journals. All faculty staff and students need special mention for their tremendous contributions towards publishing & presenting their scholarly work.

This is just a beginning, and we need to be focused and continue to put in hard work to achieve further heights. I wish all our research team, faculty, and students best of luck in their future pursuits.



**Prof Dr. Wajid Ali Khan**

## Annual Research Report 2021 by Director Research

2021 has been a year of great change and outstanding achievements, as we were a part of many ambitious projects both national and international. This year we continued to respond to the impact of the COVID-19 pandemic, and we reaffirmed our position as one of the best eyecare, research and teaching institute.

The number of publications coming to the year 2021 is a real indication of the strength of research and research training at Al-Shifa Trust. COVID-19 widened our horizon of research and led to new discoveries that had a real impact on understanding and treating the infections. Research opportunities generated as a result of this pandemic enabled us to reach to a next level and tap into so much passion for research training and development. Scientific research papers were published in best peer reviewed journals like BMJ Case Reports, Molecular Biology Reports, Plos One and Clinical Ophthalmology.

We pledge to enhance our research collaborations for carrying out meaningful, productive, and positive research to tackle health problems facing people here and across the globe. Provision of research and training in healthcare priorities will generate exciting opportunities for novel research for the faculty and to enable them working with national and international partners.

Al-Shifa's overarching vision to develop research talent and skills provides an opportunity to faculty to pursue their research careers.



**Prof. Dr. Ume Sughra**



**“Everything is theoretically impossible until it is done”**

Johann Wolfgang Von Goeth



## 1. Risk Factors, Causative Organisms and Sensitivity Patterns of Infective Keratitis in a Tertiary Care Hospital in Rawalpindi

**Objective:** To determine the risk factors, causative organisms, sensitivity patterns and treatment outcomes of infective corneal ulcers.

**Methods:** This is a prospective cohort study carried out from January 2018 to December 2019 at the Department of Ophthalmology, Fauji Foundation Hospital (FFH) Rawalpindi. A total of 65 eyes of 65 patients of corneal ulcer meeting the inclusion criteria were evaluated and corneal scrapes were sent for microbiological assessment. Variables studied were age, gender, risk factors, onset and duration of symptoms, best corrected visual acuity (BCVA), treatment and complications.

**Results:** Out of 65 eyes of 65 patients, 40 (61.5%) were females and 25 (38.4%) were males. Most common local risk factor was ocular surgery (29.2%) followed by ocular trauma (23.1%). Diabetes was present in 44.6% of the cases. Culture results after corneal scrapings were positive for 39 (60%) of the total samples, while 26 (40%) had no growth. Bacterial growth was present in 51.3% of eyes, fungal in 28.2% while 20.5% of the eyes were infected with polymicrobial organisms. Most common pathogens were *Pseudomonas* (25.6%) that were most sensitive to ciprofloxacin. By the end of the follow-up period 40 cases (61.5%) showed improvement.

**Conclusion:** This study concluded that isolated *Pseudomonas* was the most common pathogen. Prompt diagnosis with culture sensitivity tests are very much needed in developing countries to avoid blindness due to keratitis.

**Keywords:** Infective Keratitis, Risk Factors, Corneal Ulcer, Culture Sensitivity.

**How to Cite:** Rizwan, A., Asghar, A., Naqvi, S. A. H., Sughra, U., & Raza, H. (2021). Risk factors, causative organisms and sensitivity patterns of infective keratitis in a tertiary care hospital in Rawalpindi. *Journal of the Pakistan Medical Association*, 71(12), 2735-2739.

## 2. Lower Back Pain and Disability: An Occupational Public Health Dilemma of Chamalang, Balochistan Coal Miners

**Objective:** Lower back pain (LBP) is a common problem associated with the musculoskeletal system due to abnormal and persistent working posture among coal miners. This study aims to explore the occupational and personal factors associated with LBP and disability in coal miners of Baluchistan.

**Materials and Methods:** This cross-sectional study was conducted in Chamalang, Baluchistan, spanned over four months. Using the random sampling technique, a total of 376 underground conventional coal miners were approached. A pre-validated structured questionnaire i.e., Oswestry Lower Back Pain Questionnaire based on the

**How to Cite:** Arif, M., Kawish, A. B., Nasim, M., & Zeb, A. (2021). Lower Back Pain and Disability: An Occupational Public Health Dilemma of Chamalang, Balochistan Coal Miners. *Foundation University Journal of Dentistry*, 1(1), 18-24.



Oswestry Disability Index (ODI) was used for data collection. Descriptive statistics, correlations analysis and chi-square tests were performed for data analysis using SPSS version 20.0. A value of  $p < 0.05$  was considered statistically significant.

**Results:** Amongst the 376 respondents with the age distribution 20-50 years, the majority (50%) were from the 31-41 years age group and, nearly all suffered from LBP and had developed varying degrees of disability. Occupational factors contributing towards LBP included lifting heavy loads (81.1%), static posture underground (81.9%), working in confined spaces (77.9%), jolts from machinery (66%) and personal factors contributing towards lower back pain were age, smoking (71.8%), and existing respiratory condition (58.5%). No significant association was found between job satisfaction and the lifting of heavy loads.

**Conclusion:** Increasing age, diagnosed respiratory condition and nature of work were found to be significantly associated with LBP in coal miners. It is recommended to define and implement proper guidelines for the coal miners. This will improve their quality of life, as well as minimize disability-oriented risks associated with LBP.

**Keywords:** Coal Miners, Disability, Lower Back Pain, Musculoskeletal Disorders, Pakistan

### 3. Impact of Colorism and Self-Rated Skin Tone in Predicting Self-Esteem among Women from Pakistan

**Abstract:** Discrimination is a very complicated, multifaceted, and long-lasting problem that prevails in social and even political structure. In subcontinent, the discrimination on the basis of skin color (colorism) is making lives of women miserable who are already victims of various disparities. Colorism was found to be a predictor for both mental and physical health. This study intended to examine the impact of colorism on self-esteem of Pakistani women along with finding out other determinants of self-esteem. A cross-sectional study with 400 Pakistani females (18–40 years) from rural area was conducted. The study comprised of demographics, skin-related questions, everyday discrimination scale, and Rosenberg's self-esteem scale. Hierarchical linear regression showed residence, education, and colorism as significant predictors ( $p$ -value  $< 0.05$ ) of self-esteem. Self-rated skin tone moderated effect of colorism on self-esteem ( $R^2$  change = 0.028). It emphasized education of females with special focus on suburban areas along with participation of public health and dermatologists to discourage colorism and to stay confident with their skin tone.

**How to Cite:** Sharif, H., & Siddique, D. (2021). Impact of colorism and self-rated skin tone in predicting self-esteem among women from Pakistan. *Biodemography and Social Biology*, 1-11.

#### 4. Effect of Trabeculectomy on Corneal Astigmatism: A Hospital Based Study

**Purpose:** To find out the effect of trabeculectomy on corneal astigmatism among glaucoma patients.

**Study Design:** Interventional case series.

**Place and Duration of Study:** Al-Shifa Trust hospital, from August 2015 to February 2016.

**How to Cite:** Hashmi, S. D. A., Sughra, U., & Kausar, S. (2021). Effect of Trabeculectomy on Corneal Astigmatism: A Hospital Based Study. Pakistan Journal of Ophthalmology, 37(1).

**Methods:** Thirty patients of glaucoma who were advised trabeculectomy were included in the study. Pre and post trabeculectomy data was collected by a structured clinical proforma. Snellen chart was used to measure visual acuity. Autorefracto-keratometer was used to find K-readings, corneal astigmatism and its axis. Data was entered in SPSS version 22. Descriptive analysis was done to report frequencies, percentages for qualitative variables and mean and SD for continuous variables. Paired sample t test was applied after the preliminary analysis to compare the corneal astigmatism pre and post trabeculectomy.

**Results:** Out of 30 patients, majority (76%) were males. There was no statistically significant change found in visual acuity pre and post trabeculectomy ( $p$ -value  $> 0.05$ ). There was statistically significant difference of K1 (Horizontal) and K2 (Vertical) readings pre and post trabeculectomy ( $p < 0.05$ ). There was a statistically significant increase in overall corneal astigmatic power ( $p < 0.05$ ). Approximately 1.20D of astigmatism developed after trabeculectomy. There was no statistically significant difference between pre ( $94.0 \pm 49.6$ ) and post-operative corneal axis of astigmatism ( $87.6 \pm 64.1$ ).

**Conclusion:** Trabeculectomy results in a significant change of corneal curvature in both meridians. This causes a change in post-operative visual acuity which in turn may adversely affect the compliance of patient towards surgical treatment. Patient should be informed and counselled about the possible visual outcomes after the trabeculectomy to preclude any distress that may occur following surgery.

**Key Words:** Glaucoma, Trabeculectomy, Corneal Astigmatism, Visual Acuity, Keratometry.

#### 5. Association of Pharmacy Services with Patient Satisfaction in Public and Private Tertiary Care Hospitals of Rawalpindi and Islamabad

**Background:** The healthcare system in Pakistan is facing a shortage of human resources and appropriate and sustainable financial measures and therefore fails to provide optimum services to the population of Pakistan. Furthermore, research is limited in the healthcare institutes; therefore, there is a scarcity of information about patient satisfaction with pharmacists and pharmacy services in Pakistan.

**How to Cite:** Mahrosh, U., & Abbas, M. (2021). Association of pharmacy services with patient satisfaction in public and private tertiary care hospitals of Rawalpindi and Islamabad; Research Square.

As evident from the inadequate information in the literature, patients' opinions about the pharmacy services in Pakistan are important [1]. Therefore, the current study was designed to assess patient satisfaction with the pharmacy performance of the outpatient pharmacy and its variation with socio-demographic characteristics in twin cities of Pakistan (Rawalpindi and Islamabad).

**Method:** A cross-sectional study design was used to assess the patient satisfaction through convenience sampling technique. Minimum sample size of 250 respondents who visit pharmacy department of public and private hospital for pharmaceutical care were included in this study. A pre-validated tool was used to assess the patient satisfaction. Data was clean coded and import into spss for analysis. Descriptive and inferential statistic was applied to calculate frequency, standard deviation, mean deviation and p value to find the association among different domain of patient satisfaction with different demographic characteristics of respondents.

**Result:** Current study shows overall patients were satisfied from pharmacy services provided by government and private hospitals. Furthermore, patient satisfaction towards pharmacist medication advice was very good however patient satisfaction towards pharmacist approach was good while patient perception with pharmacy setting, drug availability and cost were underrated. Significance difference ( $p \leq 0.05$ ) was observed in pharmacist's approach with different gender, age groups and qualification. No significant difference ( $p \geq 0.05$ ) was observed in pharmacy setting drug availability and cost with different gender, age groups and marital status of respondents. However, Significance difference ( $p \leq 0.05$ ) was observed in pharmacy setting drug availability and cost with different level of education patients with less education had better satisfaction as compared to highly educated respondents. Furthermore, Significance difference ( $p \leq 0.05$ ) was observed in pharmacy setting drug availability and cost with occupation. Self-employee and government employee had low satisfaction score while other had better satisfactory score. Significance difference ( $p \leq 0.05$ ) was observed in pharmacist's approach with different gender, age groups and qualification. Females had better satisfactory score as compared to female. Younger age group had better satisfaction as compared to elderly. Patients belong to higher educational groups had better satisfaction toward pharmacist approach as compared to low qualification groups respondents. Page 3/13. Furthermore No significant difference ( $p \geq 0.05$ ) was observed in pharmacist's approach with marital status and number of visits

**Conclusion:** Current study concluded that overall patient had average satisfaction score. Patients shows a better satisfaction towards pharmacist behavior/ way of handling the patients, information provided by pharmacist regarding medicine. Patient had less satisfaction towards the location of pharmacy, availability and affordability of medicine. Patient shows negative satisfaction regarding waiting area and counselling area at indoor patient pharmacy. It has been observed that educated respondents shows high level of satisfaction towards pharmacist availability and information provided by the pharmacist.

**Keywords:** Patient Satisfaction, Pharmaceutical Care, Public and Private Healthcare Facility

## 6. Topical Ocular Anesthetic use among Welders of Rawalpindi City, Pakistan

**Abstract:** A descriptive cross-sectional survey was done from January to June 2018 in welding shops of Rawalpindi city, Pakistan. The objectives of the study were to determine the frequency of topical ocular anesthetic use among welders and to assess the knowledge and practices of welders regarding safety measures. One hundred and fifty-eight welders from age group of 20 years and above, having welding work experience of more than one year, were included in the study. The sampling strategy was non-random convenient sampling. A pretested structured questionnaire was used to collect data. Topical ocular anesthetic use among welders was found to be 45.6%. Statistically significant association was found between knowledge and practices of welders regarding their safety measures ( $p < 0.05$ ). On binary logistic regression, work experience was found to be the strongest predictor of good knowledge (OR = 4.15, 95% CI = 1.45 - 12.15) and practices (OR=10.46 95% CI = 2.92 - 37.51).

**How to Cite:** Sughra, U., Khan, W. A., & Kausar, S. (2021). Topical Ocular Anesthetic Use among Welders of Rawalpindi City, Pakistan. *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP*, 30(6), 737-739.

**Key Words:** Welder, Topical Anesthetic Abuse, Knowledge, Practices, Perceptions

## 7. Ring Shaped Cataract and Urinary Metabolites Among 2,4,6-trinitrotoulene Exposed Population of Pakistan

**Background:** Safety protocols are usually neglected among most of the 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 ( $n=20$ ).

**How to Cite:** Sarwat, S., Akhtar, A., Dayan, S., 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*, DOI: 10.1007/s10792-022-02252-2.

**Methods:** An observational case-control study was carried out in two groups: 300 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 on ( $p > 0.05$ ) on presence of ring-shaped 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  $51 \pm 14.38$  (Mean $\pm$ SD) years. The mean year of exposure was  $49 \pm 5$  (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

## 8. Awareness Regarding Primary Eye Care Among Primary Healthcare Workers of Pakistan: a Way to Revitalize Health for All!

**Purpose:** To assess awareness regarding Primary Eye Care among (primary healthcare workers) PHCWs and also intended to identify its determinants.

**Study Design:** Descriptive cross-sectional study.

**Place and Duration of Study:** All primary healthcare facilities of Tehsil Kallar Syedan, from October 2019 to December 2019.

**Methods:** The calculated sample size was 115. Data was collected from primary health care workers (PHCWs). Data was collected through a structured questionnaire with both open-ended and close-ended questions. Questions were made using simple language and were also translated in Urdu. Questionnaire was adapted from two articles and some questions were made after reading the components of National Programme for Prevention and Control of Blindness (Punjab, Pakistan). Chi-square test of independence was used for finding associations.

**Results:** Fifty-four percent PHCWs had poor awareness regarding primary eye care. Majority of the PHCWs, N = 64 (55.7%) identified just the names of common eye diseases. Cataract was identified with correct treatment by 88% primary healthcare workers. Age, education, designation were significantly associated with awareness of PHCWs.

**Conclusion:** The study concluded that more than half of PHCWs had low awareness regarding PEC. All of them mentioned that there was a need of improving and refreshing their knowledge related to primary eye care. This will definitely help to reduce pressure on secondary and tertiary healthcare workers.

**Key Words:** Primary Eye Care, Primary Healthcare Workers, Primary Healthcare Facilities, Pakistan.

**How to Cite:** ur Rehman, N., & Sharif, H. (2021). Awareness Regarding Primary Eye Care Among Primary Healthcare Workers of Pakistan: a Way to Revitalize Health for All!. *Pakistan Journal of Ophthalmology*, 37(2).

## 9. Success Rate of Augmented Trabeculectomy in Primary Congenital Glaucoma

**Purpose:** To evaluate the outcome of trabeculectomy augmented with mitomycin C in primary congenital glaucoma and to document the complications of the procedure in young children.

**Methods:** This was a prospective study of children younger than 2 years with primary congenital glaucoma who were treated with primary trabeculectomy with mitomycin C. After surgery, patients were observed for a minimum of 1 year. Trabeculectomy success was defined as an intraocular pressure (IOP) of 21 mm Hg or less without (absolute success) or with (qualified success) topical antiglaucoma medications. Surgical success was assessed at 1, 6, and 12 months after the procedure.

**How to Cite:** Jabeen, S., Noorani, S., Memon, M. N., & Zaheer, N. (2021). Success Rate of Augmented Trabeculectomy in Primary Congenital Glaucoma. *Journal of Pediatric Ophthalmology & Strabismus*, 1-8.

**Results:** Seventy-four eyes of 42 children were included in the current study. The mean age was  $11.7 \pm 8.5$  months. Of the 42 children, 57.2% were male and 42.8% were female. The mean IOP after surgery was significantly lower than the preoperative IOP ( $P < .0001$ ). Absolute success was observed in 98.6%, 50%, and 27% of eyes at 1, 6, and 12 months, respectively. Qualified success was achieved in 1.4%, 36.5%, and 48.6% of eyes at 1, 6, and 12 months, respectively. Overall success of the procedure was 100% at 1 month but reduced to 86.5% at 6 months and 75.7% at 12 months. In 24.3% of eyes, IOP was not controlled even with adjunctive topical glaucoma medications and was considered a failure. Postoperative complications were shallow anterior chamber (10.8%), collapsed anterior chamber (1.3%), and choroidal detachment (12.0%). Complications were managed conservatively, and 6 eyes needed surgical intervention.

**Conclusions:** Augmented trabeculectomy is a useful primary procedure in children with primary congenital glaucoma. Topical glaucoma medications supplement the success of the procedure.

## 10. Relationship Between Axial Length and Chorioretinal Atrophy in Pathological Myopia

**Background:** Pathological myopia has vision threatening complications. Posterior segment changes are more obvious in pathologic myopia with increased co-axial length, age and degree of myopic refractive error.

**Purpose:** The aim of study was to determine the relationship between axial length and chorioretinal atrophy in pathological myopia.

**How to Cite:** Ali, S., Manzoor, H., Akram, S., Batool, A., Latif, N., Safdar, M., & Qasim, A. (2021). Relationship Between Axial Length and Chorioretinal Atrophy in Pathological Myopia. *Ophthalmology Update*, 19(4), 36-40.

**Material and Methods:** A descriptive cross-sectional study was conducted in November 2019 to March 2020 which included 43 patients with refractive error greater than -6D to -20D is presented to department of ophthalmology Al Shifa Trust Eye Hospital Rawalpindi. Non-probability convenient sampling technique was used to collect the data, including both genders (male& female), age ranging from 10-35 years. Patient with other posterior segment pathologies were excluded. Visual acuity was recorded by ETDRS chart and routine eye examination with slit lamp was performed. A detail fundus examination was evaluated with the help of binocular indirect ophthalmoscope Axial length was measured by using ultrasonic A Scan with 10-Mhz frequency. Data was analyzed using SPSS-25 version and t-test was performed. ( $P < 0.01$ ) was taken statistically significant.

**Results:** out of 43 patients 24 (55.8%) were females and 19(44.1%) males. Mean age was  $23.50 \pm 4.07$  years and axial length  $26.98 \pm 0.9$  mm. In right eyes of 43 individuals focal and generalized Chorioretinal atrophy was noted 21(48.8%) and 16(37.2%) respectively. While in left eyes proportion was 18(41.8%) and 19(44.2%) for focal and generalized chorioretinal atrophy respectively. Chorioretinal atrophy increased with axial length ( $p < 0.01$ ).

**Conclusion:** Chorioretinal atrophy is a complication of pathological myopia that expands as the axial length and degree of myopic spherical equivalent increases. The proportion of Chorioretinal atrophy increased with elongation of axial length and high spherical equivalent of myopia. Chorioretinal atrophy is a vision threatening complication that keep on increasing with axial length of eye.

## 11. Impact of Pharmacist Led Pharmaceutical Care on Patient Medication Therapy using PROMPT-QOL In Tertiary Care Hospital: A Randomized Controlled Trial

**Background:** Pharmacists play vital role in health care system; they help to prevent medication errors. At discharge from health care facility 20% to 70% patients have at least one medication discrepancy. Pharmacist has direct impact on reducing readmission in hospitals as well as emergency visits. There is substantial reduction of 67%, 28% and 19% in adverse drug event-related to hospital revisits, (ED) visits and hospital readmissions.

**How to Cite:** Saeed, A., Sughra, U., Noor, F., Ahmad, I., Farooq, U., & Nazir, T. (2021). Impact of pharmacist led pharmaceutical care on patient medication therapy using prompt-qol in tertiary care hospital: A randomized controlled trial. *Journal of Applied Pharmacy*, 13, 1-13.

**Objectives:** To determine the Impact of pharmacist led pharmaceutical care on patient medication therapy by comparing PROMPT-QOL between pharmaceutical care (PC) patients and usual care (UC) patients. Also, to compare the characteristics of participants between PC and UC groups.

**Methods:** A randomized controlled trial was conducted at tertiary care hospital in Pakistan, Rawalpindi from May to October 2020. A total of 300 patients were randomly allocated into UC (N = 150) and PC (N = 150) groups respectively, the follow up period was one month.



**Results:** Independent Sample t-test results showed that post intervention in pharmaceutical care group had significantly higher mean changes in 8 Domains of PROMP- QOL than in usual care group. The Domains were MDI (Medicine and Disease Information), SME (Satisfaction of Medicine Effectiveness), IMS (Impacts of medicines and Side effects), PIMU (Psychological Impacts of Medication Use), CON (Convenience), AA (Availability and Accessibility), TRHC (Therapeutic Relationships with Health care providers) and OQOL (Overall quality of life) with p-value <0.005. In Demographic characteristics, gender variable is significantly different between two groups (p-value <0.001). The other variables found to be similar in both PC and UC groups.

**Conclusions:** Pharmacist oriented pharmaceutical care could improve patient medication therapy related to quality of life hence there is a need of proper pharmacist counseling room in at least tertiary care hospitals so that patient can better understand medication to improve quality of life. Eight domains of PROMPT-QOL showed significant results and were sufficient to assess humanistic impact of pharmaceutical care.

**Keywords:** Pharmacist, Patient-Oriented, Pharmaceutical Care, Pharmacist Counseling Room, Pharmacist Reported Outcome Measure of Pharmaceutical Therapy Related to Quality of Life, Medication Therapy.

## 12. Sunlight Exposure: A Protective Role in the Development of Myopia

**Abstract:** The study objective was to assess the correlation of time outdoors in sunlight hours with spherical equivalent refraction (SER) and other variables. This was a cross-sectional study carried out in the Fauji Foundation Hospital, Rawalpindi, between January and April 2019. A total of 110 Individuals were included via convenient sampling, with myopia defined as having at least -0.5 D ( $SER \leq -0.5$  D). Collection of

Questionnaires with interviews regarding eye care behaviour along with auto-refraction was done, followed by calculation of spherical equivalent refraction. Those having high myopia of 6 D or more ( $SER \leq -6$  D), hyperopia of 0.5 D or more ( $SER \geq +0.5$  D), and history significant for ocular trauma and surgeries, were excluded. After data cleaning and their entry, analyses were done using SPSS version 26. The mean age data, available for 105 individuals, was  $15.4 \pm 3.69$  years. Spearman's correlation was used for right SER with time outdoors in summers ( $r= +0.25$ ,  $p=0.008$ ) and winters ( $r= +0.243$ ,  $p=0.010$ ), indicating an inverse relationship with myopia. Females had more myopic refraction than males, but the independent sample t-test was not significant. Logistic regression was used and a protective effect was found for both summer and winter time outdoors, while education level was associated with myopia.

**How to Cite:** Naqvi, S. A. H., Rehman, Z. U., Nazir, T., Rizwan, A., Raza, H., & Obaid, N. (2021). Sunlight Exposure: A Protective Role in the Development of Myopia. *Journal of the College of Physicians and Surgeons Pakistan: JCPSP*, 31(9), 1126-1128.

**Key Words:** Myopia, Spherical Equivalent Refraction (SER), Sunlight Exposure

### 13. Knowledge and Practices Regarding Nosocomial Infection Among Nurses in Hospitals of Islamabad

**Objectives:** Objectives of the study were to determine the level of knowledge and practices regarding Nosocomial infection among nurses working in public and private hospitals of Islamabad and to determine the factors associated with knowledge and practices among these nurses.

**How to Cite:** Abdullah, M. (2021). Knowledge and practices regarding Nosocomial infection among nurses in hospitals of Islamabad. *Journal of Clinical Nursing and Practice*, 4-4.

**Design:** A cross sectional study based on self administered questionnaire was ducted.

**Setting:** Study was carried out in public and private tertiary teaching hospitals in Islamabad.

**Study Participants:** A sample of 356 nurses including 185 from public hospital and 171 from private hospital through stratified random sampling proportion to size for collecting information regarding knowledge and practices about Nosocomial infection was selected. Main outcome measures of the study were good and bad knowledge and practices regarding Nosocomial infection.

**Results:** A total sample size was 356 participants was studied where 185(51%) nurses from public hospital and 171(48%) from private hospitals were included. Most of the participants, 212 (59.6%) were of age between 20-29 years. Among the participants 221(62.1%) were females and 135 (37.9%) were male staff. Regarding knowledge level, 194(54.5%) participants had good knowledge about Nosocomial infection and as far as practice is concerned, 204(45.5%) of the participants had good practices regarding Nosocomial infection.

**Conclusion:** Overall, the knowledge and practices of the nursing staff was good. Based on facility, knowledge of the private hospital was better as compare to knowledge of the participants of public hospital however, practice of the participants from public hospital was better as compare to the practice of the participants from private hospital.

### 14. Is Pterygium Morphology Related to Loss of Corneal Endothelial Cells? A Cross-Sectional Study

**Purpose:** To determine the difference in mean corneal endothelial cell density (CECD) between the healthy and diseased eyes of the patients with unilateral pterygium with different morphology patterns by using a non-contact specular microscope (SP2000: Topcon Corporation, Japan) and to find out any relationship between severity of pterygium and daily sunlight exposure with the CECD loss.

**How to Cite:** Zaidi, S. B. H., & Khan, W. A. (2021). Is Pterygium Morphology Related to Loss of Corneal Endothelial Cells? A Cross-Sectional Study. *Clinical Ophthalmology (Auckland, NZ)*, 15, 1259.

**Methods:** A descriptive cross-sectional prospective study was carried out at Al-Shifa Trust Eye Hospital (ASTEH), Rawalpindi, Pakistan from 21st January 2019 to 22nd January 2020. Two

hundred eyes (n= 100 patients) of age range 18 -68 years with unilateral pterygium were selected. Necessary demographic data and essential variables like age, smoking status, occupation, and daily direct sunlight exposure were determined. The severity of pterygium (grading) based on its morphology was determined by slit-lamp examination. CECD of each patient was carried out using a non-contact Specular Microscope. The healthy eye (without pterygium) of a patient was considered as control.

**Results:** The age range in this study was 18-68 years, with a mean age of  $43.80 \pm 24.37$  years with a male to female ratio of 1.6:1 (62.00% males vs 38% females). Out of six occupations, the most common occupation was labor/construction work (n=31) followed by farming (n=27). The study reported a mean corneal endothelial cell density (CECD) of  $2411.61 \pm 143.64$  vs  $2751.41 \pm 123.674$  cells/mm<sup>2</sup> in diseased and normal eyes, respectively (p-value = 0.0001). CECD was lower in grade 3 pterygium compared to less severe pterygium grade 3 (Fleshy) =  $2261$  cells/mm<sup>2</sup> vs grade 2 (Intermediate) =  $2413$  cells/mm<sup>2</sup> vs grade 1 (Atrophic) =  $2459$  cells/mm<sup>2</sup> although this difference between the groups was not found to be significant (p=0.065). No significant association between sunlight exposure and CECD loss was observed (p=0.065).

**Conclusion:** This study concluded that the mean corneal endothelial cell density in patients with unilateral pterygium using a non-contact specular microscope were  $2411.61 \pm 143.64$  cells/mm<sup>2</sup>.

**Keywords:** Corneal Endothelial Cell Density, Pterygium, Specular Microscope

## 15. Measurement of Service Quality Gaps in Dental Services using SERVQUAL in Public Hospitals of Rawalpindi

**Objectives:** To measure service quality gaps in dental services provided at public hospitals of the district, Rawalpindi.

**Methods:** A cross-sectional survey was conducted in two of the public hospitals of the district, Rawalpindi from April to October 2019. Non-probability

**How to Cite:** Riaz, A., & Sughra, U. (2021). Measurement of Service Quality Gaps in Dental Services using SERVQUAL in Public Hospitals of Rawalpindi. *Pakistan Journal of Medical Sciences*, 37(3), 751.

consecutive sampling was used to include a total number of 400 patients, equally divided between Rural health center (RHC) and Tehsil headquarter (THQ). Face to face interviews were done using a 32-item SERVQUAL in the form of a structured questionnaire where one part of the questionnaire was filled before the treatment and the other after the treatment. Cronbach's alpha coefficient was found to be 0.90. It was analyzed using SPSS version 25 with descriptive and parametric tests, and further multiple linear regression was done.

**Results:** The quality of services provided to patients was significantly lower than their expectations in both RHC ( $-14.48 \pm 7.96$ ) and THQ ( $-9.97 \pm 7.97$ ). Independent t-test showed a significant difference in service quality between both the hospitals ( $-4.41$ ), with a better quality of services in THQ. Association of service quality gap was statistically significant with gender,

education, occupation, monthly income, and the number of visits to the hospital with  $p$ -value  $< 0.05$ . The type of hospital was the strongest predictor ( $\beta = 4.12$ ) of the outcome variable.

**Conclusion:** The findings reveal that patients' expectations exceed their perception of dental services provided in public hospitals. THQ provided a better quality of services compared to RHC.

**Keywords:** Dental services, Service Quality, SERVQUAL, Expectations, Perceptions, Public Hospitals

### 16. Effects of Unilateral Intravitreal Bevacizumab on the Contralateral Eye having Diabetic Macular Edema

**Objective:** To investigate the effect of unilateral intravitreal Bevacizumab on contralateral eye in bilateral diabetic macular edema.

**Study Design:** Quasi-experimental study. Place and Duration of Study: Retina Department of Al-Shifa Trust Eye Hospital, Rawalpindi, from Sep to Dec 2020.

**How to Cite:** Bashir, A. J., Hannan, A., Chaudhary, S. S., Zafar, S., Syed, A. N., & Massana, S. H. (2021). Effects Of Unilateral Intravitreal Bevacizumab on The Contralateral Eye Having Diabetic Macular Edema. PAFMJ, 71(6), 2075-77.

**Methodology:** Thirty-two patients were enrolled with consecutive sampling. All the patients had clinically diagnosed diabetic macular edema having  $>275\mu\text{m}$  macular thickness on OCT. They were injected with 1.25mg/0.05mL of Bevacizumab in one eye. Baseline macular thickness was compared with 4 weeks follow up macular thickness, using Optical Coherence Tomography.

**Results:** The central macular thickness in the untreated eye at baseline was  $396.97 \pm 29.79 \mu\text{m}$  and  $388.34 \pm 30.06 \mu\text{m}$  at 4 weeks ( $p$ -value=0.001). The difference in central macular thickness in treated and untreated eyes were  $28.44 \pm 4.11 \mu\text{m}$  and  $19.81 \pm 5.31 \mu\text{m}$  respectively ( $p$ -value = 0.001). There were statistically significant differences between these measurements.

**Conclusion:** Injecting Bevacizumab in one eye for diabetic macular edema has statistically significant effect on the contralateral non-injected eye macular thickness.

## 17. Trickle Down Effects of COVID-19 on Glaucoma Patients

**Purpose:** To report the adherence of Glaucoma patients to anti-glaucoma medical therapy during lockdown period of COVID-19 and to evaluate the factors that lead to non-adherence to medical therapy.

**Study Design:** Cross sectional survey. Place and Duration of Study: Al-Shifa Trust Eye Hospital, Rawalpindi from August 2020 to October 2020.

**Methods:** A total of 210 patients diagnosed with glaucoma were included. Exclusion criteria was newly diagnosed cases of glaucoma and patients who were non-compliant before lockdown. Patients' age, gender, marital status, occupation, residence, monthly income bracket, type of glaucoma, duration of glaucoma, number and type of anti-glaucoma medication and any other co-morbidity like diabetes or hypertension were asked from the patient. The patients were evaluated for best corrected visual acuity (BCVA), intraocular pressure (IOP) and retinal nerve fiber layer thickness (RNFL). Before lockdown, BCVA, IOP and RNFL thickness were taken from computerized data of our hospital. Patients were asked about the compliance of the anti-glaucoma therapy and the factors that lead to non-compliance (if any).

**Results:** Out of 210 individuals, there were 131 (62.4%) males and 79 (37.6%) females. About 169 (80.5%) patients reported non-compliance to anti-glaucoma drugs during the lockdown period. Non-availability of medicines was the most common reason given by 77 (57.5%) individuals, followed by lack of money by 44 (32.8%) patients.

**Conclusion:** A high proportion of non-compliance to anti-glaucoma therapy was seen in glaucoma patients during pandemic. Low literacy rate, non-availability of medicines and lack of money were major reasons for non-compliance.

**Key Words:** COVID-19, Glaucoma, Intra Ocular Pressure.

**How to Cite:** Rizwan, A., Ali, M., Akhtar, F., Sughra, U., & Naqvi, S. A. H. (2021). Trickle down effects of covid-19 on glaucoma patients. *Pakistan Journal of Ophthalmology*, 37(3).

## 18. Effect of Intravitreal Triamcinolone Acetonide in Refractory Diabetic Macular Edema

**Objective:** To investigate the effects of intravitreal triamcinolone for refractory diabetic maculopathy after 03 unsuccessful intravitreal bevacizumab injections.

**Study Design:** Prospective observational study.

**Place and Duration of Study:** Retina department of Al-Shifa Trust Eye Hospital Rawalpindi, from Jun 2016 to Jul 2017.

**How to Cite:** Sughra, U., Gul, A. A., Habib, K., Khan, Z., & Khan, O. (2021). Effect of intravitreal Triamcinolone Acetonide in Refractory Diabetic Macular Edema. *PAFMJ*, 71(5), 1861-64.

**Methodology:** Total 35 eyes of 35 patients who were diagnosed with diabetic maculopathy and having history of minimum three intravitreal Bevacizumab injections were included. Detailed eye examinations included visual acuity, anterior and posterior segment examination and intraocular pressure measurement was performed in all patients. Central macular thickness was also measured. Then intravitreal triamcinolone was administered to eyes by principal researcher (Ophthalmologist). After one month, follow up examination of patient's eyes was done to assess the effects of injection.

**Results:** Majority of the participants were males 19 (55%) in this research. There was statistically significant difference between means of intra ocular pressure (mean difference=  $4.30 \pm 5.41$ ), Visual acuity (mean difference=  $2.8 \pm 2.4$ ) and central macular thickness (mean difference =  $236.4 \pm 13$ ) pre and post injection was found ( $p$ -value<0.05).

**Conclusion:** There was statistically significant difference of central macular thickness and visual acuity, pre and post intravitreal triamcinolone acetate injection was found.

**Keywords:** Central Macular Thickness, Diabetic Macular Edema, Diabetic Retinopathy, Diabetes, Intravitreal Bevacizumab, Intravitreal Triamcinolone Acetate.

### 19. SLC4A11 Mutations Causative of Congenital Hereditary Endothelial Dystrophy (CHED) Progressing to Harboyan Syndrome in Consanguineous Pakistani Families

**Background:** Autosomal recessive corneal hereditary endothelial dystrophy (CHED) is a rare congenital disorder of cornea. Mutations in SLC4A11 gene are associated with CHED phenotype. CHED is also an early feature of Harboyan syndrome. The aim of the present study was to identify genetic mutations in the SLC4A11 gene in CHED cases belonging to inbred Pakistani families. Furthermore, all homozygous mutation carriers were investigated for hearing deficit.

**How to Cite:** Firasat, S., Khan, W. A., Sughra, U., Kaul, H., Naz, S., Noreen, B., ... & Afshan, K. (2021). SLC4A11 mutations causative of congenital hereditary endothelial dystrophy (CHED) progressing to Harboyan syndrome in consanguineous Pakistani families. *Molecular Biology Reports*, 48(11), 7467-7476.

**Methods and Results:** This study included consanguineous CHED families presented at Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan from June 2018 to September 2018. DNA was extracted from blood samples. Direct sequencing of SLC4A11 gene was performed. All identified variants were evaluated by in silico programs i.e., SIFT, PolyPhen-2, and Mutation Taster. Pathogenicity of the two identified splice site variants was analyzed by Human Splicing Finder and MaxEnt Scan. Screening of five CHED families revealed a total of three previously un reported ( $p$ . Arg128Gly, c.2241-2A > T and c.1898-2A > C in family CHED19, CHED22 and CHED26 respectively) and two already reported homozygous disease-causing variants ( $p$ . Arg869Cys and  $p$ . Val824Met in family CHED24 and CHED25 respectively) as predicted by mutation taster. All of these variants segregated with disease phenotype and were not detected in controls.

**Conclusion:** Affected individuals of the five CHED families screened in this study had the disease due to SLC4A11 mutations and progressing to Harboyan syndrome. Identification of previously unreported mutations aid to heterogeneity of SLC4A11 and CHED pathogenesis as well as helped to provide genetic counseling to affected families.

**Keywords:** Corneal Hereditary, Endothelial Dystrophy, Harboyan Syndrome, SLC4A11, Mutation, Autosomal Recessive

## 20. Utility of Teleconsultation in Accessing Eye Care in a Developing Country During COVID-19 Pandemic

**Objective:** To evaluate the utility of teleconsultation in the provision of eye care services during the COVID-19 lockdown. Disparities in the consultation burden of sub-specialties and socio-demographic differences in teleconsultation utilization were also assessed.

**Methods:** Al-Shifa Trust Eye Hospital Rawalpindi began audio and video teleconsultation using broadband telecommunication services during the lockdown.

Patients' and consultations' data gathered during the first three weeks after the commencement of this programme were compared with data from the four weeks prior to lockdown. The weekly consultation ratio and overall consultation burden of sub-specialties were measured. Chi-Square tests of association determined the relationship between different variables (socioeconomic status and consultation characteristics) and consultation modality (on-site vs online).

**Results:** In total, 17507 on-site consultations (4377/week) were conducted compared to 1431 teleconsultations (477/week), which maintained 10.89% of the weekly pre-lockdown eye care services. The post-lockdown teleconsultation programme saw a relatively higher percentage of service utility among female (47.09% vs 44.71%), younger-age (31.33±19.45 vs 41.25±23.32 years) and higher-socioeconomic-status (32.21% vs 0.30%) patients compared to pre-lockdown on-site consultations. The most common indication for teleconsultation was red-eye (16.70%). While cornea and glaucoma clinics maintained most of the pre-lockdown services (30.42% and 29% respectively), the highest dropout was seen in optometric and vitreoretinal services supporting only 5.54% and 8.28% of pre-lockdown services, respectively.

**Conclusion:** Digital initiatives could partially maintain eye care services during the lockdown. Focused strategies to improve teleconsultation utilization are required during the pandemic and beyond.

**How to Cite:** Mansoor, H., Khan, S. A., Afghani, T., Assir, M. Z., Ali, M., & Khan, W. A. (2021). Utility of teleconsultation in accessing eye care in a developing country during COVID-19 pandemic. *PloSone*, 16(1), e0245343. <https://doi.org/10.1371/journal.pone.0245343>



## 21. Patient Satisfaction: A Tool towards Quality Improvement

**Purpose:** To determine the importance of patient satisfaction as a tool for quality improvement.

**Study Design:** Cross sectional survey.

**Place and Duration of Study:** Pediatric Ophthalmology Department of Al-Shifa Trust Eye Hospital, Rawalpindi, from May 2017 to September 2017.

**How to Cite:** Sughra, U., Siddiqui, M., Noorani, S., Mansoor, H., & Kausar, S. (2021). Patient Satisfaction: A Tool towards Quality Improvement. *Pakistan Journal of Ophthalmology*, 37(2).

**Methods:** This study included 500 individuals, who were caregivers of children visiting the hospital at the time of data collection. Individuals who visited departments other than pediatric department were excluded. Two groups were made. Group 1 included 300 individuals who were interviewed for to assess the patient satisfaction. On the basis of response, play area was made spacious, additional registration counters were placed and more reception staff members were hired to shorten the waiting and registration time, additional fans were installed in the waiting area and patient information was displayed on TV screens to aid uneducated patients and their attendants. Second group with 200 individuals were interviewed after these improvements. Pretested structured questionnaire was used to collect data regarding socio-demographic characteristics and experience of visit to the hospital. SPSS version 20 was used for descriptive and inferential data analysis.

**Results:** Participants in this survey showed high level of satisfaction after interventions 45 to 65%. There was statistically significant association between satisfaction level and improvement in services was found ( $p < 0.001$ ).

**Conclusion:** Satisfaction level of patients depends upon the quality of services and medical care provided and it can be used as a good tool for improving the services in the hospitals.

**Key Words:** Satisfaction, Outpatient Department, Hospital.

## 22. Effects of Health-Seeking Behavior on Compliance of Long-Term Treatment Among Glaucoma Patients

**Objectives:** The objectives of the study were to determine the level of non-compliance with long-term glaucoma therapy in patients presenting in glaucoma department of Al-Shifa Trust Eye Hospital and to identify the health-seeking predictors affecting it.

**Methods:** A cross-sectional study of 5 months was conducted on glaucoma patients who are taking follow-up visits in glaucoma department for 6 months or more.

**How to Cite:** Nasim, Midhet & Zeb, Amir & Khan, Samrin. (2021). Effects of health-seeking behavior on compliance of long-term treatment among Glaucoma Patients. *Innovare Journal of Medical Sciences*. 13-18. 10.22159/ijms.2021.v9i6.43024.

The level of compliance with glaucoma medication (dependent variable) was assessed through a scale at first and further transformed into binary variable afterward. Chi-square test of independence was used followed by logistic regression to find out the predictors of compliance.

**Results:** A total of 200 patients participated in the study. Majority of them were from urban background (n=125, 62.5%) and were diagnosed with glaucoma 1–5 years (n=104, 52%) back. Almost 16.00% of patients were not giving follow-up on given appointment. Moreover, 10.00% were not taking proper medications and prescribed dosage of medications was not taken by 21.5%. Intraocular pressure was higher than normal limits in 13.00%. Self-medication ( $\chi^2$  (df) =5.44(1), 0.01, OR=0.28 (0.09–0.81) and doctor-patient communication ( $\chi^2$ (df)=18.25(1), 0.03, OR= 2.27 (1.06– 4.86) were significant health-seeking predictors of glaucoma treatment compliance.

**Conclusion:** Blindness due to glaucoma is an avoidable condition if underlying factors such as self-medication is discouraged and doctor-patient communication can be improved in the glaucoma department.

**keywords:** Adherence, Socioeconomic Determinants, Self-Medication, Doctor-Patient Communication.

### 23. Outcome of Neonates Born to Mothers Who Are COVID-19 Positive; An Observation Cohort Study from Pakistan

**Background:** COVID-19 virus infection, first identified in Wuhan city of China was declared a pandemic by WHO in March 2020. Since then, the disease has spread to almost all parts of the world. It has affected all segments of society. The effects of infection on neonates born to mothers who are infected with SARS-CoV-2 virus have not been fully studied in detail thus far. We aimed to study the clinical and epidemiological profile of neonates born to COVID-19 positive mothers in Pakistan.

**How to Cite:** Khushdil, A., Ahmed, Z., Waqar, T., Haque, K. N., Sultana, R., Sughra, U., ... & Malik, Q. U. (2021). Outcome of Neonates Born to Mothers Who Are COVID-19 Positive; An Observation Cohort Study from Pakistan. PAFMJ;7(1):288-91

**Methods:** In a first observational, prospective cohort study from Pakistan, conducted between April 2020 to August 2020, at secondary and tertiary care hospitals, we studied 106 pregnant women who tested positive for SARS-CoV-2, most of whom were asymptomatic, and we followed their newborn babies. Stable asymptomatic newborn babies were kept in SARS-CoV-2 specified incubators, at specially designated areas in NICUs, for observation. Nasopharyngeal swabs were taken at 24 hours of life and if negative, babies were handed over to clinically stable mothers who were educated regarding use of face masks and proper hand washing while caring for their babies. Neonates who tested positive for SARS-CoV-2 were evaluated for SARS-CoV2 again at 48 hours and then every 48-72 hours, until found to be negative.

Maternal and neonatal data, like maternal age, gestational age, duration of hospital stay, birth weight etc. were collected and analyzed using SPSS version 16.

**Findings:** Total 106 women were found to be SARS-CoV-2 positive during the study period. All 106 women delivered singleton babies. Of the 106 babies, five were found to be positive for SARS-CoV-2 at 24 hours and only one baby was found to be positive at 48 hours of life and then found negative at 7 days of life. None of the babies were found to be symptomatic and discharged home.

**Interpretation:** Babies born to SARS-CoV-2 mothers were mostly asymptomatic and there was no increased risk of morbidity or mortality to neonates suffering from the infection.

#### 24. Chloramphenicol Eye Drops: Should We Continue using in Threatening Keratitis & Endophthalmitis

**Summary:** We propose a trial period during which chloramphenicol is prescribed under the following restrictions:

- (1) for vision-threatening keratitis or conjunctivitis cases that have failed a trial of first-line antibiotic drops
- (2) only in patients who have no personal or family history of blood dyscrasias
- (3) only in adults
- (4) only after obtaining written informed consent

**How to Cite:** Durrani, M., ul Haq, I., Durrani, J., & Inam, Z. (2021). Chloramphenicol Eye Drops: Should we continue using in threatening Keratitis & Endophthalmitis. *Ophthalmology Update*, 19(1), 38-40.

This adjustment would allow third- and fourth-generation fluoroquinolones to remain reserved for postoperative endophthalmitis or keratitis, as is currently recommended. They also suggested 1 drop should be used at a time with pressure on the lacrimal sac, for 14 days of use. If there is no increase of aplastic anemia cases, topical chloramphenicol use could be expanded to simple bacterial conjunctivitis and other indications. With this approach, we may just find the old dog of topical chloramphenicol settling comfortably into its new house.

#### 25. Saliva Exhibits High Sensitivity and Specificity for the Detection of SARS-COV-2

**Abstract:** In the wake of the COVID-19 pandemic, it is crucial to assess the application of a multitude of effective diagnostic specimens for conducting mass testing, for accurate diagnosis and to formulate strategies for its prevention and control. As one of the most versatile and amenable specimen options, saliva offers great advantages for widespread screening

**How to Cite:** Warsi, I., Khurshid, Z., Shazam, H., Umer, M. F., Imran, E., Khan, M. O., ... & Goodson, J. M. (2021). Saliva Exhibits High Sensitivity and Specificity for the Detection of SARS-COV-2. *Diseases*, 9(2), 38.

strategies due to its non-invasive properties, cost-effectiveness, excellent stability and minimal risk of cross-infection. This review attempts to outline the scientific rationale for detection of SARS-COV-2 in saliva specimens. By combining the data obtained from ten chosen published clinical studies, we calculated the pooled sensitivity and specificity using an online calculator. Through evidence, we established that SARS-COV-2 is detectable in saliva with a high degree of diagnostic sensitivity (87%) and specificity (98%). We also presented a review of emerging technologies approved by the FDA for detection of SARS-COV-2 in oral fluids (saliva and sputum) using polymerase chain reaction methods. Given the challenges involved in obtaining invasive specimens from the naso- and oropharynx, saliva can serve as an easy to collect diagnostic specimen for screening in the work environment, schools and for home testing. Furthermore, saliva offers the opportunity to screen early cases that can be missed by invasive sampling.

**Keywords:** Saliva; COVID-19, SARS-Cov-2, Infection, Diagnosis, Polymerase Chain Reaction

## 26. Effect of Topical Versus Sub-Conjunctival Anaesthesia during Administration of Intravitreal Bevacizumab Injection

**Purpose:** To compare the anesthetic effect of topical proparacaine hydrochloride 0.5% with sub-conjunctival lidocaine 2% for intravitreal injection of Bevacizumab.

**Study Design:** Quasi experimental study.

**Place and Duration of Study:** Department of Ophthalmology Fauji Foundation Hospital, Rawalpindi, from July 2017 to January 2018.

**How to Cite:** Rizwan, A., Zafar, R., Asghar, A., Obaid, N., & Naeem, B. A. (2021). Effect of Topical Versus Sub-Conjunctival Anaesthesia during Administration of Intravitreal Bevacizumab Injection. *Pakistan Journal of Ophthalmology*, 37(4).DOI:<https://doi.org/10.36351/pjo.v37i4.1249>

**Methods:** Sixty 60 patients who needed intravitreal Bevacizumab were included in the study after approval from the ethical review board. Exclusion criteria were patients with conditions that could affect pain sensation, acute ocular inflammation, history of intravitreal injection, using systemic analgesic/sedatives, uncooperative patients and unable to understand the pain scale. Written informed consent was taken. Name, age, gender, diagnosis, previous intravitreal injection, hospital registration number, address and contact numbers were noted. Patients were briefed about the visual analogue scale. Patients were divided into two groups. Group A received proparacaine drops and group B was given subconjunctival lidocaine injections before intravitreal bevacizumab.

**Results:** The mean age of patients in this study was  $60.38 \pm 10.55$  years. There were 03 (5.0%) males and 57 (95.0%) females. Majority of the patients (30%) presented with choroidal neovascularization followed by diabetic maculopathy, vitreous hemorrhage, central retinal vein occlusion and proliferative diabetic retinopathy. Mean pain score among both the groups was  $3.67 \pm 1.97$  (topical group) and  $1.70 \pm 1.51$  (sub-conjunctival group) respectively which

was statistically significant (p-value 0.000). Among age, diabetes, duration of diabetes and hypertension, only hypertension had moderate correlation with the pain score (correlation coefficient = 0.316, p values = 0.017).

**Conclusion:** Sub-conjunctival anesthesia results in less pain during intravitreal drug administration as compared to the topical anaesthesia.

**Key Words:** Intravitreal Injections, Bevacizumab, Intravitreal Anti-VEGF, Anaesthesia

## 27. Risk of “On Job Non-Compliance” towards Various COVID-19 Standard & Transmission Based Infection Prevention & Control Measures/Precautions among the Healthcare Workers Working in OPD Settings of Public Sector Tertiary Care Hospitals of Quetta Balochistan (Prospective Cohort Study)

**Background:** COVID-19 Pandemic is still circulating within the human population and proving to be a deadlier disease with mortality rate ranging from 0.5 to 7%8. Since COVID-19 is a highly transmissible disease; there is always a probability for its out ward spread towards general public and community from the hospitals and healthcare facilities where they come to seek treatment.

**Methodology:** A prospective cohort study design was used, considering the limited available resources and time A total of 200 healthcare workers (Including Doctors, Nurses, Para-Medical staff, Janitorial staff, Reception staff & Pharmacists) working in the OPDs of the two major Public sector hospitals of Quetta were made part of this study. The study participants were selected using simple random sampling technique. The study participants from “Hospital-A” were first of all educated and trained on various COVID-19 IPC measures later on various COVID-19-IEC materials; written in simple Urdu language, were displayed clearly everywhere in the OPD. Similarly hand washing station along with Hand sanitizers/Soaps and surgical face masks were also made available free of cost for all the study participants of Hospital-A. More over the importance and effectiveness of COVID-19 IPC measures were continuously announced in the OPD gallery of Hospital-A, these announcements used Simple wording in local languages (i.e. Urdu, Pashto, Balochi & Brahvi). On the other hand in the OPD of “Hospital-B” no such interventions were made. The study participants of both the hospitals were followed for one month and observations like-which group showed more on-job non compliance towards various COVID-19 IPC measures were recorded. The data was recorded on daily bases (From 1st May-to-31st May 2021) after observing the study participants and checklist was used for recording various findings. Lastly all the data was analyzed using Microsoft Excel 2007 version.

**How to Cite:** Arif, M., Abdullah, M., Chaudhry, A., Hussain, Z., & Larik, E. (2021). Risk of on job non-compliance towards various covid-19 standard & transmission based infection prevention & control measures/precautions among the healthcare works working in OPD settings of Public Sector Tertiary Care Hospitals Of Quetta Balochistan. (Prospective cohort study). medRxiv. doi: <https://doi.org/10.1101/2021.07.08.21260212>

**Results:** The major findings of this study are almost in line with the set objectives, the study results are clearly showing the Risk ratio (R.R) as 0.27, indicating that the intervention group participants were only 27% as likely to develop On-job non-compliance for various COVID-19 IPC measures compare to the non-intervention group.

**Conclusion:** The best suggestion and intervention for the developing countries that could at least address the spread of COVID-19 in a cost effective manner at health facility levels remains to be adoption of various Standard and Transmission based non-pharmacological measures of Infection prevention and Control (IPC).

## 28. Non-Institutional Childbirths and the Associated Socio-Demographic Factors in Gambella Regional State, Ethiopia

**Abstract:** The decades-long global efforts to reduce maternal morbidity and mortality have shown overall progress, but most developing countries are still lagging significantly. This study aimed to assess the prevalence of non-institutional childbirths in the Gambella State and to identify socio-demographic factors responsible for non-institutional utilization of available birth services by reproductive-aged mothers. A community-based cross-sectional study design was adopted using a multi-stage random sampling technique. Binary logistic regression was used to identify factors associated with the selected place of birth. EpiData version 3.1 and SPSS version 13.0 were applied for data entry and analyses. All the 657 eligible mothers recruited for this study responded to the interview. 71% of the total respondents had non-institutional childbirths (NICB), and the rest had their most recent childbirth in an institution with skilled healthcare providers' assistance. Socio-demographic factors were significantly associated with NICB. Nuer (AOR = 2.12, 95% CI: 1.23–3.63) and Majang ethnic (AOR = 1.98, 95% CI: 1.02–3.83) groups had higher rates of NICB than the rest of the study population. The prevalence of non-institutional childbirths in Gambella remained two times higher than the institutional childbirths.

**How to Cite:** Gora, G. A., Umer, M. F., Ojulu, P. O., Betaw, S. T., Cham, A. O., Gora, O. A., & Qi, X. (2021). Non-Institutional Childbirths and the Associated Socio-Demographic Factors in Gambella Regional State, Ethiopia. *International Journal of Environmental Research and Public Health*, 18(6), 2859.

**Keywords:** Non-Institutional Childbirth, Institutional Birth, Socio-Demographic Factors, Gambella Regional

### 29. Rifaximin: An Option for the Treatment of Irritable Bowel Syndrome

**Objective:** To study the response of irritable bowel syndrome patients presenting with diarrhea and abdominal pain to the treatment with rifaximin.

**Study Design:** Observational descriptive study.

**Place and Duration of Study:** Study was carried out from 1 February 2019 to 1 December 2019 at Gastroenterology department of Combined Military Hospital Rawalakot.

**Materials and Methods:** Total of 113 patients were consecutively chosen from the Gastroenterology Outpatient Department, Sheikh Khalifa Bin Zayed Al Nahyan Hospital/ AK Combined Military Hospital Rawalakot. Irritable bowel syndrome, diarrhea was diagnosed using Rome III criteria. All participants received 550mg Rifaximin in two divided doses for a period of fourteen days and were observed for six weeks. The assessed symptoms were diarrhea and abdominal pain, which were recorded at baseline and then at 6week follow up. Descriptive statistics were done to look for the response of patients' clinical symptoms to Rifaximin.

**Results:** Mean age of the participants was 26.96 years. Out of 113 subjects, 45% were male (51/113) and 55% (62/113) females. Rifaximin was found to be effective in relieving symptoms in 99(87.6%) cases while it did not relieve symptoms in 14 (12.4%) cases. Only 14(12.4%) patients developed headache as a side effect, while the rest 99(87.6%) tolerated it well.

**Conclusion:** Rifaximin is a useful, effective and a safe drug for the treatment of irritable bowel syndrome patients suffering from diarrhea and abdominal pain.

**Key Words:** Abdominal Pain, Diarrhea, Irritable Bowel Syndrome, Rifaximin.

**How to Cite:** Quddus, M. A., Shahzad, A., Munawar, R., Maqbool, K. T., Mansoor, A., Gani, N., & Anwer, S. M. T. (2021). Rifaximin: An Option for the Treatment of Irritable Bowel Syndrome. *Journal of Islamic International Medical College (JIIMC)*, 16(4), 215-218.

### 30. Management of Cataract in a patient with Anterior Megalophthalmos

**Description:** A healthy 40-year-old man presented with reduced (counting fingers) right eye visual acuity (VA) due to a dense unilateral cataract (posterior subcapsular and nuclear sclerosis) (figure 1A). Examination revealed bilateral enlarged but thin corneas and deep anterior chambers (ACs). Bilateral iridodonesis and phacodonesis were noted with no significant subluxation of the right crystalline lens.

Iridocorneal angles were open bilaterally with normal intraocular pressures (12 and 14mm Hg, right and left, respectively). Corneal diameters were 14.5mm/14.5mm and 15mm/15mm, right and left, respectively, in horizontal and vertical meridians. There was no view of the fundus in

**How to Cite:** Zaidi, Syed Bilal Hassan, Kirk AJ Stephenson, Hafiz Muhammad Ejaz-Ul-Haq, and Hassan Massanna. "Management of cataract in a patient with anterior megalophthalmos." *BMJ Case Reports CP* 14, no. 2 (2021): e241659.



the right eye, but the left eye posterior segment was normal without stigmata of vitreoretinal degeneration. B-scan ultrasonography excluded major right eye posterior segment pathology. Megalocornea, extremely deep AC and zonular laxity, without sequelae of congenital glaucoma (ie, raised intraocular pressure and optic neuropathy), suggested a diagnosis of anterior megalophthalmos (AM). Cataract surgery for visual improvement was discussed and consented for by the patient. Cataract extraction in AM presents a number of surgical challenges. Extreme AC depth makes access to the cataract difficult, but this was bypassed by supracapsular prolapse of the lens nucleus out of the capsular bag also minimising shear stress on the weakened zonules of Zinn. Intraocular lens (IOL) choice in such a large eye was another challenging factor, and a +13.00 dioptre Rayner Superflex IOL (12.5mm diameter, Rayner Intraocular Lenses Limited, UK) was implanted in the capsular bag with reverse optic capture technique. VA on the first postoperative day was 6/6, which was maintained at 6-month review. This is the first case report of AM in Pakistan. First reported in 1914, AM is defined as megalocornea with deep AC without abnormal axial length. Elongation of the ciliary ring causes iris-lens-diaphragm instability (ie, phacodonesis and iridodonesis), predisposing to lens subluxation (crystalline lens and IOLs). IOL choice is critical in such a large eyes and deep ACs with weak, stretched zonules. The main lens issues in AM are instability of standard diameter IOLs (ie, 13mm) within the abnormally large capsular bag, lack of optic centration and postoperative posterior dislocation of IOLs. Cases of IOL dislocation with endocapsular fixation have been described. Multiple IOL strategies have been employed, including iris-claw IOLs, iris-sutured IOLs and custom-made larger-diameter IOLs. AM is associated with vitreous abnormalities (eg, syneresis, synchysis and optically empty vitreous with strands) and vitreoretinal pathology (eg, lattice degeneration, associated with retinal detachment); thus, annual dilated fundal examination is recommended. Other notable ocular associations include anterior embryotoxon, mosaic corneal dystrophy, glaucoma due to goniodysgenesis, irregular astigmatism, and amblyopia due to strabismus and myopia. Mutations in the Xq12–q26 region have been implicated previously.<sup>10</sup> Systemic associations include Marfan syndrome, trisomy 21, Apert syndrome, mucopolysaccharidosis type 2 and Walker-Warburg syndrome. Recognition and diagnosis of AM allows planning for the monitoring of the posterior segment and preparation for the unique challenges of cataract surgery in the complex anterior segment.

### 31. Smoke in the Operating Room

Mr. President! You wouldn't want your surgeons to sit in the Operating Room (OR) and smoke a pack-and-a-half of cigarettes while operating on their patients, but many are doing nearly the equivalent by creating surgical smoke and refusing to evacuate it. In an

**How to Cite:** Afghani T. Smoke in the operating room. *IP Int JOcul Oncol Oculoplasty* 2021;7(2):115-116. DOI: 10.18231/j.ijooo.2021.026

ophthalmology set-up, right on the top of the list of "surgical smokers" are from department of orbit and oculoplastic followed by vitreo retina folks. After years of inhaling surgical plume, orthopedic surgeon Anthony Hedley, MD, FACS, of the Hedley Orthopedic Institute in Phoenix, Ariz., was diagnosed with idiopathic pulmonary fibrosis and underwent a life-saving double

lung transplant. Surgical smoke, a grossly neglected health hazard, is facing operating room staff today. Surgical smoke includes roughly 150 chemicals, including 16 EPA priority pollutants, toxic and carcinogenic substances, viruses and bacteria. It will be of some interest to know that sevoflurane, a common anesthetic given during the operation, has been found in surgical smoke and has been reported to cause numerous adverse effects. Similarly, it is suspected that type of the target tissues being cauterized like dermis, fat or muscle also influences smoke composition and its toxicity. It is widely accepted that inhalation of smoke, specifically, the particulate matter (PM) found within smoke, can cause adverse effects on health. When diathermy devices, such as electrocauterization instruments, lasers, and ultrasonic scalpels, are used during surgery, surgical smoke, also called cautery smoke, surgical plume, laser plume, and diathermy plume, is released into the operating room. Although smoke evacuation devices exist, they are not often used in practice owing to inconvenience and lack of awareness. Most operating room staff acknowledge adverse symptoms (e.g., coughing, headache) from surgical smoke, yet few wear effective personal protection. Inhalation of PM can cause adverse consequences to the respiratory, circulatory, and nervous systems. The lungs can become irritated, and the smaller particles can be absorbed into the bloodstream. Studies have suggested a link between exposure to PM and systemic inflammation and hypertension. Many studies have shown a link between surgical smoke and the development of potentially fatal cardiovascular diseases. Studies have reported links between exposure to PM and increased risk of neurologic and psychiatric disorders as well as adverse birth outcomes, such as low birth weight and risk of stillbirth. Although the potential to spread disease through surgical smoke exists in theory, only human papillomavirus transmission has been seen.<sup>5</sup> Studies have determined that the cancer risk from exposure to surgical smoke is greater than negligible. One study determined that the 70-year lifetime cancer risk from exposure to polycyclic aromatic compounds from smoke for 116 the surgeon is 117 times greater than for someone exposed to safe levels. The sizes of the particles in surgical smoke are reported as 0.07 to 0.42  $\mu\text{m}$  for electrocautery, 0.1 to 0.8  $\mu\text{m}$  for laser ablation, and 0.35 to 6.5  $\mu\text{m}$  for ultrasonic scalpels. Studies have shown that most PM from electrocautery and lasers can be as small as 10 nm, and a large proportion is between 100 nm and 1  $\mu\text{m}$ . This small size poses a problem in that some ultrafine particles within surgical smoke may be able to penetrate high-performing filters and masks. The temperature of the plumes also matters. Low temperature laser plume has been found to contain several potentially infectious components, such as viable bacteriophages, viable cells, and virus particles, and is believed to have a higher infectious potential than high temperature electrocautery smoke.<sup>9</sup> Therefore electrocautery smoke is believed to have a smaller potential for disease transmission than other forms. Personal protection against surgical plumes by OR staff is almost non-existent. Surgical masks are used widely, but these do not protect against surgical smoke which requires special filtration masks (Medical Mask/N95 Filtering Facepiece Respirators). Procedures used for the elimination of smoke from the operating room vary widely. A large number of surgeons use dispersion for smoke clearance. A suction device is held close to the generated smoke and the smoke is then suctioned into a large canister on the other side of the room. It is recommended that the suction device be kept within 5 cm of the surgical site and have a capture velocity of

31 to 46 m per minute to ensure efficient removal of PM. The other form of smoke elimination system for the operating room is the smoke evacuator either attached to the conventional suction devices or directly built into electrocautery instruments. Commonly used filters are high-efficiency particulate air (HEPA) filters, and ultra-low particulate air (ULPA) filters or a combination of both. However, these filters must be regularly replaced to maintain efficiency because particles can assemble and later be broken down and released into the environment. Furthermore, microorganisms can potentially grow from deposited organic compounds, especially with the influence of moisture. In brief, surgical smoke contains numerous toxic, mutagenic, and carcinogenic compounds, sometimes exceeding recommended limits set by national and international health organizations. It is widely recommended to use a smoke evacuation device to purify the smoke and capture particulate matter. However practical difficulties, like noise, distraction, and limited space, along with a lack of knowledge on the hazards of surgical smoke, are important barriers for many surgeons to use these devices. Also, the smaller size of surgical smoke particulate matter and ultrafine particles make filtration difficult. Despite that, since there is no safe level of surgical smoke, evacuation of PM during surgery is recommended. Ophthalmic professional staff working in oculoplastic and vitreoretinal surgical services should preferably use special filtration masks.

### 32. Uncovering the Reasons and Ethical Concerns Behind Publishing in a Predatory Journal

**Abstract:** This paper highlights the ethical concerns related to these journals and publishing in them. These concerns are poor editorial standards with lack of proper editorial board, editorial offices, academic fraud, deception and misinterpretations, trust deficit in research literature and lack of archiving policy. It is

**How to Cite:** Sughra U, Imran M, Kausar S. Uncovering the reasons and ethical concerns behind publishing in a predatory journal. *Isra Med J.* 2021; 13(1): 63-66.

of utmost importance that the scholarly groups, researchers, academicians, editors, editorials boards, institutions, publishers should be aware of these predatory journals, and avoid supporting these journals by not publishing in them or being a part of their editorial board members. Faculty members should also be discouraged for knowingly publishing in them. Scholarly community should support the legitimate and valid scholarly research enterprises.

**Keywords:** Predatory Journals, Publication Ethics, Scholarly Research, Article Processing Charge, Legitimate Journals, Pseudo-Journals

### 33. Late Presentation of Primary Open Angle Glaucoma and its Predictors at a Tertiary Eye Care Hospital in Pakistan

#### ABSTRACT

**Background:** To determine stages of glaucoma and to identify predictors of late presentation.

**Methods:** A cross-sectional study was conducted in a tertiary eye hospital for four months. All patients diagnosed with primary open angle glaucoma for the first time were inducted and data was collected through an interview-based questionnaire. Classification into stages (early or late) was done based on visual field parameters and optic disc findings. Multivariable logistic regression was conducted to identify predictors of late presentation of glaucoma.

**Results:** Out of total sample (n=325), 82.2% of the cases (n=267) presented in hospital at late stage of glaucoma. Multivariable logistic regression model explained 18% to 29.6% variation in outcome variable. Late presentation was more likely in individuals with chief complaint of lacrimation (OR=2.45, p-value=0.02) and individuals who had delayed ocular examination as a result of long appointment date in hospital (OR=2.64, p value=0.01), and individuals living a far distance from the hospital (OR=1.01/km, p-value=0.01).

**Conclusion:** Geographical accessibility is an important predictor of advanced glaucoma and screening should be focused aggressively on remote areas. It is essential to focus on building the capacity of optometrists and community ophthalmologists to ensure early diagnosis and management of glaucoma at the district level.

**Keywords:** Advanced Glaucoma; Determinants; Delayed Presentation; Factors

**How to site:** Arshad H, Ali M, Khan SA, Akhtar F, Mueed A. Late Presentation of Primary Open Angle Glaucoma and its Predictors at a Tertiary Eye Care Hospital in Pakistan. *J Clin Exp Ophthalmol* [Internet]. 2021 [cited 2022 Feb 7];12(7):899.

### 34. Comprehensive Phenotypic and Functional Analysis of Dominant and Recessive FOXE3 Alleles in Ocular Developmental Disorders

**Abstract:** The forkhead transcription factor FOXE3 is critical for vertebrate eye development. Recessive and dominant variants cause human ocular disease but the full range of phenotypes and mechanisms of action for the two classes of variants are unknown. We identified FOXE3 variants in individuals with congenital eye malformations and carried out in vitro functional analysis on selected alleles. Sixteen new recessive and dominant families, including six novel variants, were identified. Analysis of new and previously reported genetic and clinical data demonstrated a broad phenotypic range with an overlap between recessive and dominant disease. Most families with recessive alleles, composed of truncating and forkhead-domain missense

**How to site:** Reis, L. M., Sorokina, E. A., Dudakova, L., Moravikova, J., Skalicka, P., Malinka, F., ... & Semina, E. V. (2021). Comprehensive phenotypic and functional analysis of dominant and recessive FOXE3 alleles in ocular developmental disorders. *Human Molecular Genetics*.

variants, had severe corneal opacity (90%; sclerocornea in 47%), aphakia (83%) and microphthalmia (80%), but some had milder features including isolated cataract. The phenotype was most variable for recessive missense variants, suggesting that the functional consequences may be highly dependent on the type of amino acid substitution and its position. When assessed, aniridia or iris hypoplasia were noted in 89% and optic nerve anomalies in 60% of recessive cases, indicating that these defects are also common and may be underrecognized. In dominant pedigrees, caused by extension variants, normal eye size (96%), cataracts (99%) and variable anterior segment anomalies were seen in most, but some individuals had microphthalmia, aphakia or sclerocornea, more typical of recessive disease. Functional studies identified variable effects on the protein stability, DNA binding, nuclear localization and transcriptional activity for recessive FOXE3 variants, whereas dominant alleles showed severe impairment in all areas and dominant-negative characteristics.

### 35. Knowledge and Practices Regarding Hand-Washing among Mothers of Children Less Than Five Years of Age in Rural Areas of District Sialkot

**Objective:** To assess knowledge and practices regarding hand-washing among mothers of children aged  $\leq 5$  years.

**Methods:** The cross-sectional study was conducted from March to July 2015 in rural areas of Union Council Charwa, Tehsil Pasrur in District Sialkot, Pakistan, and comprised mothers of children aged  $\leq 5$  years. Data was collected using a pre-tested and validated structured questionnaire developed in line with World health Organization guidelines on hand-washing technique. Data was analyzed using SPSS 17.

**Results:** Of the 422 subjects, 319 (75.4%) had sufficient knowledge and 104 (24.6%) showed good practices regarding hand-washing. However, only 59 (14%) mothers were found adherent to the appropriate technique of hand-washing.

**Conclusions:** Health education and behavior-changing communication approaches must be implemented to educate the masses about proper hand-washing technique.

**Keywords:** Knowledge, Practices, Hand-Washing, Mothers, Health Education, Pakistan.

**How to cite:** Almas, S., Kawish, A. B., Butt, T. M., & Akber, S. (2021). Knowledge and practices regarding hand-washing among mothers of children less than five years of age in rural areas of District Sialkot. JPMA. The Journal of the Pakistan Medical Association, 71(1(A)), 105–109. <https://doi.org/10.47391/JPMA.456>

### 36. An Investigation into Infection Prevention and Control Practices among Close Contacts of COVID-19 Positive Cases Identified during Trace Test and Quarantine Activities at District Quetta (Unmatched Case-Control Study)

**Abstract:** The second wave of COVID-19 pandemic has started globally, right now 220 countries are infected and a total of 71,351,695 confirmed cases and 1,612,372 deaths due to COVID-19 have been reported. Infection Prevention and Control (IPC) measures for COVID-19 all have proved vital in decreasing the transmission rates among the communities. Methodology: Unmatched Case-Control Study was conducted where cases were defined as “every PCR positive contact (symptomatic or asymptomatic) for any index case” similarly controls were defined as “every PCR negative contact (symptomatic or asymptomatic) for any index case who was home quarantined for 14 days based on suspicion by PDSRU team”. A simple random technique was used and 300 individuals were made part of this study. Results: The major findings of this study shows that PCR positive contacts poorly adopted certain COVID-19 IPC measures of interest in their daily life hence got infected. The odds for all the variables of interest were found to be statistically significant among cases as compared to controls like the odds for knowingly and intentionally contacted with a COVID-19 positive case was 13.7 times more among the PCR positive contacts as compare to PCR negative contacts ( $p = 0.00$ , C.I = 7.62 - 24.90), similarly, the odds of being a family member of the index COVID-19 case was 7.07 times more among the PCR positive contacts as compared to the PCR negative contacts ( $p = 0.00$ , C.I = 3.25 - 15.86). Conclusion: Before the development and availability of a vaccine, the only tools that can help prevent the spread of COVID-19 are IPC measures.

**How to site:** Arif, M., Saeed, A., Abdullah, M., Chaudhary, A., Hussain, Z., Baig, M. Z. I., ... & Larik, E. (2021). An Investigation into Infection Prevention and Control Practices among Close Contacts of COVID-19 Positive Cases Identified during Trace Test and Quarantine Activities at District Quetta (Unmatched Case-Control Study). *Open Journal of Epidemiology*, 11(4), 360-370. DOI: 10.4236/ojepi.2021.114030

**Keywords:** COVID-19, IPC Measures, Contact, PCR, PDSRU

### 37. Effect of Cigarette Smoking on Intraocular Pressure in Individual with Normal Blood Pressure

**Objective:** The purpose of this study was to determine the effect of smoking on intraocular pressure in individual with normal blood pressure and to compare the smoking effects on intraocular pressure in smoker and nonsmoker.

**Material and Methods:** A hospital based descriptive cross-sectional study was conducted at Aziz Fatimah Hospital Faisalabad including 480 patients of age between 20-50 years. The person with normal visual acuity and normal blood pressure were

**How to Site:** Ghafoor, Sonia. (2021). Effect of Cigarette Smoking on Intraocular Pressure in individual with Normal Blood Pressure Iqra Iqbal 1 , Rabia Saeed 2 , Sadaf Qayyum 3 , Nimra Gul 4 , Zubair Wahab 5 , Ayisha Shakeel 6 , Sonia Ghafoor 7 1. *Pakistan Journal of Medical and Health Sciences*. 14.



included in the study. After history taking and visual acuity measurement Ophthalmoscopy was performed to evaluate different eye conditions. After that the intraocular pressure of both eyes was measured by using Goldman Applanation tonometer.

**Results:** There were 192 (40%) patients of age 20-30 years, 160 (33.3%) patients of age 31-40 years of age, and 128 (26.6%) patients of age 41-50 years. The percentage of the subjects who smoke 1-5 cigarettes per day was 12.9% and for those who smoke 6-10 cigarettes per day was 37.08%. The mean IOP of smoker's right and left eye was 21.50+2.5 mmHg and 22.3+2.9 mmHg respectively. The mean IOP of non-smokers right and left eyes was 15.99+1.8 mmHg and 16.96+2.1 mmHg respectively.

**Conclusion:** There was a highly significant association of rise in intraocular pressure in smokers as compared to non-smoker. This study also concludes that intraocular pressure increases more in smokers left eye as compared to the left eye.

**Keywords:** Cigarette Smoking, Intraocular Pressure, Glaucoma, Ocular Hypertension

### 38. Prevalence of Convergence Insufficiency, Accommodation Insufficiency and Visual Symptoms of Convergence Insufficiency

**Objective:** To determine the prevalence of convergence and accommodation insufficiency and its associated symptoms.

**Materials and Methods:** This descriptive cross-sectional study containing 320 patients was conducted in ophthalmology department of Madinah Teaching

Hospital Faisalabad. After history taking ocular examination of each subject started from V/A followed by with and without glasses, pinhole, autorefractometry and subjective refraction. The near point of convergence and near point of accommodation were measured using 50 cm long RAF rule with rotating four-sided cubes of dissimilar target. Then convergence insufficiency symptoms were found in patients through a questionnaire.

**Results:** The total sample n=320 subjects including males (n=119) and females (n=201) were divided into 2 groups of age ranging 15 to 25 years and 26-35 years. The percentage of normal individual without any symptoms was 53.4%. The percentage of convergence and accommodation insufficiency alone was 8.125% and 16.875% respectively. The co morbidity of both convergence and accommodation insufficiency accounted for 21.56%. The overall percentage of convergence insufficiency was 29.4% while accommodation insufficiency was seen in 38.4% patients. The frequency of major symptoms including headache, eyestrain, sleepiness, double vision, pulling feelings and read slowly were 97.9%, 96.8%, 64.9%, 43.6%, 90.4% and 36.3 % respectively.

**Conclusion:** There was a highly significant association of convergence and accommodation insufficiency. This study emphasizes on measuring the convergence and accommodation

**How to Site:** Saeed, R., Gul, N., Iqbal, I., Qayyum, S., Wahab, Z., & Khalil, I. Prevalence of Convergence Insufficiency, Accommodation Insufficiency and Visual Symptoms of Convergence Insufficiency. PJMHS;(14): 1972-74



insufficiency along with the other refraction test and make it an integral part of routine examination.

**Keywords:** Binocular Vision Disorder, Binocular Eye Alignment.

### 39. Efficacy of Intra-lesional Injection of 5- Fluorouracil in Preventing Progression of Recurrent Pterygium

**Abstract:** Purpose: To study the effectiveness of 5 FU, injected into the dome of Pterygium., in preventing progression of recurrent Pterygium. Method: 10 eyes of 10 patients who had recurrent Pterygium over riding cornea by 2.0 mm or less were injected 2.0 mg of 5 FU into the dome of fibro vascular tissue. They were seen for 03 weeks, if progression was not stopped a repeat injection was given. Results: In 7(70%) out of 10 treated eyes after one injection, Pterygium became clinically atrophic. In 3 (30%) eyes clinical improvement was not observed, in these eyes a second injection was given after 03 weeks. In one eye third injection was given. These patients were observed for 10 months. Clinically Pterygium was quiet. No significant complication related to the use of 5 FU was observed. Conclusion: This study showed that intra-lesional injection of 5 FU into the dome of fibro vascular tissue is useful in preventing progression of recurrent pterygium. This approach should be tried first before surgically treating recurrent pterygium.

**How to Site:** ul Haq, I., Khan, M. A., Durrani, M., Durrani, J., & Inam, Z. (2020). Efficacy of Intra-lesional Injection of 5-Fluorouracil in Preventing Progression of Recurrent Pterygium. *Ophthalmology Update*, 18(3), 6-8.

**Key words:** Pterygium, Recurrent Pterygium, 5 Fluorouracil, Antimetabolites

### 40. Plasma Rich Protein Injection in Chronic Plantar Fasciitis

**Objective:** To compare outcomes (plantar fascia thickness, Visual analogue scale scores, role and maudsley scores of satisfaction and complication) of ultrasound guided plasma rich protein injection and steroid injection in chronic plantar fasciitis. Study Design: Quasi experimental study. Place and Duration of Study: Department of orthopedics, Sheikh Khalifa Bin Zayed Al Nahyan /Combined Military Hospital (CMH), Muzaffarabad, from Jun 2018 to Jun 2019.

**How to Site:** Khan, S. H., Raza, M. S., Ara, I., Wani, R., Mehmood, K., & Altaf, A. (2020). Outcomes Of Ultrasound Guided Plasma Rich Protein Injection in Chronic Plantar Fasciitis. *PAFMJ*, 70(4), 1101-04.

**Methodology:** Plantar fasciitis patients were selected through non-probability consecutive sampling. Patients were randomly divided into two groups, group A received ultrasound guided PRP injection while group B received steroid injection. Both groups were followed for outcomes for 6 months.

**Results:** Total 42 patients were included in study. There were 20 (47.6%) male and 22 (52.4%) female. Mean age of patients was 42.6 years  $\pm$  9.5 SD. Plasma rich protein group showed significantly low visual analogue scores ( $p < 0.01$ ), American Orthopedic foot and ankle scores ( $p < 0.01$ ), reduced plantar fasciitis thickness ( $p < 0.01$ ), Roles and Maudsley satisfaction scores ( $p < 0.01$ ). Age and gender showed insignificant association with outcomes ( $p = 0.538$  &  $p = 0.653$  respectively).

**Conclusion:** Ultrasound guided Plasma rich protein injection is a safe, well tolerated and effective method of plantar fasciitis management with long lasting accuracy as compared to steroid injection. Early diagnosis and management of plantar fasciitis leads to better health outcomes

**Keyword:** Platelet Fasciitis, Platelet Rich Plasma Injection, Ultrasound.

#### 41. Remdesivir for the Treatment of COVID-19 — Preliminary Report

**Background:** Although several therapeutic agents have been evaluated for the treatment of (COVID-19), none have yet been efficacious. We are producing preliminary report.

**How to Site:** Durrani, M., ul Haq, I., Khan, A., Beigel, J. H., Dodd, L. E., Mehta, A. K., ... & Finberg, R. W. (2020). Remdesivir for the Treatment of Covid-19—Preliminary Report. *Ophthalmology Update*, 18(3), 50-52.

**Methods:** We conducted a double-blind, randomized, placebo-controlled trial of intravenous remdesivir in adults hospitalized with COVID-19 with evidence of lower respiratory tract involvement. Patients were randomly assigned to receive either remdesivir (200 mg loading dose on day 1, followed by 100 mg daily for up to 9 additional days) or placebo for up to 10 days. The primary outcome was the time to recovery, or hospitalization for infection-control purposes only.

**Results:** A total of 1063 patients underwent randomization. The data and safety monitoring board recommended early results on the basis of findings from an analysis that showed shortened time to recovery in the remdesivir group. Preliminary results from the 1059 patients (538 assigned to remdesivir and 521 to placebo) with data available after randomization indicated that those who received remdesivir had a median recovery time of 11 days (95% confidence interval 9 to 12), as compared with 15 days (95% CI, 13 to 19) in those who received placebo (rate ratio for recovery, 1.32; 95% CI, 1.12 to 1.55;  $P < 0.001$ ). The Kaplan-Meier estimates of mortality by 14 days were 7.1% with remdesivir and 11.9% with placebo (hazard ratio for death, 0.70; 95% CI, 0.47 to 1.04). Serious adverse events were reported for 114 of the 541 patients in the remdesivir group who underwent randomization (21.1%) and 141 of the 522 patients in the placebo group who underwent randomization (27.0%).

**Conclusions:** Remdesivir was superior to placebo in shortening the time to recovery in adults hospitalized with COVID-19 and evidence of lower respiratory tract infection.

#### 42. To Compare the Effect of Nepafenac versus Prednisolone on Post-Operative Inflammation and Intraocular Pressure after Cataract Surgery 1 2 3 4 5 6

**Objective:** To compare the effect of topical 0.1% Nepafenac and 1% prednisolone in control of inflammation and maintenance of Intraocular Pressure (IOP) after cataract surgery. Study Design: Randomized control trial. The Place and Duration of Study: Department of Ophthalmology, from 4 June 2018 to 30 June 2019.

**How to Site:** Mehboob, A., Arshad, M. U., Afzal, F. B., Zia, S., Mirza, A. U. B., & Hassan, M. U. (2020). To Compare the Effect of Nepafenac versus Prednisolone on Post-Operative Inflammation and Intraocular Pressure after Cataract Surgery. *Journal of Islamic International Medical College (JIIMC)*, 15(1), 23-27.

**Materials and Methods:** Total sample size of study population was 400, including all patients getting phacoemulsification cataract surgery. Study population was equally divided in two groups. Group 1 was Nepafenac group, and Group 2 was Prednisolone group. Both groups underwent cataract extraction, and were started on topical 0.1% Nepafenac or 1% Prednisolone along with topical antibiotics after surgery. Postoperative IOP and activity and flare was checked in all patients on day 1, 7 and 28 after surgery and compared between both groups.

**Results:** The study population had a mean age of  $60.97 \pm 4.91$  years. The proportion of male and female patients in study population was 51% and 49% respectively. Difference in mean post-operative IOP and mean change from pre-operative value between both groups was statistically significant ( $p=0.003$  and  $0.004$  respectively). There was statistically significant difference between both groups in terms of anterior chamber cells and flare respectively at 1st week post-operatively ( $p=0.002$ , and  $0.003$ ). However, there was no statistically significant difference between both groups in terms of anterior chamber cells and flare respectively after 28 days post operatively ( $p=0.12$ , and  $0.71$ ).

**Conclusion:** Nepafenac is superior to prednisolone in controlling IOP after cataract surgery, with adequate and comparable control of post-surgical inflammation.

**Key Words:** Intraocular Pressure, Nepafenac, Prednisolone.

#### 43. Automated Detection of Diabetic Retinopathy in Fundus Images using Fused Features

**Abstract:** Diabetic retinopathy (DR) is one of the severe eye conditions due to diabetes complication which can lead to vision loss if left untreated. In this paper, a computationally simple, yet very effective, DR detection method is proposed. First, a segmentation independent two-stage preprocessing based technique is proposed which can effectively extract DR pathognomonic signs; both bright and red lesions, and blood vessels from the eye fundus image. Then, the performance of Local Binary Patterns (LBP), Local Ternary Patterns (LTP), Dense Scale-Invariant Feature Transform

**How to Site:** Bibi, I., Mir, J., & Raja, G. (2020). Automated detection of diabetic retinopathy in fundus images using fused features. *Physical and Engineering Sciences in Medicine*, 43(4), 1253-1264.

(DSIFT) and Histogram of Oriented Gradients (HOG) as a feature descriptor for fundus images, is thoroughly analyzed. SVM kernel-based classifiers are trained and tested, using a 5-fold cross-validation scheme, on both newly acquired fundus image database from the local hospital and combined database created from the open-sourced available databases. The classification accuracy of 96.6% with 0.964 sensitivity and 0.969 specificity is achieved using a Cubic SVM classifier with LBP and LTP fused features for the local database. More importantly, in out-of-sample testing on the combined database, the model gives an accuracy of 95.21% with a sensitivity of 0.970 and specificity of 0.932. This indicates the proposed model is very well-fitted and generalized which is further corroborated by the presented train-test curves.

**Keywords:** Diabetic Retinopathy, Fundus Images, CAD Systems, Retinal Image, Texture Features

**Acknowledgements:** We would like to thank Prof. Dr. Nadeem Ishaq, Consultant Retina Department, Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan for his cooperation in acquisition and labelling of the fundus image database utilized in this work

#### 44. Important Guidelines for Ophthalmologists Special Considerations for Ophthalmic Surgery during COVID-19 Pandemic

**Objective:** To determine the functional outcome of frontalis suspension by Fox Pentagon for congenital ptosis using polypropylene suture in patients with congenital ptosis having poor levator function by quasi experimental study.

**How to Site:** Durrani, M., ul Haq, I., Durrani, J., & Inam, Z. (2020). Important Guidelines for Ophthalmologists Special Considerations for Ophthalmic Surgery during Covid-19 Pandemic. *Ophthalmology Update*, 18(3), 13-16.

**Material and Methods:** After getting IRB approval and written consent from every patient, 22 patients of any age or gender, with congenital ptosis, and having poor levator function  $\leq 4$ mm were included in this study. It was conducted at ophthalmology department, Khyber Teaching Hospital Peshawar for a period of 12 months (Jan. 2019- Dec. 2019). Preoperatively, complete ophthalmic examination including detailed ptosis evaluation was done by ophthalmologist. Surgical technique used was Fox pentagon and surgical material used was monofilament polypropylene 4/0. Functional success as well as complications was determined during post-op follow up period of 6 months. Data recorded and analyzed using SPSS version 23.

**Results:** Out of 22 patients, 13 (59.1%) were male and 9 (40.9%) were female. 4 patients (18.2%) had bilateral involvement. Mean age recorded was  $14.05 \pm 9.85$  years with range of 2.0 to 45.0 years. Functional outcome described in terms of MRD  $\geq 3$  mm and satisfactory lid symmetry was obtained in 20 out of 22 patients (90.9%) with a significant p-value of 0.034 ( $\leq 0.05$ ). Post-operative complications noted were recurrence (4.5%), exposure keratopathy (13.6%), infected wound (4.5%), granuloma (9.1%), and lagophthalmos (18.2%).

**Conclusion:** This study has concluded so far that the synthetic polypropylene sling can be used effectively with better functional outcome, less recurrence, and comparable risk of few postoperative complications.

**Keywords:** Blepharoptosis, Polypropylenes, Recurrence, Granuloma, Wound Infection

#### 45. Use of Dexamethasone in Treating COVID-19 Patients

**Background:** Coronavirus disease is associated with diffuse lung damage. Glucocorticoids may modulate inflammation mediated lung injury leading to respiratory complications and death.

**How to Site:** Durrani, M., Durrani, J., ul Haq, I., & Inam, Z. (2020). Use of Dexamethasone in Treating Covid-19 Patients. *Ophthalmology Update*, 18(4), 36-39.

**Methods:** In this controlled study, possible treatments in patients who were hospitalized with COVID-19, patients were randomly assigned to receive oral or intravenous dexamethasone (at a normal dose daily) for up to 10 days or to receive usual care alone. Here, we report the preliminary results of this comparison.

**Results:** A total of 2104 patients were assigned to receive dexamethasone and 4321 to receive usual care. Overall, 482 patients (22.9%) in the dexamethasone group and 1110 patients (25.7%) in the usual care group died within 28 days after randomization. The mortality varied considerably according to the level of respiratory support patients were receiving at the time of randomization. In the dexamethasone group, the incidence of death was lower than that in the usual care group among patients receiving invasive mechanical ventilation and among those receiving oxygen without invasive mechanical ventilation but not among those who were receiving no respiratory support at randomization.

**Conclusions:** In patients hospitalized with COVID-19, the use of dexamethasone resulted in lowered 28-day mortality among those who were receiving either invasive mechanical ventilation or oxygen alone at randomization but not among those receiving no respiratory support.

#### 46. Prevalence of Pterygium among Welders in Okara District

**Purpose:** This study was done to find out prevalence of pterygium among welders as compared to age related random population of the same area. Pterygium is a disabling, preventable ophthalmic conditions. In advance cases it encroaches visual axis and visually disabling people. In such cases even after surgery vision is not fully restored.

**How to Site:** ul Haq, I., Durra, M., Tahir, M., & Khan, M. A. (2020). Prevalence of Pterygium among Welders in Okara District. *Ophthalmology Update*, 18(2), 25-27.

**Subjects and methods:** A total of 100 males working in welders shops were compared with their age related males working in adjacent shops. On the basis of age, five groups were made. Individuals were randomly selected. People with grade 2 pterygium and beyond were labeled as cases of pterygium. All individuals were examined by an experienced ophthalmologist.

**Results:** In group I (15-24 years) prevalence amongst welders were 7.4% as compared to 4% in control; group II (25-34) 25% as compared to 7.4% in control group; group III, 53.3% as compared to 22.2%; group IV 57.8% as compared to 25%; group V, 54.54% as compared to 28.5% in control group.

**Conclusion:** This study shows high incidence of pterygium among residence of Okara district, and it is significantly more in welders of the same area.

**Keywords:** Pterygium, Welding, UV Light.

#### 47. Systemic Predictors of Diabetic Macular Edema in Patients Visiting Tertiary Hospital

**Objective:** To evaluate the systemic predictors of diabetic macular edema in patients of tertiary care hospital of Rawalpindi.

**Material and Methods:** A cross sectional study of 8 months was performed on 191 diabetic patients at Retina Department of Holy Family Hospital, Rawalpindi.

The research performas were filled from all participants of the study to kept them on proper follow ups at the clinic which contained the variables for demographics of the patients, their diabetic type, diabetic age, treatment modality, consumption of alcohol or smoking, also systemic i.e. blood pressure, results of renal function test, hemoglobin A1c (HbA1c) level, lipid profile of serum, urine albumin level of 24hrs, and neuropathy existence were also noted and entered in the data. The ophthalmological examination of every patient was also performed and noted on performa, The patients with age above 18 years and diagnosed to have diabetes were included, while patients with other ocular complication such as vitreomacular traction, epiretinal membrane, etc.) and opacity at media which effect the reliability of OCT imaging like dense cataract, uveitis, etc or those who have insufficient data for the study were excluded from the study. All the collected data was entered to SPSS 22.0 for the statistical analysis.

**Results:** The DME was detected in 83 (43.45%) patients and DR was found in 108 (56.5%) of the 191study participants. The frequency of DME was found significantly greater in those patients who had HbA1c value of 7.0% or greater ( $p=0.029$ ). The diabetic type had found no effect on DME while duration was significantly found longer in DME patients, mostly in the patient who had the diabetes history of previously one or two decade ( $p=0.001$ ). The comparison of normo-albuminuric, micro-albuminuric, and macro-albuminuric patients were also done for DME and found statistically significant difference, the p-value was found 0.001.

**How to Site:** Syed, A. N., Safdar, M., & Abbas, S. (2020). Systemic predictors of diabetic macular edema in patients visiting tertiary hospital. *Pak J Surg*, 36(4), 343-348.

**Conclusion:** Duration of diabetes, baselines of patients like creatinine levels, lipoprotein levels and level of albuminuria has statistically significant associations of Diabetic macular edema. Proper observation of the underlying conditions in diabetic patient on periodic intervals can help prevent the vision threatening condition of DME.

**Keywords:** Systemic Predictors, Diabetic Macular Edema (DME), Diabetic Retinopathy

#### 48. Comparison of Academic Performance Among Different Handed Medical Students: A Cross-Sectional Study

**Objective:** To compare academic performances among different handed second professional medical students in Khyber Medical College, Peshawar, Pakistan.

**Methods:** This is a cross sectional study conducted from May to September 2017. A total of 194 medical students from second professional MBBS of any gender were recruited in this study after taking their informed consent. A questionnaire was distributed among the students; their handedness and first professional marks were noted. SPSS v.20.0 was used to analyze the data. Descriptive statistics were applied for both categorical and numerical variables while for comparison independent sample t-test was applied.

**How to Site:** Zafar, U., Ahsan, J., Ayub, R., & Zafar, A. (2020). Comparison Of Academic Performance Among Different Handed Medical Students: a Cross-Sectional Study. Khyber Medical University Journal, 12(1), 49-52.

**Results:** Out of 194 students enrolled, 184 (94.8%) were right-handed & 10 (5.2%) were left-handed. There were 108 (55.7%) male & 86 (44.3%) female students. In right-handed students, 103 (56%) were males and 81 (44%) were females while in left-handed students, five (50%) were males and five (50%) were females. Mean marks in first professional examinations by right-handed and left-handed students were  $429.57 \pm 39.054$  and  $439.80 \pm 34.113$  respectively ( $p$ -value=0.481). Mean first professional marks of male and female students were  $422.48 \pm 37.53$  and  $439.66 \pm 38.46$  respectively ( $p$ -value=0.002).

**Conclusion:** Our study findings infer that handedness does not affect the academic scores in medical students.

**Keywords:** Academics (Non-MeSH), Handedness (MeSH), Students, Medical (MeSH), Performance (MeSH), Education



#### 49. Development of Myopia

**Abstract:** The study objective was to assess the correlation of time outdoors in sunlight hours with spherical equivalent refraction (SER) and other variables. This was a cross-sectional study carried out in the Fauji Foundation Hospital, Rawalpindi, between January and April 2019. A total of 110 Individuals were included via convenient sampling, with myopia defined as having at least -0.5 D (SER  $\leq$  -0.5 D). Collection of

Questionnaires with interviews regarding eye care behavior along with auto-refraction was done, followed by calculation of spherical equivalent refraction. Those having high myopia of 6 D or more (SER  $\leq$  -6 D), hyperopia of 0.5 D or more (SER  $\geq$  +0.5 D), and history significant for ocular trauma and surgeries, were excluded. After data cleaning and their entry, analyses were done using SPSS version 26. The mean age data, available for 105 individuals, was  $15.4 \pm 3.69$  years. Spearman's correlation was used for right SER with time outdoors in summers ( $r = +0.25$ ,  $p = 0.008$ ) and winters ( $r = +0.243$ ,  $p = 0.010$ ), indicating an inverse relationship with myopia. Females had more myopic refraction than males, but the independent sample t-test was not significant. Logistic regression was used, and a protective effect was found for both summer and winter time outdoors, while education level was associated with myopia.

**How to Site:** Naqvi, S. A. H., Rehman, Z. U., Nazir, T., Rizwan, A., Raza, H., & Obaid, N. (2021). Sunlight Exposure: A Protective Role in the Development of Myopia. *Journal of the College of Physicians and Surgeons Pakistan: JCPSP*, 31(9), 1126-1128.

#### 50. Anemia prevalence in women of reproductive age in low- and middle-income countries between 2000 and 2018.

**Abstract:** Anemia is a globally widespread condition in women and is associated with reduced economic productivity and increased mortality worldwide. Here we map annual 2000–2018 geospatial estimates of anemia prevalence in women of reproductive age (15–49 years) across 82 low- and middle-income countries (LMICs), stratify anemia by severity and aggregate results to policy-relevant administrative and national levels. Additionally, we provide subnational disparity

analyses to provide a comprehensive overview of anemia prevalence inequalities within these countries and predict progress toward the World Health Organization's Global Nutrition Target (WHO GNT) to reduce anemia by half by 2030. Our results demonstrate widespread moderate improvements in overall anemia prevalence but identify only three LMICs with a high probability of achieving the WHO GNT by 2030 at a national scale, and no LMIC is expected to achieve the target in all their subnational administrative units. Our maps show where large within-country disparities occur, as well as areas likely to fall short of the WHO GNT, offering precision public health tools so that adequate resource allocation and subsequent interventions can be targeted to the most vulnerable populations. Geospatial estimates of the

**How to Site:** Kinyoki, D., Osgood-Zimmerman, A. E., Bhattacharjee, N. V., Kassebaum, N. J., & Hay, S. I. (2021). Anemia prevalence in women of reproductive age in low-and middle-income countries between 2000 and 2018. *Nature medicine*, 27(10), 1761-1782.

prevalence of anemia in women of reproductive age across 82 low-income and middle-income countries reveals considerable heterogeneity and inequality at national and subnational levels, with few countries on track to meet the WHO Global Nutrition Targets by 2030.

### 51. Impact of COVID-19 Lockdown on Retinal Surgeries

**Objectives:** To determine the frequency and severity of surgical Vitreo-Retinal diseases during COVID-19 lockdown period (LP) and compare it with same period last year.

**How to Site:** Awan, M. A., Shaheen, F., & Mohsin, F. (2021). Impact of COVID-19 lockdown on Retinal Surgeries. *Pakistan Journal of Medical Sciences*, 37(7), 1808.

**Methods:** Single hospital based retrospective Cohort Study. Data of the patients that underwent retinal surgeries during the COVID-19 LP i.e., 23-03-2020 till 23-06-2020 and same period last year i.e., 23-03-2019 till 23-06-2019 was analyzed.

**Results:** One hundred thirty-six eyes of 105 patients were included. Among these eyes, 48 (35.3%) were operated during the COVID-19 LP while 88 (64.7%) were operated during the same time last year. A decline of 45.5% ( $p=0.023$ ) was observed in the frequency of surgeries during the LP. Mean age of patients during the LP was  $43.2 \pm 20.3$  years compared to  $48.4 \pm 17.9$  years last year. There was reduction in the surgeries for Diabetic Tractional Retinal Detachment (11.4% vs 4.2% during LP,  $p=0.166$ ), Vitreous hemorrhage (10.2% vs 8.3% during LP,  $p=0.04$ ), Full thickness macular hole (3.4% vs 0% during LP) and Epiretinal membrane (12.5% vs 0% during LP). While Rhegmatogenous retinal detachment (27.3% vs 58.3% during LP,  $p<0.001$ ) among other disorders had a higher proportion during the LP.

**Conclusion:** The decline in the frequency of retinal surgeries during the LP is indicative of complex pathologies presenting later with more advanced disease. However, earlier presentation and an increase trend in surgeries for RRD during the LP shows the positive impact of free time on the health concerns of our population.

**KEYWORDS:** COVID-19, Eye, Pandemic, Retina, Vitrectomy

### 52. Outcomes Of 27-Gauge Pars Plana Vitrectomy for a Variety of Posterior Segment Diseases

**Objective:** To report outcomes of 27-gauge pars plana vitrectomy for the management of a variety of simple to complex posterior segment disorders.

**How to Site:** Awan, M. A., Shaheen, F., & Janjua, K. (2021). Outcomes of 27-gauge pars plana vitrectomy for a variety of posterior segment diseases. *Journal of the Pakistan Medical Association*, 71(11), 2570-2575.

**Methods:** This retrospective cohort study was conducted at the Shifa International Hospital, Islamabad, Pakistan, and comprised data of all patients who underwent 27-gauge pars plana vitrectomy between July 1, 2015, and June 30, 2019, for a variety of indications. Data noted included age, gender, laterality, diagnosis, pre-operative

visual acuity, date of surgery and surgical details, including operating time and complications. Best corrected visual acuity at 3 months was also recorded. Data was analyzed using SPSS 21.

**Results:** Of the 574 patients, 355(62%) were males and 219(38%) were females. The overall mean age was  $55\pm 16.9$  years. There were total 665 eyes as 91(15.8%) patients underwent bilateral surgeries. The most common surgical indications were diabetic tractional retinal detachment 196(29.5%) and vitreous haemorrhage 191(28.7%). Mean operating time was  $62\pm 37$  minutes. With the exception of 0.34% cases where 20 gauge fragmatome was used, no case required conversion to 20gauge system, while 25 gauge trocar was used for silicon oil injection. Per-operative complications included iatrogenic retinal tear 2(0.3%) eyes and supra choroidal silicon oil migration 1(0.15%) eye. Post-operative complications were raised intraocular pressure 7(1.05%), endophthalmitis 1(0.15%) eye, haemorrhagic occlusive retinal vasculitis 1(0.15%) eye and rhegmatogenous retinal detachment 2(0.3%) eyes. Mean best corrected visual acuity improved from  $1.62\pm 0.68$  to  $0.4\pm 0.38$  logarithm of minimum angle of resolution ( $p<0.001$ ).

**Conclusion:** The 27 gauge pars plana vitrectomy was found to be a safe and effective procedure for both simple and complex retinal pathologies requiring significant surgical manipulation.

**Keywords:** Operative Time, Retina, Visual Acuity, Vitrectomy, Vitreoretinal Surgery

### 53. Incidence Of Endophthalmitis Following Intravitreal Anti VEGF Injections At A Tertiary Care Hospital In Pakistan

**Objective:** To assess the rate of infectious endophthalmitis with anti-vascular endothelial growth factor injection, and to evaluate institutional procedure protocol in this regard.

**Methods:** The retrospective consecutive case series was conducted at Shifa International Hospital, Islamabad, Pakistan, from August 2018 to January 2019, and comprised 5-year data from August 2014 to July 2019 related to patients who underwent intravitreal anti-vascular endothelial growth factor injections. Data was analysed using SPSS 21.

**Results:** Of the 7,542 injections administered to 2,734 patients, 5,976(79.2%) were bevacizumab, 1,081(14.3%) ranibizumab and 485(6.4%) aflibercept. There was 1(0.01%) case of infectious endophthalmitis which was treated with 25-gauge pars plana vitrectomy.

**Conclusions:** The institutional procedure protocol was found to be effective as the rate of infectious endophthalmitis was lower than what is reported in literature.

**How to Site:** Shaheen, F., Awan, M. A., Hafeez, A., Haq, A., & Zainab, R. (2021). Incidence of endophthalmitis following intravitreal anti VEGF injections at a tertiary care hospital in Pakistan. *Journal of the Pakistan Medical Association*, 1-12.

#### 54. Spectrum Of Ocular Tuberculosis

**Abstract:** Tuberculosis (TB) is one of the most contagious infection known after it was first isolated and presented in 1882. This infection has caused a high rate of mortality over centuries and current researches show that it is responsible for almost 1.4 million deaths yearly.

1 Nearly one third of the world's population is latently infected with TB. According to World Health Organization 80% of the reported cases of tuberculosis are pulmonary and remaining 20% are extra pulmonary. Pakistan is the fifth country in the world which reports high number of cases of pulmonary tuberculosis. 2 Tuberculosis can involve any organ in the body including ocular tissue, either directly or by spreading from other sites in the body. Despite the lethal complication of this infection, it often goes undiagnosed due to the masked appearance of its symptoms. We came across 3 cases of ocular tuberculosis which differ from each other in presentation, but thorough investigation led us to a common diagnosis in all three of them

**How to Site:** Haq, A., Shaheen, F., & Farooq, S. (2021). Various spectrum of ocular tuberculosis. J Ayub Med Coll Abbottabad.

#### 55. Incidence Of Endophthalmitis Following Intravitreal Anti VEGF Injections At A Tertiary Care Hospital In Pakistan

**Objective:** To assess the rate of infectious endophthalmitis with anti-vascular endothelial growth factor injection, and to evaluate institutional procedure protocol in this regard.

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**Results:** Of the 7,542 injections administered to 2,734 patients, 5,976 (79.2%) were bevacizumab, 1,081 (14.3%) ranibizumab and 485 (6.4%) aflibercept. There was 1 (0.01%) case of infectious endophthalmitis which was treated with 25-gauge pars plana vitrectomy.

**Conclusions:** The institutional procedure protocol was found to be effective as the rate of infectious endophthalmitis was lower than what is reported in literature.

**How to Site:** Shaheen, F., Awan, M. A., Hafeez, A., Haq, A., & Zainab, R. (2021). Incidence of endophthalmitis following intravitreal anti VEGF injections at a tertiary care hospital in Pakistan. Journal of the Pakistan Medical Association, 1-12. p

**56. Title of Chapter: Glaucoma Genetics in Pakistan****Book: Advances in Vision Research, Volume III****How to Cite:** Ayub, H., Azam, M., Micheal, S., Imran Khan, M., Akhtar, F., Khor, C. C., ... & Qamar, R. (2021). Glaucoma Genetics in Pakistan. In *Advances in Vision Research, Volume III* (pp. 233-249). Springer, Singapore. DOI: 10.1007/978-981-15-9184-6\_18

Glaucoma, a multifactorial ocular disease, is clinically and genetically heterogeneous. It is the second leading cause of blindness in elderly population worldwide. Because of the complex nature of glaucoma, the genetic spectrum has not been established globally. In Pakistan, both the familial and the sporadic forms of the disease are common, which is attributed to higher percentage of consanguinity in the Pakistani population. Till the year 2008, there were no reports from Pakistan about the genetic factors causing glaucoma. In order to identify the glaucoma genetic spectrum in the Pakistani population, we genetically screened individuals with glaucoma that included the common clinical subclasses; primary congenital glaucoma (PCG), primary open angle glaucoma (POAG), primary angle closure glaucoma (PACG), and pseudo-exfoliation glaucoma (PEXG). We conducted linkage analysis of the glaucoma families, case-control association analysis of the sporadic glaucoma cases using previously reported single nucleotide polymorphisms (SNPs), and also carried out genome wide association studies (GWAS). These studies have allowed us to discover novel glaucoma causing genes and risk-associated SNPs in the Pakistani population. The identification of novel glaucoma genes reveals novel molecular mechanisms involved in glaucoma pathogenesis. However, the clinical heterogeneity in the Pakistani glaucoma population suggests the need for further exploration of the molecular/genetic causes of the disease.

**Keywords:** Glaucoma, GWAS, SNPs, CYP1B1, Novel Genes/Loci

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. Developing National Strategy/approach to enhance hospital and Emergency Medical Service (EMS) provider preparedness for Chemical, Biological, Radiological & Nuclear (CBRN) events to meet the minimum IHR requirements.



**“What is not started will never get finished”**

Johan Wolfgang Von Goethe



Sr #	Student Name	Topic	Supervisors
1	Ali Zeb Khan	Public Perception on Community Pharmacy Practice in Islamabad: A Quantitative Study	Dr. M. Farooq Umer
2	Alina Qadir	Awareness on Food Labels Among People Visiting Super Marts in Rawalpindi	Ms. Qandeel Tahir
3	Amber Jamil	Effect of Workplace Support on Breastfeeding Self-Efficacy Among Working Mothers of Attock City	Dr. Saman Waqar Naqvi
4	Amir Saeed	Comparison of Factors Associated with Malnutrition Among Children Under Five in Rural and Urban Areas of District Layyah	Dr. Khizar Nabeel Ali
5	Ammara Asghar	Effect of Hospital Healing Environment on Patient Well-Being in Tertiary Care Hospitals of Rawalpindi and Islamabad	Dr. Saman Waqar Naqvi
6	Anam Razzaq	Assessment of Obsessions, Compulsions and Coping Strategies Among University Students of Rawalpindi	Dr. Khizar Nabeel Ali
7	Anam Sana Awan	Assessment of Knowledge & Practices about Zoonotic Diseases & Associated Factors in Chakwal, Pakistan	Ms. Hina Shareef
8	Ansa Nawaz	Assessment of Health System's Responsiveness Towards Inpatients in Public and Private Hospitals of Rawalpindi	Dr. Ayesha Babar Kawish
9	Ayesha Anwaar	Barriers in Pharmacists Regarding Adverse Drug Reactions Reporting in Public and Private Tertiary Care Hospitals of Islamabad and Rawalpindi	Dr. Saman Waqar Naqvi
10	Bushra Faqeer	Knowledge and Practice of Emergency Contraceptive Pills in Married Women of Urban Slums in Lahore	Dr. Khizar Nabeel Ali
11	Ejaz Ul Haq	Attitudes of Health Care Professionals towards Person with Disability, in Public and Private Tertiary Care Hospitals of Rawalpindi City, Pakistan	Dr. Ayesha Babar Kawish
12	Ejaz Ul Haq	Assessment of Provision and Utilization of Maternal and Newborn Child Health Services in Tehsil Dera Ghazi Khan	Dr. Ayesha Babar Kawish
13	Fahim Ullah Noor	Assessment of Patient Satisfaction in Rehabilitation Center of Al-Shifa Trust Eye Hospital Rawalpindi	Dr. Quratulain Waheed
14	Farhana Javed	Willingness to Change Health Behaviors During COVID-19 Pandemic in Population of Rawalpindi City, Pakistan	Dr. Ume Sughra
15	Farzana Ahmad	Effect of Kangaroo Mother Care in Weight Gain of Pre-Term Neonates of District Chakwal, Punjab	Dr. Ume Sughra
16	Hamza Tanveer	Quality of Life Allergic Rhinitis Patients with Non-Allergic People Visiting NIH Allergy Centre (Comparative Study) Islamabad	Dr. Quratulain Waheed
17	Iram Ijaz	Frequency of Musculoskeletal Pain and Associated Factors in Young at Public Hospitals in Rawalpindi City	Dr. Saman Waqar Naqvi
18	Irsah Khan	First Aid Knowledge Among Primary and Secondary School Teachers of Wah Cantt, Pakistan	Dr. Ume Sughra

19	Jafar Ali Shah	Knowledge and Practices Regarding Occupational Safety Among Factory Workers of District Buner, Khyber Pakhtunkhwa	Ms. Hina Shareef
20	Maham Khaliq	Assessment of Nutritional Risk Among Geriatric Population, Visiting Tertiary Care Hospitals in Rawalpindi, Pakistan	Ms. Hina Shareef
21	Mahe-Kamil Qureshi Hashmi	Effect of Visual Communication on Diabetic Health Literacy in a Rural Community of Islamabad: A Quasi-Experimental Study	Dr. Ayesha Babar Kawish
22	Mahjabeen	Sleep Disturbance Among Women University Students in (AJ&K) Bagh	Dr. Khizar Nabeel Ali
23	Mahwish Arooj	Assessment of Working Mothers Parenting Satisfaction Regarding their Children's Upbringing in Chakwal City	Dr. Quratulain Waheed
24	Mariha Faisal	An Association of Psychosocial Triggers and Genetic Risk Variants as Contributing Factors to Onset of Anxiety Disorders	Dr. Quratulain Waheed
25	Marriam Asif	Effect of Screen Time on Behavior of Preschoolers in Islamabad	Dr. Ume Sughra
26	Maryam Hameed Abbasi	Association of Strabismus with Functional Vision and Eye Related Quality of Life of Children Aged 5-15 Years in Tertiary Hospital	Dr. Ume Sughra
27	Maryam Zahid	Effect of Artificial Intelligence on Nutritional Status of Children Post Cardiac Surgery; A Randomized Controlled Trail	Dr. Ume Sughra
28	Mayra Abbasi	Preparedness and Responsiveness of Health Care Providers During Emergency Situation in Tertiary Care Hospitals of Rawalpindi	Dr. Ayesha Babar Kawish
29	Mehwish Arooj	Attitudes of Health Care Professionals towards Person with Disability, in Public and Private Tertiary Care Hospitals of Rawalpindi City, Pakistan	Dr. Quratulain Waheed
30	Mehwish Fayaz	Assessment of Family Planning Services Utilization Among Women of Union Council Bangoin (Rawalakot) Azad Jammu and Kashmir (AJ&K)	Ms. Qandeel Tahir
31	Misbah Rashid Mughal	Functional Status and Coping Strategies Among COVID-19 Recovered Individual in Islamabad	Ms. Qandeel Tahir
32	Muhammad Tariq	Knowledge, Attitude and Practices towards Eye Care Among Primary Health Care Workers in District Chakwal	Dr. Ayesha Babar Kawish
33	Naveed Akhtar	Awareness Regarding Dengue Prevention and Control in Peri urban Union Council of Tehsil Rawalpindi	Ms. Qandeel Tahir
34	Noor Shah	Assessment of Work-Life Balance Among Health Care Workers in A Tertiary Care Hospital Rawalpindi	Dr. Ayesha Babar Kawish
35	Rabia Inam	Prevalence of Backache in Mothers of Children Having Disabilities in Rehabilitations Centers of Islamabad and Rawalpindi	Dr. Saman Waqar Naqvi
36	Rasikh Arif	Perceived Role of Community Pharmacist for Type 2 Diabetes Services and Current Practices in Rawalpindi and Islamabad	Dr. Ume Sughra

37	Rehana Asghar	Predictors of Psychological Stress Among University Students of Rawalpindi & Islamabad	Dr. Saman Waqar Naqvi
38	Rumaisa Anwar	Association of added Sugar Consumption and Sleep Quality Among Children of Rawalpindi City	Dr. M. Farooq Umer
39	Saadia Hamid	Assessment of Knowledge about Benefits of Micronutrients in Cardiovascular Diseases in Undergraduate Medical Students of Rawalpindi	Dr. Quratulain Waheed
40	Saira Irum	Assessment of COVID-19 Vaccine Hesitancy and its Association with Myths and Beliefs of General Public Visiting Hospital in Rawalpindi	Dr. Khizar Nabeel Ali
41	Salma Baig	Risk taking Behaviors Among Late Adolescents of Higher Secondary Schools Rawalpindi Cantt, Pakistan	Dr. Ume Sughra
42	Samina Nawaz	Perceptions of Community and Role of Media During COVID 19 Pandemic Among Residents of Islamabad – A Mixed Method Study	Dr. Ayesha Babar Kawish
43	Samina Sulman	Patient Satisfaction with The Quality of Nursing Care in Public and Private Tertiary Care Hospital Rawalpindi	Dr. Quratulain Waheed
44	Sara Saeed	Risk Perception about Communicable and Vector Borne Diseases in International Travelers Arriving at Islamabad International Airport, Pakistan	Ms. Qandeel Tahir
45	Shaukat Ali	Knowledge Attitude, and Practices Regarding Biomedical Waste Management Among Nurses in Public Hospitals in Mardan City	Dr. Khizar Nabeel Ali
46	Sibtain Nawaz	Assessment of Knowledge and Recycling and Disposal Practices Regarding the E-Waste Among the Handlers in Rawalpindi City	Dr. Ayesha Babar Kawish
47	Sohail Malik	Association of Health Literacy with Health Seeking Behavior at Primary Level Among Rural Community of Tehsil Gujar Khan	Ms. Hina Shareef
48	Summiya Iqbal	Association of Body Image Satisfaction and Self-Esteem in University Students of Rawalpindi and Islamabad	Dr. Ayesha Babar Kawish
49	Sunmbul Shahzadi	Frequency and Predictors of Tokophobia Among Pregnant Women Visiting Maternity Hospital in Rawalpindi	Dr. Quratulain Waheed
50	Syeda Fatima Jafari	Knowledge of Sportsperson Regarding Use of Orthotic Appliances for Prevention and Treatment of Sports Related Injuries in Rawalpindi and Islamabad	Ms. Hina Shareef
51	Tauqeer Ahmed Nasir	Vision Related Quality of Life and Coping Strategies in Patients of Diabetic Retinopathy in Tertiary Care Hospital of Rawalpindi	Dr. Saman Waqar Naqvi
52	Tehreem Fatima	Asthenopia and the Coping Strategies used Among Undergraduate University Students of Islamabad Attending Virtual Classes	Ms. Qandeel Tahir
53	Ume Habiba	Cardiovascular Disorders and Dietary Total Antioxidant Capacity in Adults of Twin Cities (RWP, ISB)	Ms. Qandeel Tahir

54	Urmah Mahrosh	Association of Pharmacy Services with Patient Satisfaction in Public and Private Tertiary Care Hospitals of Islamabad and Rawalpindi	Dr. Ayesha Babar Kawish
55	Zoonah Arshad	Nutritional Knowledge and Practices Among Female University Students in Rawalpindi and Islamabad	Dr. Saman Waqar Naqvi
56	Abdul Samad	Subjective Experience of Soft Cosmetic Contact Lens Users in RWP	Dr. Shama Khan
57	Aiman Fakhar	Comparison of Digital Contrast Sensitivity Chart with Pelli Robsin in Low Vision Patients	Ms. Hina Shareef Ms. Fareeha Ayub
58	Anim Arif	Barriers Regarding Negative Peer Pressure of Manifest Strabismus Among Adults	Dr. Sumaira Altaf Ms. Sadaf Qayyum
59	Anjum Ruksana	Validation of Smart Phone Based Visual Acuity Chart for Community Outreach Program	Dr. Amtul Aziz Dr. Saman Waqar Naqvi
60	Ayun Asif	KAP of Diabetic Patient Presenting at Tertiary Eye Care Hospitals and Effect of Health Education on KAP of These Patients	Dr. Tayyab Afghani Ms. Sultana Kausar
61	Azka Sadat	Influence of Coping Strategies on General Wellbeing in Patient with Low Vision	Ms. Midhet Nasim
62	Hadia Shakeel	Assessment of Knowledge, Practice, and Guidelines towards the Novel COVID 19 Among Eye Care Practitioner in Rawalpindi	Dr Ume Sughra Ms. Fareeha Ayub
63	Hafsa Maryam	Visual Outcome After Cataract Surgery in Tertiary Eye Hospital	Dr. Shama Khan Ms. Qandeel Tahir
64	Hafsa Nazak	Comparison of Frequency of CVS Between Software Engineer and IT Students	Dr. Ismat Ullah Chaudhary Ms. Sultana Kausar
65	Hina Tajmal	Impact of Doctor Patient Communication on Patient Compliance in Eye Health Setting	Dr. Ayesha Babar Kawish Ms. Rabia Sheikh
66	Hira Aziz	Parental Knowledge and Attitude towards Refractive Error Among Children	Dr. Nusrat Shareef Dr. Saman Waqar Naqvi
67	Kashaf Fatima	Willingness to Pay for Cataract Surgery Among Patients Coming to Hospital	Dr. Ismat Ullah Chaudhary Ms. Qandeel Tahir
68	Mahnoor Asif	KAP Associated with Glaucoma Among Hospital Personnel in Tertiary Care Centers	Dr. Farah Akhter Dr. Ayesha Babar Kawish
69	Maryam Bacha	Assessment of Quality of Life before and with Cataract	Dr. Ume Sughra Ms. Sadaf Qayyum
70	Maryam Habib	Parental Attitude Knowledge and Behavioural Regarding Patching Therapy in Amblyopic Patients	Dr. Quratulain Waheed Dr. Shadab Hassan
71	Mehak Shehzad	Presbyopia Spectacles Coverage and its Associated Factors Among Schoolteachers	Ms. Hina Shareef Ms. Momina Javed
72	Mehmoona Asgher	Effects of PRP Laser on IOP in Proliferative DR	Dr. Ume Sughra Dr. Abdul Hannan

73	Mehwish Saleem	Knowledge Attitude and Associated Factors Among Primary School Teacher Regarding Refractive Error	Dr. Khizar Nabeel Ali Ms. Maryam Firdous
74	Nalain Syeda	Knowledge and Awareness Towards Refractive Error Correction and Preferred Modality for Correcting it	Dr. Mehmood Ali Dr. Quratulain Waheed
75	Noor ul Ain	Association Between Eye Makeup Usage and Ocular Comfort	Dr. Saman Waqar Naqvi Ms. Momina Javed
76	Rafia Batool	Factor Associated with Noncompliance of Spectacles Among Adults	Dr. Quratulain Waheed Ms. Sadaf Qayyum
77	Raj Um ul Baneen Bakht	Satisfaction Level as an Evaluation Measure of Low Vision Services	Dr. Saman Waqar Naqvi Ms. Mehreen
78	Rubab Fatima	Experience Results of MSICS Surgery with Foldable IOL at Newly Established Trust Hospitals at RWP	Dr. Abdullah Ms. Sultana Kausar
79	Sameen Zahra	Outcomes of Low Vision Devices for Reading Purpose in Patients with Visual Impairment	Dr. Ayesha Babar Kawish Ms. Maryam Firdous
80	Sana Nisar	Assessment of Patient's Satisfaction Level Regarding Eye Services Availability in Free Vs Private Patients	Dr. Tayyab Afghani Dr. Khizar Nabeel Ali
81	Ume Aiman	Knowledge and Barriers Associated with Contact Lens Wearers Visiting Tertiary Eye Care Hospitals of Rawalpindi	Dr. Khizar Nabeel Ali Ms. Fareeha Ayub
82	Yasra Atta	Frequency of Ocular Disorder in District Headquarter Hospital Chakwal	Ms. Hina Shareef Ms. Fareeha Ayub
83	Zaltoor Ayesha	Prevalence of Ocular Morbidity in School going Children	Dr. Tayyab Afghani Dr. Ayesha Babar Kawish

Sr. #	Participating Faculty	Title
1	Dr. Farah Akhtar Dr. Mehmood	Optimizing the Outcomes of Ahmed Glaucoma Valve Implant World Glaucoma Congress 2021 DOI: 10.13140/RG.2.2.20948.12163
2	Dr. Farah Akhtar Dr. Mehmood	Visual Fields Interpretation Glaucoma Workshop in connection with World Glaucoma Week 2021
3	Dr. Farah Akhtar Dr. Mehmood	CycloG6 Micropulse Diode Laser Hands on Workshop on Micropulse Diode Laser (Pre-congress workshop in connection with Rawal Medical University International Congress 2021)
4	Dr. Ume Sughra	Developing National Strategy/approach to enhance hospital and Emergency Medical Service (EMS) provider preparedness for Chemical, Biological, Radiological & Nuclear (CBRN) events to meet the minimum IHR requirements.
5	Dr. Maryam Zahid Dr. Ume Sughra	Effect of Artificial Intelligence on Nutritional Status of children post cardiac surgery, A Randomized Controlled Trial EMPHNET Seventh Reginal Conference Jordan
6	Dr. Marriam Suleman Dr. Ume Sughra	Effect of Screen Time on the Behavior of Preschoolers in Islamabad: Descriptive Cross-sectional Study EMPHNET Seventh Reginal Conference Jordan
7	Dr. Ayesha Babar Kawaish	Contemporary medicines, health technologies and vaccines for emerging public health risks
8	Dr. Farhana Zain ul Abdein Dr. Ume Sughra	Willingness to Change Health behavior During the COVID-19 Pandemic in the Population of Rawalpindi City, Pakistan EMPHNET Seventh Reginal Conference Jordan
9	Dr. Ayesha Babar Kawaish	Cancer prevention in children & establishment of center of eye cancer in Al-Shifa Trust Eye Hospital, Rawalpindi as panelist
10	Dr. Ume Sughra	Research Methodology, Biostatistics & Dissertation Writing FCPS Residents workshop at CPSP
11	Dr. Ayesha Babar Kawaish	Strengthening advocacy for Breast cancer prevention in adolescent girls
12	Dr. Ayesha Babar Kawaish	Aghaz premarital/ marital counselling approach” as General body member of Forum of safe motherhood, WHO and MONHSRC
13	Dr. Ayesha Babar Kawaish	International summit on medical sociology and Public Health on equity benefit by vaccines to population
14	Dr. Ayesha Babar Kawaish	Inaugural plenary of 24th Sustainable Development conference by SDPI in Aiwan-e-Saddar, Islamabad
15	Dr. Ayesha Babar Kawaish	Evolving research in complex world
16	Dr. Ayesha Babar Kawaish	Workshop on “Research methodology” for undergraduate students in Army Medical college, NUMS
17	Dr. Ume Sughra	Subject workshop as single facilitator at CPSP Regional Center Rawalpindi
18	Dr. Ayesha Babar Kawaish	Master trainer of Baby Friendly Hospital Initiative by WHO, UNICEF & MONHSRC
19	Dr. Quratulain Waheed	Obtained certification for IPPCR (Introduction to the Principals and Practices of Clinical Research)

20	Dr. Ayesha Babar Kawaish	General body member of "Forum of safe motherhood Alliance" Pakistan Chapter
21	Dr. Quratulain Waheed	Completed a workshop on "Clinical Research made easy" focusing on modern methods of research with certification
22	Dr. Ayesha Babar Kawaish	Organized Medical writing workshop with MONHSRC, Al-Shifa School of Public Health
23	Dr. Quratulain Waheed	Completed a workshop on "The Qualitative Research Paradigm" with certification
24	Dr. Quratulain Waheed	Attended the 11th Annual HSA conference titled "Contemporary Medicines, Health Technologies and Vaccines for Emerging Public Health Risks"





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

David Sarnoof

## 1<sup>st</sup> Al-Shifa International Research Conference 2021

An international conference on COVID 19 Phase III Clinical Trials in Pakistan was held at Al Shifa Trust Rawalpindi on Wednesday December 8<sup>th</sup>, 2021. It was the first international research conference by Al Shifa Trust. The theme for the research was building research expertise with changing times, research at the forefront of pandemic. Esteemed decision-makers, researchers, academia faculty and scholars, renowned researchers, and representatives from World Health Organization (WHO) and Drug Regulatory Authority Pakistan (DRAP) took part in the conference.

The conference was put together to highlight the research opportunities generated as a result of the pandemic in Pakistan and the role of national institutes in becoming a part of global activities to combat the pandemic through research in Pakistan. The paradigm shift from curative to preventive medicine was also discussed by the national and international speakers present at the conference.





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

**Topic:**  
 Concluding Remarks on Phase III Clinical Trial  
 being conducted at Al-Shifa Research Centre  
 Rawalpindi



**Prof. Dr. Wajid Ali Khan**  
 Dean and Chief of Medical Services  
 Al-Shifa Trust Eye Hospital  
 Rawalpindi

**Topic:**  
 Welcome Address and Introduction of Al-Shifa  
 Trust Eye Hospital and Establishment of  
 Research Centre



**Prof. Dr. Ume Sughra**  
 Principal Investigator ZF2001 Phase III Clinical  
 Trial  
 Professor of Public Health  
 Director Research  
 Al-Shifa Research Centre

**Topic:**  
 COVID-19 Phase III Clinical Trial at Al-Shifa  
 Clinical Trial Site



**Dr Palitha Mahipala**  
 Representative  
 World Health Organization Pakistan (WHO)

**Topic:**  
 WHO support to Government of Pakistan for  
 COVID-19 Response



**Major General Dr. Aamer Ikram, SI(M),**  
Executive Director  
National Institute of Health (NIH)  
Islamabad

**Topic:**  
Role of NIH in COVID-19 Response in Pakistan



**Dr. Abdur Rashid**  
Ex-Chairman, Clinical Studies Committee  
& Ex-Director, Pharmacy Services,  
Drug Regulatory Authority of Pakistan  
Ex-President, Pharmacy Council of Pakistan

**Topic:**  
The Country Situation in Clinical Trials, A DRAP  
Prespective



**Dr. Jawad Gill**  
Head of Clinical Operations  
DRK Pharma Solutions Lahore

**Topic:**  
Role Of DRK In Bringing & Conducting Clinical  
Research to Pakistan



**Dr. Zahid A. Butt**  
Assistant Professor  
School Of Public Health Sciences  
University of Waterloo Ontario Canada

**Topic:**  
Infodemiology and Infoveillance: An overview





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

**Topic:**  
Public Health Response in COVID-19



**Prof. Dr. Javed Akram**  
Vice Chancellor: University of Health Sciences  
Lahore  
President: Pakistan Society of Internal Medicine

**Topic:**  
Institutional Experience Of COVID-19 Phase III  
Trials  
University Of Health Sciences, Lahore



**Ms Maria Song**  
Representative  
Anhui Zhifei Longcom Biopharmaceutical Co., Ltd  
Recombinant COVID-19 Vaccine (CHO Cell),  
Zifivax®, ZF2001

**Topic:**  
Overview of Phase III Clinical Trial of ZF2001



## Contact Details

**Director Research**  
**Al-Shifa Research Centre**  
**E-mail: [dr\\_sughra@yahoo.com](mailto:dr_sughra@yahoo.com)**  
**Tel: 051-5487821-5, Ext: 372**

**Assistant Editor ASJO**  
**Al-Shifa Journal of Ophthalmology**  
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