



AL-SHIFA

ANNUAL RESEARCH REPORT 2019



PREPARED BY

AL-SHIFA RESEARCH CENTRE

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Message by President Al-Shifa Trust



Maj Gen (R) Rehmat Khan

Health research has a high value to society. Evidence based policies and approaches which provide complementary insights are required to confront challenges in health sectors.

Research is essential to guide improvements in our existing health system and developing initiatives. We must invest, develop and promote a research culture and harness its benefits to create demands for research.

It gives me immense pleasure to see Al-Shifa Research Report of year 2019. I believe through research we can frame up our health policies which are more responsive to the healthcare needs of the society.

Al-Shifa provides eye care services to over one million patients every year. This rich experience backed by brilliance and expertise of our faculty, residents and students can find solution of complex problems through research. This will help us achieve our ultimate objective of elimination of blindness in Pakistan.

Message by Dean



Professor Dr. Wajid Ali Khan

I am extremely delighted to see the second annual Al-Shifa Research report 2019 being published. This is a testimony to the dedicated hard work of our faculty, residents and students. I would like to congratulate every member of Al-Shifa team who has contributed in the form of scientific papers, presentations and dissertations. I would also appreciate the hard work done by the Al-Shifa research centre staff under the guidance of Dr. Ume Sughra, our research associate.

Our focus in years to come should be on more and more useful research collaboration with international institutions including clinical trials. The aim of our efforts should be to develop more useful strategies for better treatment options for our patients and useful community based interventions for prevention of diseases.

I hope and wish that Al-Shifa will soon become a platform for quality research in ophthalmology in particular and public health in general. That is the only way forward for achieving the target of prevention and control of blindness in Pakistan.

Message by Research Associate



Associate Prof. Dr. Ume Sughra

I feel privileged to write this message for Al-Shifa Annual Research Report 2019. I would like to extend my thanks to each and every one of you for contributing through your research work.

Let us move forward together with humility and common purpose for identifying and bridging the gaps in community health care services through research.

PUBLICATIONS

Knowledge and Practices Regarding Contact Lens Wear and Care among Contact Lens Users in Twin Cities of Pakistan

How to Cite: Sughra U, Khan W A, Munir F, Kausar S, Akbar M, Imran M. Knowledge and Practices Regarding Contact Lens Wear and Care Among Contact Lens Users in Twin Cities, Pakistan. ASJO. 2018; 14(3): 141-147

Objective: To assess the knowledge level of the lens users and to find out various practices regarding

Methods: A cross sectional study was conducted in Rawalpindi from January till June 2018 on 200 individuals of both genders. An online generated structured questionnaire about knowledge and practices regarding contact lens (CL) was asked to be filled by the users aged 15-55 years, who gave a prior consent for participation in the study.

Results: Out of 200 CL users majority were females (170, 85.2%), and 53% of users had completed their graduation. Majority of respondents (78.5%) used CL for correction of refractive error. Duration of use is 9-12 hours a day by 41% of the respondents. Lubricating eye drops were considered necessary by 45% of the users. No consultation or guidance was sought by 89% of contact lens users regarding CL. Almost 33% individuals accounted that they still wear the lens even after it fell on the ground or in washbasin. Approximately 19% individuals use running water to wet their lenses while 7.4% users put CL in their mouth to moisten them. Overall 34% and 38% contact lens users had poor knowledge and practices regarding contact lens wear and care.

Conclusion: Out of 200 contact lens users, 34% users had poor knowledge and 38% had poor practices regarding contact lens wear and care.

Computer Vision Syndrome: Pre and Post Treatment Assessment of Computer Users

How to Cite: Shah M, Ullah S, Amin F, Khan S A. Computer Vision Syndrome: Pre and Post Treatment Assessment of Computer Users. Al-Shifa Journal of Ophthalmology 2018; 14(3): 141-147.

Objectives: The objective of the study was to assess ocular problems in individuals associated with computer and visual display unit uses and to assess the effect of therapeutic interventions on computer vision syndrome symptoms among computer users.

Materials and Methods: This pre and post Interventional study was conducted among the software houses of Rawalpindi and Islamabad. The total duration of the study was 6 months. A sample of 338 was calculated. All the study subjects were randomly recruited from the selected Software houses.

Results: The results of the study showed that out of 338 about 70.4% had headache, 50.9% have tired eyes, 33.1% have blurred near vision, 23.1% have blurred distance vision, 29.9% have glare problem, 45.9% have dry eyes, 57.4% have Itchy and Burning eyes, 40.8% have Red eyes, 26.3% have Lower back pain, 68.3% have Neck and Shoulder pain and 12.1% complained of Diplopia while working on VDUs. Pearson Chi Square test shows a highly significant results regarding reduction in symptoms with the use of Anti Reflective coating and UV coated lenses (p value < .000 (two tailed). The mean increase observed were ranging from -1.732 to 1.374 with CI (Confidence Interval) at 95%.

Conclusion: The conclusion of the above study was that CVS related symptoms related to VDUs use

can be prevented or reduced, by simply prescribing antiglare glasses with UV coatings and by providing the significant lubrication to ocular surface along with environmental modifications.

A Comparative Study of Dry Eye Syndrome in Diabetic & Non-diabetic Patients

How to Cite: Durrani J, Khan I U H. A Comparative Study of Dry Eye Syndrome in Diabetic & Non-diabetic Patients. *Ophthalmology Update*. 2018; 16(4); 838-841

Objective: To compare the prevalence of dry eye syndrome (DES) in diabetic and non-diabetics patients, knowing the basic Patho-physiology of dry eye

Methodology: 100 diabetics and 100 non-diabetics (total 200) patients were enrolled for this study. A cross-sectional study at HBS Medical College & Hospital, Islamabad was carried out from May'2015 to July'2016. Approval of the Ethical Board was obtained and written consent was obtained from all the participants, ranging from 50-80 years of age.

Results: 100 each patients were kept in group-A (with mean age of 60.4 ± 4.0 and group-B of non-diabetics (with mean age of 60.9 ± 4.0). Gender distribution showed males diabetics 44.0% in group-A and 58.0% in group-B, while females were 56.0% in group-A and 42.0% in group-B. Majority of the symptoms were significantly higher in diabetics group-A as compared to non-diabetics in group B ($p < 0.001$). 40% of the men and 62% of the women classified as having dry eye. Women were found more frequently than men, with ($P < 0.0001$).

Conclusion: Diabetic patients had an elevated prevalence of Dry Eye Syndrome.

Key Words: Menopause, Questionnaire, Schirmer test, Fluoresceine test.

Comparison of Knowledge, attitude and practices of health care providers and people towards blood donation

How to Cite: Sughra U, Khan WA, Imran M. Comparison of knowledge, attitude and practices of health care providers and people towards blood donations. *Isra Med J*. 2019; 11(2): 118-121.

Objective: To determine and compare the knowledge, attitude and practices towards blood donation of health care providers and people attending Fauji Foundation Hospital Rawalpindi and to find out the barriers towards blood donation.

Study Design: Descriptive Cross-sectional study Place and Duration: Outpatient Department of Fauji Foundation Hospital Rawalpindi from the 1st January till 31st May 2014.

Methodology: Pre-tested questionnaire was used to determine and compare the level of knowledge, attitudes and practices towards blood donations.

Results: Out of total 200 respondents, 29% of the sample was donors and 71% were non donors. Among healthcare providers 34% were donors as compared to 24% of the patients who were donating blood. The correct minimum age of donation was known to 31% of the patients and 66.6% of the doctors. Both groups knew that blood transfusions are a mode of transmission of diseases (HCP 90%, patients 77%). In terms of attitude, only 13 people thought that only males could donate blood.

Conclusion: There is a marked difference in the level of knowledge and practices of healthcare providers and patients regarding blood donation with the patients falling behind.

Health status of Geriatrics in Gujarat, Pakistan

How to cite: Ejaz A, Sughra U. Health status of geriatrics in Gujrat, Pakistan J Pak Med. 2019; 69(5):610-14

Objective: To determine the overall health status of the elderly in an area Pakistan's Punjab province.

Methods: The cross-sectional study was conducted from April to June 2016 in Tehsil Kharian of district Gujrat, Punjab, Pakistan district, and comprised people aged 60 years or more who were enrolled through multistage random sampling. To measure the health status, and adapted and modified version of Short Form-36 health survey was used. SPSS 23 was used for data analysis.

Results: Of the 395 subjects, 254(65%) were males, and the overall mean age was 69.18• } 8.93 years. Of the total, 151(38%) subjects reported having no health issues. Among those who reported health issues, 63(16%) had joint problem as their primary health illness. Health status score suggested 286(72%) participants to have poor health, and in the 60-69 years age group, females were more likely to report poor health status compared to males (p<0.05).

Conclusion: The majority of the elderly subjects reported to have poor health status, and females reported more health issues compared to males.

Keywords: Health status, Older people, Pakistan, Morbidity, Women health. (JPMA 69: 610; 2019)

Factors affecting contraception in married women of Rawalpindi, Pakistan

How to cite: Sughra U, Imran M. Factors affecting contraception it in married women of Rawalpindi, Pakistan. J Post Grad Med Inst. 2019; 33(3): 216-21.

Objective: To determine the use of contraception and factors affecting it in the married women attending a tertiary healthcare facility of Rawalpindi, Pakistan.

Methodology: This hospital based cross-sectional study was carried out among the married women of Rawalpindi from January to September 2014 in a tertiary healthcare facility. The study was conducted on a sample of 331 married women of reproductive age selected with convenience sampling. Data were collected through a structured questionnaire translated into both Urdu & English after getting informed consent. Data were analyzed with SPSS version 17.

Results: Majority (71.9%) were in the age range 31-45 years. It was found that 98.5% women had knowledge of contraceptives but among them only 55.3% were using them. About female autonomy, majority were allowed to make decisions about contraception (77%) and the number of children (81.6%). Overall, 84% considered contraception beneficial, 67.3% had family planning discussion and 64% reported that they had no fear of side effects.

Conclusion: Although the level of knowledge about contraception was good but contraceptive use and practice was comparatively low.

Key Words: Contraceptives, Pakistan, Women

Frequency of secondary intra-abdominal pathologies detected during diagnostic laparoscopy in patients undergoing laparoscopic cholecystectomy

How to cite: Sardarullah, Taimur M, Imran M, Sughra U. Frequency of secondary intra-abdominal pathologies detected during diagnostic laparoscopy in patients undergoing laparoscopic cholecystectomy. *Isra Med J.* 2019; 11(1): 3-5.

Objective: To assess the frequency of secondary intra-abdominal pathology during diagnostic laparoscopy in patients undergoing laparoscopic cholecystectomy.

Methodology: A Total of 130 patients with symptomatic gall stones were studied. Diagnostic laparoscopy was carried out before cholecystectomy and all four quadrants, pelvis and inter gut loops were look for different additional pathologies like abdominal tuberculosis, tumors, adhesions etc.

Results: Patients age range was 17 to 80 years with a mean age 46.67 years. There was no pathology noted in 76.9% of patients and adhesions were detected in 12.3%, Tumors in 6.2 % and abdominal tuberculosis diagnosed in 4.6% patients.

Conclusion: Our study concludes that a simple diagnostic laparoscopy at start of laparoscopic cholecystectomy is a valuable procedure for diagnosis of hidden secondary intra-abdominal pathologies.

A Comparison of Macular Edema Formation in Diabetic Patients Undergoing Phacoemulsification and Extracapsular Cataract Extraction

How to Cite: Afzal A B, Qureshi S W, Arshad M U, Massana H, Hassan M U, Cheema M N .*Al-Shifa Journal of Ophthalmology.* 2019; 15(1): 8-14.

Objective: To investigate the frequency of macular edema formation in diabetic patients undergoing cataract surgery and to compare the frequency of macular edema formation in diabetic patients undergoing phacoemulsification and extracapsular cataract extraction.

Study design: Descriptive case series

Materials and Methods: The study was conducted at Al-Shifa Trust Eye Hospital from 25th March to 25th September 2018 and a total of 100 patients were selected. Central Subfield Mean Thickness (CSMT) was recorded through OCT one day before surgery and one-month postsurgery. One of the groups underwent Extra capsular cataract extraction (ECCE) (N=56) while the other underwent phacoemulsification (N=44). Statistical analyses were done. Frequency of macular edema between phacoemulsification and ECCE was compared through chi-square. Pand ECCE was compared through chi-square. $PP < 0.05$ was considered significant.

Results: There were insignificant differences in the formation of macular edema in ECCE and phacoemulsification groups and with respect to age and gender.

Conclusions: For diabetic patients undergoing cataract surgery, there is no significant difference between phacoemulsification and ECCE in terms of macular edema formation

Association of rs10490924 in ARMS2/HTRA1 with age-related macular degeneration in the Pakistani population

How to Cite: Ayub H, Shafique S, Azam A, Muslim I, Qazi N A, Akhtar F et al. Association of rs10490924 in ARMS2/HTRA1 with age-related macular degeneration in the Pakistani population. *Annals of Human Genetics*. 2019; 83(4), 285-290.

Abstract

Age-related macular degeneration (AMD) is a disease of the elderly in which central vision is lost because of degenerative changes of the macula. The current study investigated the association of single-nucleotide polymorphisms (SNPs) with AMD in the Pakistani population. Four SNPs were analyzed in this study: rs1061170 in the *CFH*, rs429608 near *CFB*, rs2230199 in the *C3*, and rs10490924 in *ARMS2/HTRA1*. This case-control association study was conducted on 300 AMD patients (125 wet AMD and 175 dry AMD) and 200 unaffected age- and gender-matched control individuals. The association of the SNP genotypes and allele frequency distributions were compared between patients and healthy controls, keeping age, gender, and smoking status as covariates. A significant genotype and variant allele association was found of rs10490924 in *ARMS2/HTRA1* with wet AMD, while the SNPs in *CFH*, *CFB*, and *C3* were not associated with AMD in the current Pakistani cohort. The lack of association of *CFH*, *CFB*, and *C3* may be attributed to limited sample size. This study demonstrates that genetic causative factors of AMD differ among populations and supports the need for genetic association studies among cohorts from various populations to increase our global understanding of the disease pathogenesis.

Traboulsi Syndrome in Pakistan

How to Cite: Awais T, Ali M, Khan S A. Traboulsi Syndrome in Pakistan Khan. *Journal of the College of Physicians and Surgeons Pakistan*.2019;29 (Special Supplement 1 of Case Reports): S37-S40

Abstract: Traboulsi syndrome is characterised by facial dysmorphism, abnormal spontaneous filtering blebs, ectopia lentis and multiple anterior segment abnormalities. The constellation of abnormalities separate it from syndromes related to connective tissue abnormalities which are associated with ectopia lentis. We report five females with distinctive spontaneous filtering blebs, ectopia lentis and other anterior segment abnormalities and no systemic features other than flat cheeks and beaking of nose. The cases are being managed conservatively in the Cornea and Glaucoma departments of Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan. Key Words: Traboulsi, Anterior segment dysgenesis, Spontaneous filtration bleb.

Assessment of Binocular Visual Functions in Primary Open Angle Glaucoma

How to Cite: Khishwar S, Ali A, Akhtar F. Assessment of binocular visual functions in primary open angle glaucoma. *Al-Shifa Journal of Ophthalmology*. 2019; 15(1): 15-20

Objectives: This study was conducted to find the impact of primary open angle glaucoma on the visual functions of the eye. It also aimed to find out the use of visual function tests as a screening tool for glaucoma.

Materials and Methods: Total 100 patients were included in the cross sectional study where binocular visual functions of the glaucomatous eyes were compared with those of healthy eyes from

October 2017- January 2018 at Al-Shifa Trust Eye Hospital (ASTEH). After careful visual acuity testing and anterior segment ocular examination; all the subjects were checked for their contrast sensitivity, color vision and stereopsis followed by dilated fundus examination. Each patient was interviewed thereafter to fill the questionnaire and questions were explained to them in detail.

Results: Total 100 patients were included in this comparative cross-sectional study with 50 patients of glaucoma and 50 those with no ocular pathology. Males were 48% and that of females were 42%. Positive family history was found in 34% of the cases of glaucoma. Significant association of contrast sensitivity, stereopsis and color vision was found with the cases of primary open angle glaucoma. Each test performed had p value 0.04 , 0.01 ,0.01 respectively. No association was observed between gender and visual functions and age of patients with visual functions with $p > 0.05$.

Conclusions: No association was observed between gender and visual functions and age of patients with visual functions

Effect of Anterior Sub-Capsular Polishing during a Standard Phacoemulsification on Anterior Capsular Opacification (A randomized control study)

How to Cite: Haq I U, Durrani M, Durrani J. Effect of Anterior Sub-Capsular Polishing during a Standard Phacoemulsification on Anterior Capsular Opacification (*A randomized control study*); ophthalmology Update ;2018: 16(4); 823-829

Objective: This study was carried out to assess the effect of anterior sub-capsular polishing on Anterior Capsular Opacification (ACO), which can cause anterior capsular phimosis, decentration of IOL and visual deterioration.

Method: This prospective randomized control study compared in 100 eyes of 50 consecutive patients with bilateral age related cataract who underwent phacoemulsification. One eye had anterior capsular polishing (group 1) and second eye (Controlled group) comprised without anterior capsular polishing (group 2, control group) ACO was evaluated at 01 week, 01months and 06 months.

Results: After 01 week there was no difference in the development of ACO in the two groups. At 04 weeks follow up 2 patients in group 1 had ACO as compared to 20 in control group ($P < 0.001$) and at 06 months follow up group 1 had 5 cases of PCO as compared to 24 cases in control group ($P < 0.001$)

Conclusion: Anterior capsular Opacification is significantly lower in patients in whom anterior sub-capsular polishing was done.

Key words: Age related cataract, Anterior capsular polishing, Anterior capsular Opacification, Phacoemulsification.

Impact of Early Non-Proliferative Diabetic Retinopathy on Contrast Sensitivity

How to Cite: Firdous M, Masud H, Sharif H. 16. Impact of Early Non-Proliferative Diabetic Retinopathy on Contrast Sensitivity. Al-Shifa Journal of Ophthalmology 2019; 15(1): 21-29

Purpose: This study was conducted to find out the impact of early Non-proliferative Diabetic Retinopathy (NPDR) on contrast sensitivity.

Material and Methods: A case-control study was conducted (including 32 cases and 64 controls) from August 2016-February 2017 at General OPD of Al-Shifa Trust Eye Hospital (ASTEH), Jhelum Road, Rawalpindi. After careful visual acuity testing and anterior segment ocular examination; all the cases and controls were checked for their contrast sensitivity with Pelli-Robson contrast sensitivity

test chart, followed by mydriatic fundus examination. Each patient was interviewed, thereafter, to fill the Questionnaire and questions were explained to them in detail.

Results: Results showed that mean letter contrast sensitivity of cases was 1.70 (SD=0.19) while that of controls was 2.01 (SD=0.12). Mean difference in contrast sensitivity values between cases and controls was 0.31. There was statistically significant difference between contrast sensitivity values of the two comparison groups ($\text{Eta}^2=0.43$ and $p\text{-value}=0.001$).

Conclusion: Contrast sensitivity in cases was well below that of controls, reason being DR. So, contrast sensitivity testing can be used as a potential screening tool in optometric practice for early Non-proliferative diabetic retinopathy; responsible for causing functional vision reduction while sparing visual acuity at early stages.

Central corneal thickness and pattern standard deviation in patients with primary open angle glaucoma

How to Cite: Zia A A, Saleem A A, Gani D, Lodhi Y, Khan I, Akhtar F. Central Corneal Thickness and pattern standard deviation in patients with primary open angle glaucoma. *Al-Shifa Journal of Ophthalmology*. 2019; 15(2):

Purpose: To determine the frequency of thick and thin cornea in patients with primary open angle glaucoma (POAG) and correlate them with the visual field (VF) parameter, mean pattern standard deviation (PSD) in Pakistani adult patients.

Methods: A total of 97 eyes with POAG were consecutively recruited. Patients were labeled as glaucomatous based on VF and optic nerve head damage. All patients underwent Goldman applanation tonometry, Humphrey perimetry and measurement of CCT with non-contact pachymetry. Based on CCT value, the sample was divided in two groups (group 1, ≤ 535 μm , $n=49$; group 2 ≥ 535 μm , $n=48$).

Results: In the cohort, 51 (52.6%) males, 46 (47.4%) females, 50 (51.54%) right eyes and 47 (48.45%) left eyes were included. In Group 1, 49 (50.51%) eyes and in Group 2, 48 (49.48%) eyes were studied PSD in group 1 and group 2 was 6.96 ± 1.49 dB and 4.60 ± 1.41 dB respectively. The mean CCT in Group 1 and Group 2 was 509.25 ± 13.05 μm and 571.3 ± 14.82 μm respectively. The difference in PSD between the two groups was statistically significant, $p \leq 0.05$.

Conclusion: A thinner CCT leads to an underestimation of intraocular pressure. POAG patients with thin corneas have significantly poorer VFs as compared to the ones with thick corneas. Evaluation of CCT is imperative in all patients with POAG so that thin corneas can be treated aggressively.

Keywords: Glaucoma, Primary open angle glaucoma, Central corneal thickness, Visual fields

Identification of a Novel ZNF469 Mutation in a Pakistani Family with Brittle Cornea Syndrome

How to Cite: Micheal S, Siddiqui SN, Zafar SN, Gabriëla Niewold IT, Khan MI, Bergen AAB. Identification of a Novel ZNF469 Mutation in a Pakistani Family with Brittle Cornea Syndrome. *Cornea*. 2019 ; 38(6):718-722.

Purpose: Brittle cornea syndrome (BCS) is a rare recessive disorder affecting connective tissues, most prominently in the eye. Pathogenic mutations causing BCS have been identified in *PRDM5* and *ZNF469* genes. This study investigates the genetic cause of BCS in a large, consanguineous Pakistani family with 4 affected and 3 unaffected individuals.

Methods: The coding region and exon–intron splice junctions of *PRDM5* and *ZNF469* genes were

amplified by polymerase chain reaction, and bidirectional Sanger sequencing was performed to find the pathogenic change responsible for causing the disease in the family.

Results: A novel homozygous duplication c.9831dupC (p.Arg3278GlnfsX197) in the *ZNF469* gene was identified, which was found to be co-segregating with the disease in the family.

Conclusions: This is the first report of a *ZNF469* homozygous mutation causing a BCS phenotype in a consanguineous Pakistani family. Our data extend the mutation spectrum of *ZNF469* variants implicated in BCS.

Prevalence of Visual Disabling Age Related Cataract in Al-Shifa Trust Eye Hospital Rawalpindi

How to Cite: Rehmat M, Atangal K S, Rasheed H H. Prevalence of Visual Disabling Age Related Cataract in Al- Shifa Trust Eye Hospital Rawalpindi. *Ophthalmology update*. 2019;16(2)

Back ground: Visual impairment caused by age related cataract is the major cause for treatable blindness. It commonly occurs after the age of fifty years, which needs regular screening for the cataract.

Objective: To estimate the prevalence of age-related cataract in Al -Shifa Trust Eye Hospital and to make recommendations on the basis of results.

Materials and Methods: It was cross-sectional study in Al- Shifa Trust Eye Hospital and sample of 384 patients were collected by convenient sampling. Structured questionnaire was used with verbal consent to collect data.

Results: This study revealed that among visual disabling age related cataract 48.2% were posterior sub capsular cataract, while cortical and nuclear sclerosis were 37.2% and 42.2% respectively. Mature cataract was highly prevalent in patients coming from rural areas.

Conclusion: By this study it was concluded that posterior sub capsular cataract is the most prevalent type among visually disabled patients from age related cataract.

Key words: Age related cataract, Visual disability, Nuclear sclerosis, Cortical sclerosis, Posterior sub capsular cataract.

Patient's Expectations & Response about Phacoemulsification under Topical Anesthesia immediately before & after Surgery

How to Cite: Haq I U, Durrani M, Durrani J. Patient's Expectations & Response about Phacoemulsification under Topical Anesthesia Immediately before & after Surgery. *Ophthalmology update*. 2019; 17(2):85-88

Purpose: To assess what patients expect during phacoemulsification under topical anesthesia and what are their views after the surgery.

Material and Method: Hundred consecutive patients who had phacoemulsification with intraocular lens implantation under Topical anesthesia were included in the study. They were interviewed as per the questionnaire just before the surgery, then they were counseled about the procedure and importance of their cooperation during surgery and immediately after surgery they were interviewed again as per the questionnaire.

Result: As per the inclusion/exclusion criteria there were 61 females and 39 males, with ages varying from 35-76 years. Before surgery, 70% of patients were afraid of surgery, 80% patients thought that there would be some pain during surgery, and 20% patients did not know what will happen during

surgery. 90% patients felt that their eyes were being washed throughout the procedure. 70% patients had fears before surgery but only 10% after surgery called it a fearful experience, of these 8% were ready for surgery on the other eye under topical anesthesia.

Conclusion: Phacoemulsification under topical anesthesia is a safe procedure for most of the patients. Patients apprehensions can be minimized by counseling the patients before the procedure and during surgery patient should be engaged by encouraging words.

Key words: Topical anesthesia, phacoemulsification, patient expectations.

Analysis of circadian clock gene BMAL1 in Pakistani 3 congenital cataract families

How to Cite: 10.20944/preprints201808.0108.v1.

Abstract: In mice, mutations or targeted disruptions of the core circadian gene *Bmal1* have been 19 implicated in early onset of ocular pathologies, including premature/congenital cataract 20 developments. The aim of the present study was to analyze probands of consanguineous Pakistani 21 cataract families to identify the novel pathogenic variants in the BMAL1 gene. We have studied 21 22 congenital cataract families. Ophthalmic examination was performed for the probands and available 23 family members. Genomic DNA was isolated from peripheral blood. PCR and Sanger sequencing 24 were performed for the entire coding region of the BMAL1 gene. Targeted Sanger sequencing of 25 BMAL1 revealed a heterozygous variant c.41A>T; p. (Asp14Val) in one proband, but it did not 26 co-segregate with the disease phenotype in the family. In addition, a nonsynonymous variant 27 (rs2290037) was identified in five probands. Our study is the first one to analyze the role of BMAL1 28 gene mutations in humans for their association with congenital cataract. Although we were unable 29 to find the variants associated with congenital cataract families from Pakistan, more studies from 30 other populations will be informative to further prove the role of BMAL1 with the disease. 31

Keywords: Congenital cataract, consanguineous, circadian, mutation

Nurses' perspectives of self-awareness in nursing practice: A descriptive qualitative study

How to Cite: Younas A, Rasheed SP, Sundus A, Inayat S. Nurses' perspectives of self-awareness in nursing practice: A descriptive qualitative study. *Nurs Health Sci.* 2019.

Abstract: Self-awareness is essential for nurses for improving nurse–patient relationship and patient care. There are many theories about self-awareness, but scant research explores nurses' perspectives regarding self-awareness and its significance for themselves and patient care. This study explores nurses' perspectives regarding self-awareness in nursing, the importance of self-awareness for nurses, and its influence on patient care. We used a descriptive qualitative design. Face-to-face semi structured interviews were conducted, from October to December 2018, with a purposive sample of 13 nurses at two hospitals in Pakistan. Thematic analysis was used for data analysis. Five themes and 13 subthemes were generated. The themes included the meaning of self-awareness: a personal, professional, and conscientious attribute, significance of self-awareness for nurses, self-aware nurses and its impact on patient care, behaviors, and actions signifying self-awareness, and what is needed to enhance self-awareness. Self-awareness can increase nurses' confidence in managing challenging situations and providing culturally competent care to patients from various cultural and religious orientations.

Influence of Energy levels of Neodymium-Doped Yttrium Aluminium Garnet Laser on Macula after Posterior Capsulotomy

How to Cite: Iqbal Y , Saleem A A, Ahmad A , Shaikh S P , Zafar S. Influence of Energy levels of Neodymium-Doped Yttrium Aluminium Garnet Laser on Macula after Posterior Capsulotomy .Al-Shifa Journal of Ophthalmology 2018; 14(4): 169-175.

Objectives: To determine the frequency of increase in central macular thickness (CMT) and compare mean CMT after low and high energy levels of YAG laser after posterior capsulotomy.

Subjects and Methods: This descriptive case series was done in Armed Force Institute of Ophthalmology, Pakistan from May 2013 to February 2014. One hundred-seventy eyes were enrolled and base line CMT was measured with SD-OCT. Following pupil dilatation YAG laser posterior capsulotomy was completed and cumulative energy noted. Patients were classified according to cumulative energy used (≤ 80 mJ = low energy, ≥ 80 mJ = high energy). CMT was measured one-month post-laser.

Results: Raised CMT was noted in 58 (34.1 %) cases. Mean pre-laser CMT in the low energy group was 215.11 ± 6.72 μm whereas, in high energy group mean pre-laser CMT was 215.42 ± 6.79 μm . Mean post-laser CMT in low energy group was 215.80 ± 8.32 μm . Mean post-laser CMT in the high energy group was 219.51 ± 10.11 . Both groups had increased macular thickness compared to pre-laser levels but the frequency of raised CMT was more in the high energy group, $P \leq 0.05$.

Conclusion: Increased macular thickness is expected after YAG capsulotomy, but the severity and frequency is less when a total energy level of less than 80 mJ is used. OCT is an indispensable diagnostic tool for monitoring patients undergoing YAG capsulotomy.

Lived Experiences of Male Nurse Educators: An Interpretive Phenomenological Inquiry

Background: Male nurses experience stereotypes and obstacles that affect their career progression in clinical and leadership roles. The experiences of male students and nurses in educational and clinical settings are documented, but no research explored the experiences of nurse educators.

Purpose: To explore and develop a deeper understanding of the lived experiences of male nurse educators

Methods: An interpretive phenomenological inquiry was used. Semi-structured interviews were conducted with 12 male educators in Khyber Pakhtunkhwa. Ricoeur's interpretation theory was used for data analysis.

Findings: The themes included "searching for respect and autonomy: from discrimination to recognition", "keeping up the pace: proving worth as nurse educators", "building relationship with the opposite gender: overcoming cultural constraints", "withstanding unfair female nursing and non-nursing management", "appreciating support from democratic management" and "envisioning a non-gendered nursing profession".

Conclusion: Male educators surmounted various challenges while searching for respect and recognition and felt content with their professional growth. The greatest challenge was discriminative institutional and the government policies. The educators recognized that female dominance in nursing can be a hurdle, but they indicated that gender discrimination can be ended with collaborative efforts at personal, institutional, and governmental levels. Nursing regulatory bodies and institutions should develop policies that are conducive to recruitment of male and female educators. Separate subdivisions could be established to provide support to and advocate for the rights of male nurses in clinical, educational, and leadership positions.

Pseudocalcification: A Rare type of Intraocular lens Opacification

How to cite: Khan W A, Khan S A. Psuedocalcification: A Rare type of Intraocular lens Opacification. *Al-Shifa Journal of Ophthalmology*. 2019; 15(1): 47-50.

Abstract: Intraocular lens (IOL) opacification is a rare complication of IOL implantation after cataract surgery. It can occur because of inherent disparities in biochemical properties of eye and IOL. Current report is of a case of pseudocalcification which is a rare form of IOL opacification. A 65-year-old male with pseudophakic bullous keratopathy underwent penetrating keratoplasty. After keratoplasty sub optimal improvement was observed in visual status which was attributed to distinctive opacification of the IOL. The opacified IOL was replaced with another IOL which resulted in the significant improvement in visual status.

Disrespect and abuse during childbirth in district Gujrat, Pakistan: A quest for respectful maternity care

How to Cite: Azhar Z, Oyebode O, Masud H. Disrespect and abuse during childbirth in district Gujrat, Pakistan: A quest for respectful maternity care. *PLoS ONE*. 2018; 13(7): e0200318.

Background: Disrespectful and abusive practices at health facilities during childbirth discourage many women to seek care at facilities. This may lead to maternal morbidity and mortalities. Despite severe impacts, such practices remain hidden and are rarely reported in developing countries.

Objectives: The study was carried out to assess the prevalence and determinants of the disrespect and abuse (D & A) during child birth in rural Gujrat, Pakistan.

Methods: A cross sectional household based study was conducted in tehsil Kharian of district Gujrat. Data was collected using an interview based questionnaire from the women who had a live birth within the previous two months (n = 360). The D & A scale was based on standard Maternal and Child Health Integrated Programme indicators. Multiple logistic regression was used to find out the determinants of reported D & A.

Results: Almost all women experienced D & A (99.7%) during childbirth according to objective assessment “experienced D & A”. However, only 27.2% reported subjective experience of D & A “reported D & A”. The main determinant of reported D & A was facility based childbirth (OR = 13.49; 10.10–100.16) and lower socio economic strata (OR = 2.89; 1.63–5.11). The risk of reporting D & A was twice in public health facilities as compared to private. Women who had reported D & A were more likely to opt for changing the place of childbirth for next time (OR = 4.37, 95% CI = 2.41–7.90).

Conclusion: D & A during childbirth is highly prevalent and under-recognized in Pakistan. High prevalence at facilities and particularly at public facilities can be a reason for underutilization of this sector for childbirth. Maternal health policies in Pakistan need to be revised based on the charter of respectful maternity care.

Are people getting quality thalassemia care in twin cities of Pakistan? A comparison with international standards

How to cite: Tanveer T, Masud H, Butt Z A. Are people getting quality thalassemia care in twin cities of Pakistan? A comparison with international standards. *International Journal for Quality in Health Care*. 2018;30(3):200–207

Objectives : This study was conducted to determine if thalassemia patients were getting quality care in Rawalpindi and Islamabad, Pakistan, as per international standards and to identify determinants for better quality of thalassemia care.

Design: A cross sectional study was conducted using interview based structured questionnaire, which was developed using standards of thalassemia care used by International Thalassemia Foundation.

Setting : Five healthcare facilities catering to the needs of thalassemia patients in Rawalpindi and Islamabad, Pakistan.

Participants: Data were collected from 315 thalassemia patients from May to August, 2016.

Main outcome measure: Survey data on quality indicators.

Results: Results showed that almost half of thalassemia patients (48.5%) were getting poor quality of care. On average patients were getting only 63.93% of possible quality care for the disease. The most deficient quality area was management of complications where patients were getting only 49.1% of possible care. Better quality of care was likely to be received by those patients who were educated, patients with educated fathers, those visiting private facilities and those who were visiting facilities in Islamabad. Those with concomitant diseases were also likely to receive better care.

Conclusion: Quality of care provided to thalassemia patients was well below the international standards for the care of thalassemia. There is a need to take urgent action to improve quality of care in the country.

Key Words: thalassemia, quality of care, blood transfusion, Pakistan

Effect of Intravenous Vitamin C, Thiamine, and Hydrocortisone (The Metabolic Resuscitation Protocol) on Early Weaning from Vasopressors in Patients with Septic Shock. A Descriptive Case Series Study

How to cite: Masood H, Burki AM, Sultan A, et al. Effect of Intravenous Vitamin C, Thiamine, and Hydrocortisone (The Metabolic Resuscitation Protocol) on Early Weaning from Vasopressors in Patients with Septic Shock. A Descriptive Case Series Study. *Cureus*. 2019;11(6):e5016

Objectives: The aim of this study was to assess the efficacy of intravenous vitamin C, hydrocortisone, and thiamine in early weaning (within 48 hours) from vasopressor support in patients with septic shock. We also aimed to assess mortality and intensive care unit (ICU) stay.

Study Design: We conducted a descriptive case series study of 50 patients with septic shock who were admitted in the ICU of the Combined Military Hospital Rawalpindi in Pakistan from August 2017 until April 2018.

Materials and Methods: The study included men and women (16 to 80 years of age) who were admitted to the ICU with septic shock. Data were analysed using the IBM Statistical Package for Social Sciences (SPSS), version 18.0 (IBM Corp., Armonk, NY, USA). Inferential analysis was done with the help of simple and multivariate binary logistic regression that generated unadjusted and adjusted odds ratios (OR), respectively.

Results: Of the 50 patients, 56% (N = 28) were male with a mean age of the respondents being 46.7

± 18.4 . Eighty-four percent were successfully weaned off vasopressors within 48 hours. Median days in the ICU were reported as 8.3 (interquartile range (IQR) = 5). Primary bacteremia (34%) was the most reported cause of ICU admission. The most common vasopressor was norepinephrine and its mean dose was 21.6 ± 10.7 microgram/min. The ICU mortality was observed at 52% (N = 26). Unadjusted OR showed a dose of norepinephrine, Sequential Organ Failure Assessment (SOFA) score, plasma procalcitonin, and plasma lactate to be significant predictors (p-value < 0.05), while the adjusted odds ratio (AOR) showed only a dose of norepinephrine to be a statistically significant predictor (AOR = 0.804, 95% CI = 0.674 - 0.960; p-value = 0.016).

Conclusion: The administration of intravenous vitamin C, hydrocortisone, and thiamine to patients with septic shock was successful in early weaning from vasopressors. There was also a reduction in procalcitonin and lactate levels, as well as the SOFA score. Further trials are needed to determine whether the metabolic resuscitation protocol can become part of the treatment for septic shock.

Knowledge and perceptions of expecting and lactating women about exclusive breast feeding attending Ayub teaching hospital, Abbotabad

How to Cite: Tariq K, Shaikh B T, Azam N, Pervaiz F, Kawish A B, Javaid N, Younis F et al, Knowledge and perceptions of expecting and lactating women about exclusive breast feeding attending Ayub Teaching Hospital, Pak Armed Forces Med J 2019; 69 (Suppl-2): S223-28

Objective: To assess the level of knowledge and to explore out the perceptions of expecting and lactating women about Exclusive breastfeeding attending Ayub Teaching Hospital, Abbottabad.

Study Design: A Mixed Method Study. Place and Duration of Study: Ayub Teaching Hospital, Abbottabad, from Jul 2018 to Dec 2018.

Material and Methods: The study was carried out by using non-probability convenience sampling on 354 women who visited Gynaecology and Obstetrics department of Ayub Teaching Hospital, Abbottabad. Quantitative data was collected by using a semi structured questionnaire developed with the help of literature review whereas the qualitative data was collected by using a qualitative interview guide. Frequencies and percentages were computed and chi-square was used to find associations between socio-demographic status of women and their knowledge and perceptions about exclusive breastfeeding. In-depth interviews were conducted to explore the perceptions of women about exclusive breastfeeding. Age, Education, Area of residence, Family income and Parity are Independent variables while Knowledge and Perceptions about exclusive breastfeeding are the dependent variables.

Results: The ages of respondent women ranged from from <20 years to 50 years with the majority belonging to the 31–40 years age group (46%, n=165). Most (63%, n=225) of the children's age was 0 – 6 months, Majority (41%, n=145) of the women's qualification was matriculation. Majority (68%, n=244) of the women were multiparous and more than a half were unemployed (62%, n=222). Also the major portion of sample belonged to the rural areas. The sample predominantly belonged to middle and low-income group with a moderate level of education. Only 35% (n=124) of the women had good knowledge about the feed of a newborn up to 6 months of age. More than half (56%, n=200) of the women think that Ghutti is the best way to start feeding a newborn. About 48% (n=171) of the respondent women were able to define exclusive breastfeeding correctly.

Conclusion: There is need for large scale health enlightenment of members of the public on EBF and its benefits to the infant, mother and society at large. The content of antenatal health talks with

respect to EBF and its understanding by women requires evaluation. There is also the need for periodic refresher training of community health workers on the practice of EBF and strategies introduced for regular monitoring and evaluation of the practice. Behavior change communication (BCC) and counseling should be provided to pregnant women during antenatal visits.

Keywords: Colostrum, Demographic factors, Exclusive breast feeding, Prolactin feeding, Working mother,

Out of pocket expenditures for managing childhood acute respiratory infection in children under 5 in District Kasur Punjab

How to Cite: Abida Shafiq et al., Out Of Pocket Expenditures for Managing Childhood Acute Respiratory Infection in Children under 5 in District Kasur Punjab., Indo Am. J. P. Sci, 2019; 06(05):8847-55

Background: Acute respiratory infections are major public health threats in children aged less than 5 years. Acute respiratory infections caused 20% of the childhood deaths worldwide in which 99% deaths in children under 5 are reported in developing countries like Pakistan. Globally, about 150 million people were affected with financial loss after out of pocket expenditure on health. Out of pocket costs accounts for 61% of the health care financing in Pakistan. The mortality rates in rural areas in children under 5 are about a quarter to a third higher in comparison to urban areas.

Methodology: Simple random sampling technique was used. Data was collected only on those children under 5 who met the case definition for acute respiratory infection. The main objective of the study was to estimate the cost per episode of acute respiratory infection in children under 5 years. A structured questionnaire was used for data collection. The calculated sample size was 229.

Main findings: The median cost per episode of ARI on child treatment was approximately US\$3 (300 PKR). The median of direct medical cost of ARI US\$ 1.5(150PKR) was higher as compared to non-medical costs US\$1.0(100 PKR). Almost every outpatient visit either in private or public hospital resulted in costs for prescribed medication but no laboratory tests were recommended..

Conclusion: Study participants spend more on their male child as compared to female child. Families with higher income have more health expenditures on their child treatment than those having less income. The majority of the parents (75%) preferred to visit private health care providers for the treatment of their children. Estimated indirect cost was higher in public facilities as compared to private facilities because of waiting time to consult the doctor was longer.

Keywords: Out of pocket expenditure, acute respiratory infections, costs, Direct, Indirect, Public, and Private.

Pigmented Paravenous Chorioretinal Atrophy–Detailed Clinical Study of a Large Cohort

How to Cite: Shona O, Islam F, Robson A, Webster A, Moore A, Michaelides M. Pigmented Paravenous Chorioretinal Atrophy–Detailed Clinical Study of a Large Cohort. Retina. 2019; 39(3):514-529.

Purpose: To review and describe in detail the demographics, functional and anatomical characteristics, and clinical course of pigmented paravenous chorioretinal atrophy in a large cohort of adults and children.

Methods: This is a retrospective case series of consecutive patients diagnosed with pigmented

paravenous chorioretinal atrophy at a single U.K. referral center from 1974 to 2016. Clinical records, retinal imaging (color fundus photography, fundus autofluorescence, and optical coherence tomography), and electrophysiological assessments were reviewed.

Results: Twenty-three patients were identified (13 males and 10 females). The mean age at presentation was 35 years (range 10-67 years). Mean follow-up was 6.7 years (range 0-30 years). There was no family history of similar retinal disease. Thirteen (57%) patients were asymptomatic. Symptoms included photopsia (n = 1.4%), blurred vision (n = 4.17%), peripheral visual field loss (n = 3.13%), and nyctalopia (n = 2.8%). One patient had previous intermediate uveitis. Twenty-one (91%) patients had $\geq 6/12$ in the better seeing eye at final follow-up; visual acuity loss over time was recorded in 2 patients. Color vision was normal in all 14 patients assessed. Paravenous hypoautofluorescence with surrounding increased fundus autofluorescence was characteristically observed. Optical coherence tomography over the retinal changes demonstrated choroidal, retinal pigment epithelium, and outer retinal layer thinning. Peripapillary atrophic changes on fundus photography were evident in 20 (87%) patients. Interocular asymmetry of fundus and electroretinography findings was common. The electroretinography findings showed a similar degree of generalized rod and cone photoreceptor dysfunction in most cases.

Conclusion: Overall, most patients with pigmented paravenous chorioretinal atrophy maintained stable vision. The lack of other affected family members, slow or absent progression and interocular asymmetry of the retinal features is suggestive of an acquired rather than inherited retinal disorder, generally nonprogressive disorder. We identify that patients commonly have marked interocular asymmetry both on structural and functional assessment.

Comparison of IOP measurement by Goldmann applanation tonometer and non contact airpuff tonometer

How to Cite: Shaheen S, Ali A, Ali M, Afghani T. Comparison of IOP measurement by Goldmann applanation tonometer and non contact airpuff. *Al-Shifa Journal of Ophthalmology*. 2019; 15(2)

Background: Glaucoma is the 3rd leading cause of blindness in Pakistan affecting 7.1% of the population. Raised intra-ocular pressure (IOP) is the most common modifiable etiological factor of glaucoma. Early detection and proper management of raised IOP can significantly reduce the morbidity associated with glaucoma. Goldmann's applanation tonometer (GAT) is the current gold standard for measurement of IOP but it is not easily portable, time consuming and requires specific preparation thus cannot be used in every setting. Air-puff tonometer (APT) is easy to operate and can be used in out-patient department.

Objective: The objective of the study was to compare intra-ocular pressure (IOP) measured by GAT and non-contact air-puff tonometer.

Materials & Methods: The study was carried out on 500 patients presenting at Al-Shifa trust eye Hospital, Rawalpindi from September 2017 to February 2018 with various eye problems.

Results: Mean age of the male and female participants was 49.87 ± 18.70 yrs and 45.53 ± 16.91 yrs respectively. Mean IOP measured by GAT after correction factor and APT was 16.01 ± 5.57 mmHg and 17.31 ± 7.22 mmHg in glaucomatous eyes respectively. APT overestimated the IOP and the mean difference between IOP measurements by GAT and APT was statistically significant. The sensitivity and specificity of APT for measuring IOP in glaucomatous eyes were 84.04% and 73.53% respectively.

Conclusion: Non-contact air-puff tonometer has good sensitivity and specificity and can be used reliably for measurement of IOP in out-patient department and for mass screening of the population.

Spectrum of Biopsy Proven Extraocular Muscle Tumours of Non-Thyroid Origin

How to Cite: Afghani T, Mansoor H, Mughal AM, et al. Spectrum of Biopsy Proven Extraocular Muscle Tumours of Non-Thyroid Origin. Journal of the College of Physicians and Surgeons--pakistan. 2019; 29(6):553-557.

Objective: To describe different types of primary extraocular muscle (EOM) tumours based on the results of imaging studies, peroperative clinical picture and their histopathological diagnosis.

Study Design: Case series.

Place and Duration of Study: Al-Shifa Trust Eye Hospital, Rawalpindi, from July 2001 to January 2017.

Methodology: A retrospective analysis of 640 diagnosed orbital tumours was carried out using non-randomised sampling technique, and the prevalence of primary EOM tumours was determined. Based on the results of imaging studies, the clinical picture observed during surgery (orbitotomy) and the histopathological diagnosis, primary EOM tumours were divided into different types, accordingly.

Results: Nineteen (n=19) primary EOM tumours (frequency of 2.96%) had 12 types of histopathological diagnoses, and were categorised into inflammatory tumours (n=8, 42%), vascular tumours (n=4, 21%), lymphoproliferative tumours (n=3, 16%), neurogenic tumours (n=2, 10.5%) and myogenic tumours (n=2, 10.5%). The recti were involved more frequently than obliques (n=15, 78.94% and n=4, 21.06%, respectively). All the patients presented with proptosis of varying degree with some degree of globe rotation and had surgical excision/appropriate management. Visual acuity was not affected in any of the patients. Four (n=4, 21.05%) tumours were malignant (NHL, ASPS, myeloid sarcoma and rhabdomyosarcoma) and these patients underwent chemotherapy and/or radiotherapy.

Conclusion: Biopsy-proven primary EOM tumours were divisible into five broad categories. Patients with primary EOM tumours presented with proptosis and impaired ocular motility. The primary EOM tumours involved both the recti and the obliques and were excised surgically with favourable outcomes in most cases.

Key Words: Biopsy, Extraocular muscle, Tumour, Proptosis

Mutational analysis of the CYP1B1 gene in Pakistani primary congenital glaucoma patients: Identification of four known and a novel causative variant at the 30 splice acceptor site of intron 2

How to Cite: Afzal R, Firasat S, Kaul H, Ahmed B, Siddiqui SN, Zafar N Z, Shahzadi M, Afshan K. Mutational analysis of the CYP1B1 gene in Pakistani primary congenital glaucoma patients: Identification of four known and a novel causative variant at the 30 splice acceptor site of intron. Congenital Anomalies. 2019; 59: 152–161

Abstract: Primary congenital glaucoma (PCG) causes blindness in early age. It has an autosomal recessive pattern of inheritance, hence is more prevalent in populations with frequent consanguineous marriages that occur in the Pakistani population. Mutations in the CYP1B1 gene are commonly associated with PCG. The aim of the present study was to identify genetic mutations in the CYP1B1 gene in PCG cases belonging to 38 Pakistani families. DNA was extracted using blood samples

collected from all enrolled patients, their available unaffected family members and controls. Direct sequencing of the CYP1B1 gene revealed a novel 3' splice acceptor site causative variant segregating in an autosomal recessive manner in a large consanguineous family with four PCG-affected individuals. The novel variant was not detected in 93 ethnically matched controls. Furthermore, four already reported mutations, including p.G61E; p.R355X, p.R368H, and p.R390H were also detected in patients belonging to nine different families. All identified causative variants were evaluated by computational programs that is, SIFT, PolyPhen-2, and Mutation Taster. Pathogenicity of the novel splice site variant identified in this study was analyzed by Human Splicing Finder and Max Ent Scan. Ten out of 38 families with PCG had the disease due to CYP1B1 mutations, suggesting CYP1B1 was contributing to PCG in these Pakistani patients. Identification of this novel 3' splice acceptor site variant in intron 2 is the first report for the CYP1B1 gene contributing to genetic heterogeneity of disease.

The protective variant rs7173049 at LOXL1 locus impacts on retinoic acid signaling pathway in pseudoexfoliation syndrome

How to Cite: Berner D, Hoja U, Zenkel M, Ross J J et al. The protective variant rs7173049 at LOXL1 locus impacts on retinoic acid signaling pathway in pseudoexfoliation syndrome Human Molecular Genetics,2019;28(15) 2531–2548. April

Abstract: *LOXLI* (lysyl oxidase-like 1) has been identified as the major effect locus in pseudoexfoliation (PEX) syndrome, a fibrotic disorder of the extracellular matrix and frequent cause of chronic open-angle glaucoma. However, all known PEX-associated common variants show allele effect reversal in populations of different ancestry, casting doubt on their biological significance. Based on extensive *LOXLI* deep sequencing, we report here the identification of a common non-coding sequence variant, rs7173049A>G, located downstream of *LOXLI*, consistently associated with a decrease in PEX risk (odds ratio, OR = 0.63; $P = 6.33 \times 10^{-31}$) in nine different ethnic populations. We provide experimental evidence for a functional enhancer-like regulatory activity of the genomic region surrounding rs7173049 influencing expression levels of *ISLR2* (immunoglobulin super family containing leucine-rich repeat protein 2) and *STRA6* [stimulated by retinoic acid (RA) receptor 6], apparently mediated by allele-specific binding of the transcription factor thyroid hormone receptor beta. We further show that the protective rs7173049-G allele correlates with increased tissue expression levels of *ISLR2* and *STRA6* and that both genes are significantly down regulated in tissues of PEX patients together with other key components of the *STRA6* receptor-driven RA signaling pathway. siRNA-mediated down regulation of RA signaling induces up regulation of *LOXLI* and PEX-associated matrix genes in PEX-relevant cell types. These data indicate that dysregulation of *STRA6* and impaired retinoid metabolism are involved in the pathophysiology of PEX syndrome and that the variant rs7173049-G, which represents the first common variant at the broad *LOXLI* locus without allele effect reversal, mediates a protective effect through upregulation of *STRA6* in ocular tissues.

Comparison of plasma homocysteine (HCY) levels in normal population and patients of pseudoexfoliation

How to Cite: Bhatti, S. H., Mehboob, M. A., Khan, I. U. H., Basit, I., Rabbani, S., & Arslan, Z. Comparison of Plasma Homocysteine (HCY) levels in normal population and patients of Pseudoexfoliation syndrome *Pakistan Armed Forces Medical Journal*, 68(3), 526-30.

Objective: To compare mean plasma homocysteine (HCY) levels (measured in $\mu\text{mol/L}$) of normal population with patients having pseudoexfoliation syndrome (PXS). Study Design: Cross sectional comparative study.

Place and Duration of Study: This study was carried out at Armed Forces Institute of Ophthalmology, Rawalpindi, from May 2016 to Apr 2017.

Patients and Methods: In this study 60 patients of PXS and 60 healthy subjects of both genders between ages of 40 and 50 years, with best corrected visual acuity of 6/6 on snellen visual acuity chart were included. All the participants were subjected to ophthalmic clinical examination including corrected distance visual acuity and slit lamp examination. Participants in both groups were evaluated for plasma homocysteine levels, by collection into a heparinized tube and later transferred in ice blocks. The samples were centrifuged at 4000 rpm for 5 minutes and stored at -20°C until the biochemical assay. HCY levels were determined by high performance liquid chromatography (HPLC).

Results: Total 120 participants of both groups were similar with respect to gender and age ($p\text{-value} > 0.05$). There were 36 (60%) males and 24 (40%) females in PXS group and in control group there were 29 (48.3%) males and 31 (51.7%) females. The mean age of PXS group was 44.68 ± 3.234 years and for healthy control group it was 45.0 ± 3.13 years. The comparison of homocysteine level between healthy controls and PXS patients showed a highly significant ($p\text{-value} < 0.05$) greater among patients of PXS. There were 24 (40%) participants in healthy control group who had homocysteinemia in comparison with 58 (96.67%) patients who had homocysteinemia among PXS group.

Conclusion: Plasma HCY levels were raised in patients of pseudoexfoliation syndrome as compared to normal population, hence these patients may be considered for further systemic investigations by a medical specialist.

Comparison of corneal endothelial cell density in patients of pseudoexfoliation syndrome with normal population

How to Cite: Bhatti, S. H., Khan, S., Khan, I. U. H., Mehboob, M. A., Tareen, M. S., & Rabbani, S. Comparison of corneal endothelial cell density in patients of pseudoexfoliation syndrome with normal population. *Pakistan Armed Forces Medical Journal*, 68(3), 521-25.

Objective: To compare the corneal endothelial cell density in patients of Pseudoexfoliation syndrome (PXS) with normal healthy controls.

Study Design: Cross sectional comparative.

Place and Duration of Study: This study was carried out at Armed Forces Institute of Ophthalmology, Rawalpindi from Mar 2016 to Jan 2017.

Patients and Methods: Patients of PXS and healthy subjects of both genders between ages of 40 and 50 years, with best corrected visual acuity of 6/6 on snellen visual acuity chart were included in the

study. All the participants including controls and PXS patients were subjected to ophthalmic clinical examination including corrected distance visual acuity, slit lamp examination by the single trainee researcher to exclude bias. Participants in both groups were evaluated for corneal endothelial cell density (ECD) by using non-contact, TOPCON SP 3000P Specular microscope. Sampling bias was eliminated by analyzing 100 cells in the center of each specular microscope photograph and mean of three readings was analyzed.

Results: Both the groups were similar with respect to gender and age. In our study sample there were 29 (58%) males in PXS group and 24 (48%) males in control group with no statistical significant (p-value > 0.05) difference between gender distributions of both groups. The mean age of the PXS group was 46.34 ± 2.932 years, and in control group was 45.54 ± 2.887 years (p-value >0.05). The mean value of ECD was found to be 2021.548 ± 528.142 cells/mm² in PXS patients and the mean value of ECD in healthy subjects was noted to be 2772.692 ± 383.395 cells/mm², showing significantly lower ECD in PXS cases. Similarly, significantly higher number of cases 22 (44%) had CED <2000 in PXS as compared to normal healthy subjects.

Conclusion: Corneal endothelial cell density decreases in patients of pseudoexfoliation syndrome and this must be considered while planning any intraocular surgery including cataract extraction.

Task sharing: situation analysis about capacity and resources for management of diabetic retinopathy in Pakistan

How to Cite: Shah M, Noor A, Harper CA, Keeffe JE. Task sharing: situation analysis about capacity and resources for management of diabetic retinopathy in Pakistan. *Int J Ophthalmol* 2019;12(5):809-814.

AIM: To assess the capacity and resources of eye care facilities, using the WHO Health Systems Framework, to manage diabetic retinopathy (DR) through task sharing.

METHODS: Using purposive sampling, four participants (administrators) from four selected hospitals in two provinces in Pakistan were recruited for this cross-sectional study. A survey, to assess the capacity and resources of the selected eye care facilities for the feasibility to adopt task sharing in management of DR to prevent vision loss, was emailed to participants who were asked to complete. Responses to open-ended questions were entered into a Microsoft Excel spread sheet and inductive approach was applied for analysis.

RESULTS: All the surveyed eye care facilities offer eye care services for people with diabetes and DR. All surveyed eye care facilities have a shortage in the number of human resources across all cadres. Optometrists and mid-level eye care workers did not have active roles in DR screening and management in all four hospitals. All the hospitals surveyed did not have a computerized record management system for patients who visit ophthalmologists for eye examinations. Equipment for detection and management of DR were short in number and main users were ophthalmologists. There was no policy for population-based screening program for detection of DR in any of the surveyed hospitals.

CONCLUSION: A system-based approach to manage DR is needed. The capacity of eye care facilities and the potential to improve access of people with diabetes to eye care services can be enhanced through implementation of task sharing.

KEYWORDS: task sharing; capacity; diabetes; diabetic retinopathy; Pakistan

Transitional experience of men with breast cancer from diagnosis to survivorship: An integrative review

How to Cite: Younas, A & Sundus, A & Inayat, S . Transitional experience of men with breast cancer from diagnosis to survivorship: An integrative review. *European Journal of Oncology Nursing*. 2019; 42.

Purpose: The care needs, experiences, and physical and psychological health of women with breast cancer are well-documented, but missing is the discussion of illness and management experiences of men with breast cancer. To explore and understand the nature and complexity of transitional experiences, from the time of receiving the diagnosis to the survivorship of men with breast cancer.

Methods: An integrative review was conducted according to Whittemore and Knafl's methodology. Literature was searched in seven scientific and two grey literature databases using mesh terms "breast cancer", "men", "experiences" and "nursing". Of 1013 screened articles, 17 qualitative, quantitative, and mixed methods studies and research reviews met the inclusion criteria. The studies were critically appraised using mixed methods appraisal tool and rated as high and low quality. The data was extracted using literature summaries and synthesized using thematic, descriptive, and interpretive analysis.

Results: Nine themes captured the transitional experience at the diagnosis, management, and survivorship stages. Gender inequalities and stigmatizations at personal, health care, and social and community levels negatively influence men's experiences.

Conclusions: The gender stigmatization present at personal, health care, and social and community levels greatly influence men's experiences of breast cancer. To resolve gender inequalities in breast cancer management, the nurses should focus equally on the needs of men and women with breast cancer. The needs of men entail reducing health care and social stigmatization, gender specific information and management, and opportunities to participate in support groups.

Keywords: Breast cancer; men; male breast cancer; experiences; survivorship; integrative review; synthesis

A Mixed Methods Review of Male Nursing Students' Challenges during Nursing Education and Strategies to Tackle these Challenges

How to Cite: Younas, A & Sundus, A & Zeb, H & Jacoline, S. A Mixed Methods Review of Male Nursing Students' Challenges during Nursing Education and Strategies to Tackle these Challenges. *Journal of Professional Nursing*. 2019;35.

Background: Calls to action have been placed for recruitment of more men to address nursing shortage and to achieve a better balance and diversity in workforce. Studies also indicated patients' demand for male nurses. Despite this, male nursing students experience challenges during their education resulting in their attrition. No reviews have explored this research area. This review explored the challenges of male nursing students during their education and identified strategies used to tackle these challenges.

Methods: Literature was searched within three databases using indexed search phrases and 1 mixed-methods, six quantitative, and 36 qualitative studies (n=43), published from December 1990 to May 2018, were reviewed. The qualitative and quantitative data were separately extracted and analyzed using thematic synthesis and narrative summaries, and then compared using joint displays.

Findings: “Call me a nurse” and “Male nurses understand us better: Need more men in nursing” were the prominent themes. An array of educational and clinical challenges were identified. Students used appraisal-focused, problem-focused, and social support strategies to tackle these challenges.

Conclusion: Considering the identified challenges, the lack of support and efforts from educators and institutions, we reiterate calls to action for strategic policies to help male nursing students adapt to educational and clinical learning environments and to increase their recruitment and retention in nursing.

Frequency of Diabetic Retinopathy among the Known Diabetic Patients at a Tertiary Care Eye Hospital

How to cite: Ali M, Zafar S, Sadiq M, Akhtar F, Khan W A. Frequency of Diabetic Retinopathy Among the known Diabetic Patients as a Tertiary care eye hospital. Al-Shifa Journal of Ophthalmology. 2018; 14(2): 99-106

Objectives: To report the frequency of diabetic retinopathy (DR) among the known diabetics presenting for the first time at Al-Shifa Trust Eye Hospital (ASTEH) Rawlapindi

Subjects and Methods: Across sectional observational study conducted at out-patient department of ASTEH Rawalpindi from 01 April 2015 to 30 September 2015. After an informed verbal consent and history taking of all the patients, a detailed ocular examination was conducted including visual acuity, slit lamp examination and dilated fundus assessment. DR was graded according to International Clinical Diabetic Retinopathy and Diabetic Macular Edema Disease Severity Scale. All this information was recorded on a proforma and data analysis was done using SPSS version 18.0.

Results: Out of 200 total participants, 85(42.5%) were male and 115 (57.5%) were female. Mean age of the participants was 56.0 (+/- 9.740) years while mean duration of diabetes was 8.468(+/- 6.034) years. DR was detected in 105 (52.5 %) patients among which 44 (22 %) patients had Proliferative DR and 57(28.5%) patients had diabetic macular edema. Severity of DR was significantly associated with age (p=0.004) duration of DM (P<0.001) and blood sugar status(p=0.001).

Conclusion: Frequency of DR is high in our diabetic patients. More attention should be paid towards measures like improving awareness among diabetics and training of general physicians in diagnosing the condition.

Results of FP7 Ahmed Glaucoma Valve Implant in Refractory Glaucoma Cases

How to Cite: Ali M, Jabeen S, Akhtar F. Results of FP7 Ahmed Glaucoma Valve Implant in Refractory Glaucoma Cases . Al-Shifa Journal of Ophthalmology 2018; 14(3): 154-160

Objectives: To report the clinical outcomes of FP7 Ahmed Glaucoma Valve (AGV) implant in refractory glaucoma cases.

Study Design: It was a prospective, non-comparative, interventional case series, conducted at glaucoma clinic of Al-Shifa Trust Eye Hospital, Pakistan between July 2016 to June 2018.

Subjects and Methods: All refractory glaucoma cases, which were treated with Ahmed Glaucoma Valve implant and completed at least one year follow up were included in this study. All cases were performed by a single surgeon using a standard technique. Pre-operative and post-operative visual acuity status and intraocular pressures were recorded as well as any complications encountered during the first post-operative year. All the data was entered on proformas and statistical analysis was

done using SPSS version 21.0.

Results: A total of 34 eyes of as many patients were included. Pre-operative mean IOP was 29.76 (± 8.14) mm of Hg while post-operative mean IOP was 14.97 (± 4.65) mm of Hg. At one-year post-operative period, IOP was successfully controlled in 19 (55.88%) eyes without any additional antiglaucoma medicines, 14 (41.17%) eyes required additional post-operative anti glaucoma medicines while one eye underwent selective diode laser cycloablation. Hypertensive phase was noticed in 24 (70.58%) eyes which was managed by different methods. Post-operative complications included transient hypotony in 6 (17.64%) eyes, Choroidal detachment in 4 (11.76%) eyes, Tube exposure in 2 (5.88%) eyes and iris incarceration in tube in 1 (2.94%) eye. Drop in visual acuity was experienced in 3 (8.82%) eyes.

Conclusion: The overall success rate of FP7 AGV is comparable to that of prior studies using different models of AGV. The incidence of serious and long-term postoperative complications is low after FP7 AGV insertion.

A Clinic-Based Study of Patients with Strabismus in Pediatric Age Group

How to Cite: Saleem A A, Siddiqui S N, Mansoor H, Iqbal S, Asif M . A Clinic-Based Study of Patients with Strabismus in Pediatric Age Group. ASJO. 2018; 14(4): 183-190

Objective: This cross-sectional observational study to determine the distribution and pattern of strabismus in children seen at a tertiary care pediatric eye care unit.

Materials and Methods: The study was conducted in Al-Shifa Trust Eye hospital Rawalpindi, Pakistan from March 2013 to July 2014. During this period, a total of 711 children, aged 1-12 years were evaluated. All children underwent complete ophthalmic examination including cycloplegic refraction.

Results: Out of the 711 children, 47 % (334) were girls and 53 % (377) were boys. 56.1 % (399) children had esodeviations whereas 32.3% (230) had exodeviations. In esotropic children, constant esotropia accounted for 41.9 % cases, 14.2 % cases had infantile esotropia whereas 1.3 % had intermittent esotropia. The most common cause of constant esotropia was refractive accommodative esotropia. Non-accommodative (basic) esotropia was the second most common esodeviations. 145 (20.4 %) cases had constant exotropia and 85 (12 %) cases had intermittent exotropia. The basic type (50.6 %) was the most common presentation of intermittent exotropia. 41.1 % of the cases diagnosed with intermittent exotropia had convergence insufficiency. 7.7 % were diagnosed with pseudo-strabismus. Incomitant strabismus was less common in this population; causes included of 6th nerve palsy, Monocular Elevation Defect, Congenital Fibrosis of Extraocular Muscles and Duane Syndrome.

Conclusion: Constant esotropia, congenital esotropia and constant exotropia were the most common form of deviations noted in our pediatric population. It is vital to promote public education on the significance of early detection of strabismus.

Experiences of young smokers in quitting smoking in twin cities of Pakistan: a phenomenological study

How to Cite: Shaheen, K., Oyeboode, O. & Masud, H. Experiences of young smokers in quitting smoking in twin cities of Pakistan: a phenomenological study. *BMC Public Health*. 2018; **18**; 466

Background: Smoking is highly prevalent in Pakistan claiming the lives of over 100,000 individuals every year. A significant proportion of smokers (24.7%) make an attempt to quit each year but 97.4% fail to quit successfully. Little is known about the reasons for, and experiences of, failed quit attempts. This study was carried out to explore the experiences of young male smokers in quitting smoking in the twin cities of Pakistan

Method: A qualitative study was carried out using a phenomenological approach in Rawalpindi and Islamabad. A total of 11 participants were interviewed. All study participants were male and had made at least one quit attempt. Study participants were a mix of smokers who failed to quit smoking, intermittent smokers and successful quitters. Streubert's (1991) method of phenomenology was followed during data analysis.

Results: The experiences of smokers while smoking "the smoking phase" have major effects on their journey towards quitting smoking. The smoking phase consists of three major stages: contact with initial smoking stimuli, the journey from first puff to enjoying smoking and then finally smoking becoming part of life. However, the journey towards quitting smoking is not as simple as the journey towards becoming a smoker. Instead, smokers get trapped in three overlapping cycles of smoking and quit attempts: smoking & forced quitting, smoking & intentional quitting, and smoking & intermittent smoking before successful quitting. Breaking the cycle is not easy in the presence of trapping factors (addiction, high availability, easy affordability, conducive social setup and low perceived risks of smoking). Three factors play a major role in breaking these cycles which are strong will power, continuous peer support and avoidance of smokers' company.

Conclusion: A young smoker, during his experience of quitting smoking gets entrapped in several overlapping cycles of smoking & quit attempts before successful quitting. There are known entrapping factors as well as factors which help in breaking these cycles. Targeted interventions are needed to facilitate smoking cessation among young smokers in Pakistan.

Keywords: Cigarette smoking, Cessation, Experiences, Barriers, Failure, Young smokers, Unsuccessful attempts

BOOK CHAPTERS

Best Practice Integrated Approaches in Eye Care Service Delivery.

How to Cite: Qureshi, Muhammad & Chaudhry, Ismat. (2019). Best Practice Integrated Approaches in Eye Care Service Delivery. 10.1007/978-3-319-98014-0_3.

Globally, though there is a reduction in overall prevalence of blindness and visual impairment (VI), the absolute number of those with blindness and VI is on rise. Though major causes are cataract and uncorrected refractive error (URE), chronic non communicable diseases like glaucoma, diabetic retinopathy, etc. are also on rise. Apart from this, issues related to accessibility and affordability still persist in major parts of developing countries. There are also concerns related to quality and equity in service delivery. In order to achieve goals of universal eye health coverage, strengthening primary eye care and integrating it with primary healthcare, secondary care, as well as tertiary care and the use of appropriate technology at each level of care are proposed.

Identification of Novel Deletions as the Underlying Cause of Retinal Degeneration in Two Pedigrees

Branham, K., Guru, A. A., Kozak, I., Biswas, P., Othman, M., Kishaba, K., Mansoor, H., Riazuddin, S., Heckenlively, J. R., Riazuddin, S. A., Hejtmancik, J. F., Sieving, P. A., & Ayyagari, R. (2018). Identification of Novel Deletions as the Underlying Cause of Retinal Degeneration in Two Pedigrees. *Advances in experimental medicine and biology*, 1074, 229–236.

Abstracts/Chapter: Retinal dystrophies are a phenotypically and genetically complex group of conditions. Because of this complexity, it can be challenging in many families to determine the inheritance based on pedigree analysis alone. Clinical examinations were performed and blood samples were collected from a North American (M1186) and a consanguineous Pakistani (PKRD168) pedigree affected with two different retinal dystrophies (RD). Based on the structure of the pedigrees, inheritance patterns in the families were difficult to determine. In one family, linkage analysis was performed with markers on X-chromosome. In the second family, whole-exome sequencing (WES) was performed. Subsequent Sanger sequencing of genes of interest was performed. Linkage and haplotype analysis localized the disease interval to a 70 Mb region on the X chromosome that encompassed RP2 and RPGR in M1186. The disease haplotype segregated with RD in all individuals except for an unaffected man (IV: 3) and his affected son (V:1) in this pedigree. Subsequent analysis identified a novel RPGR mutation (p. Lys857Glu fs221X) in all affected members of M1186 except V: 1. This information suggests that there is an unidentified second cause of retinitis pigmentosa (RP) within the family. A novel two-base-pair deletion (p. Tyr565Ter fsX) in CHM (choroideremia) was found to segregate with RD in PKRD168. This paper highlights the challenges of interpreting family history in families with RD and reports on the identification of novel mutations in two RD families.

DISSERTATIONS

Sr No	Trainee	Supervisors	Topic
1	Tooba Tufail	Dr. Saman waqar Miss Maryam	To assess awareness of Low Vision rehabilitation among ophthalmologists in public & private hospitals of Rawalpindi & Islamabad.
2	Noor-UR-Rehman	Miss Hina	Awareness of primary eye care among Primary Healthcare workers in Tehsil Kalar Syedan
3	Tayyaba Arif	Dr. Ume Sughra	Range of services provided by optometrists in Rawalpindi, A cross-sectional study.
4	Aiman fayyaz	Dr. Kashif Dr. Khizar	Knowledge & practices about self-medication in ophthalmology in twin cities.
5	Asifa Nawaz	Dr. Ume Sughra Miss Maryam	Barriers toward delay in seeking eye care in patients of cataract visiting Al-Shifa Trust Eye Hospital, Rawalpindi.
6	Fatima Rizwan	Dr. Tayyab Afghani Mr. SaadAlam Khan	Effect of preventive health education on visual display unit related asthenopic symptoms among optometry students of PIO.
7	Maham Fatima	Dr. Tayyab Afghani Dr. Saman waqar	Barriers causing delay in seeking eye care in patient of strabismus in tertiary eye care hospital Rawalpindi.
8	Shanza Khan	Dr. Ayesha Babar Miss. Midhet	Association of consanguinity with keratoconus. A case-control study.
9	Khadija Rasheed	Dr. Ayesha Babar Miss. Sadaf	Effect of indoor and outdoor activities on myopia among children coming to Al-Shifa Trust Eye Hospital.
10	Labina Amrat	Dr. Khizar Miss. Sadaf	Knowledge and attitude regarding consanguineous marriage effect on eye health in rural and urban Chakwal.
11	Noor-ul-Huda	Dr. Moqheet Dr. Ume Sughra	Endothelial cell count before and after CXL
12	Hijab Arshad	Dr. Mehmood Mr. Saad Alam Khan	Factors influencing late presentation of glaucoma at Tertiary eye care hospital, Rawalpindi.
13	Hira Ajmal	Miss. Hina Miss. Sadaf	Knowledge attitude practice and the factors that motivates screening for diabetic retinopathy among diabetic patients in Rawalpindi
14	Tayyaba Shafqat	Miss. Hina Miss. Midhet	Association of asthenopia and pre-presbyopia in workers of hand crafting in Rawalpindi city.
15	Tayyaba Muzaffar	Dr. Samanwaqar Miss. Midhet	Association of risk factors for developing age related macular de generation among adult population in a Tertiary eye care hospital Rawalpindi
16	Naima Shakeel	Dr. Ayesha Babar Miss. Sadaf	Awareness of parents towards children suffering from strabismus and amblyopia presenting in Al-Shifa trust Eye Hospital
17	Faiza Shahid	Dr. Qurat-ul-Ain Miss. Nisma	Knowledge and practices about ocular hazards, its safety and the factors influencing use of protective eyewear's among

			workers of capital city of Pakistan
18	Sumaira Arif	Dr. Qurat-ul-Ain Miss Maryam	Comparison of stereopsis in refractive error patient with and without glasses
19	Samreen Qadir	Dr. Moqheet Dr. Qurat-ul-Ain	Awareness and attitude of spectacle wearers towards refractive surgery
20	Amina Jamil	Dr. Ayesha Babar Kawish	Assessment of quality of physical rehabilitation services
21	Alina Ali Zaidi	Dr. Saman Waqar Naqvi	Work related stress and associated factors among factory's blue-collar workers
22	Asmaa Riaz	Dr. Ume Sughra	Expectations and perceptions of patients regarding the quality of dental services and coping Strategies
23	Bilal Khalid	Dr. Ayesha Babar Kawish	Assesment of Instituional factors affecting Healthcare system
24	Fouzia Majeed	Dr. Khizar Nabeel Ali	Knowledge of birth preparedness and danger signs among rural and urban pregnant ladies
25	Madiha Imtiaz	Ms. Hina Sharif	Barriers towards health care seeking among transgender
26	Muhammad Ibrar	Dr. Ume Sughra	Prevalence of sexually transmitted infections and life quality of Transgender
27	Farhan Hamid	Dr. Saman Waqar Naqvi	Assessment of age friendliness
28	Midhet Nasim	Dr. Ume Sughra	Assessment of the standards for optometric healthcare services and factors affecting them
29	Bazgha Saad	Dr. Ayesha Babar Kawish	Effect of learning disabilities on social skills inschool going children
30	Irfan Qamar	Dr. KhizarNabeel	Caomparison of oral hygiene and dental caries among smokers and non-non smokers
31	Mahvesh Ajmal	Dr. SamanWaqar	Knowledge and practices of oral hygiene in pregnant women attending antenatal clinics
32	Mamoona Zahoor	Dr. SamanWaqar	Sleep quality among University students
33	Uzma Neelam	Ms. Hina Sharif	Acceptability of Health technologies among primary healthcare workers aimed at maternal, newborn and child healthcare services
34	Muhammad Muddassir	Dr. Ayesha Babar Kawish	Health related quality of life in children surviving retinoblastoma
35	Nafeesa Ashfaq	Dr. Ayesha Babar Kawish	Association of depression among infertile males and females

36	Saba Gulrukh	Ms. Hina Sharif	Personal preferences and knowledge of nutrition among adolescents in fast food outlets
37	Sabeen Masroor	Dr. Ume Sughra	Consumer rediness for social health protection in the healthcare system of Pakistan
38	Tayyaba Inam	Dr. KhizarNabeel	Preventive knowledge and practices of Hepatitis C patients
39	Shabnam Asad	Dr. Ume Sughra	Life satisfaction among working women and house wives
40	Tahira Jaffar	Dr. SamanWaqar	Perceived stress level and coping strategies in female primary school teachers
41	Rabia Haider	Dr. Ume Sughra	Quality of life satisfaction level of Kalash Tribe
42	Tahira Zahoor	Dr. Ayesha Babar Kawish	Assessment of job satisfaction among child protection officers of Punjab
43	Dolly Siddique	Ms. Hina Sharif	Colorism and its association with self-esteem among adult females
44	M Zeeshan Zafar	Dr. SamanWaqar	Assessment of standards of care with reference to Minimum Service Delivery standards (MSDS)
45	Shams Ul Karim	Dr. Ayesha Babar Kawish	Assessment of stress and coping strategies among nurses
46	Mariam Babar	Dr. SamanWaqar	Emotional Intelligence, a predictor of empathy amongst public dentist
47	Shams Zaman	Dr. Ume Sughra	Comparison of patient satisfaction with non-communicable diseases services available in public and private sector hospitals
48	Saneyah Amanat	Dr. Ume Sughra	Comparison of Non-Communicable disease Provision and readiness among Rural and Urban Secondary Healthcare settings

PRESENTATIONS

Sr.no	Presentor	Title
1	Tayyab Afghani	Cystic Optic Nerve
2		Removal of Intraconal mass
3	Soorath Noorani Siddique	ROP Case Presentation
4		Paediatric Cataract surgery
5	Mehmood Ali	Glaucoma Surgery
6		Transscleral Diode Cyclo Photocoagulation
7		Lasers in Glaucoma
8	Mahmood Ali	Target IOP
9	Yousaf Jamal Mahsood	Why (still) Blindness from Glaucoma
10	Dr. Amna Manzoor	Young women Ophthalmology Forum
11	Aneeb Ur Rehman	Refractive error among madarrasa students of Rawalpindi , City
12	Fariha Munir	Heavy school bags and its association with musculoskeletal problems among adolescents of Rawalpindi
13	Sabeen Masroor	Consumer readiness for social health insurance in the healthcare system of Pakistan
14	Raheela Abdul Ghfar	Assessment of occupational stress, its risk factors and coping strategies among Police officers of Islamabad Capital Territory (ICT)
15	Uzma Neelum	Measuring level of acceptance of Health Technologies among Primary Healthcare workers , in District Rawalpindi
16	Farhan Hamid	Age friendliness of Tertiary care hospital of Rawalpindi
17	Ubaid Azher	Wheelchair accessibility of public infra-structure to persons with disabilities in Rawalpindi
18	Nafeesa Ashfaq	Anxiety and depression among infertile people: A cross sectional study from Pakistan
19	Midhet Nasim	Optometric eye care services: The decisive weapon against preventable blindness
20	Saad Alam Khan	Visual outcome after mechanical ICRS surgery: A Quasi experimental surgery
21	Nida	Superior solution to visual function loss in keratoconus: RGP or Spectacle?
23	Dr. Anila Rehman	Errors with Vitamin D deficiency in Children coming to Al-Shifa Trust Eye Hospital, RWP



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