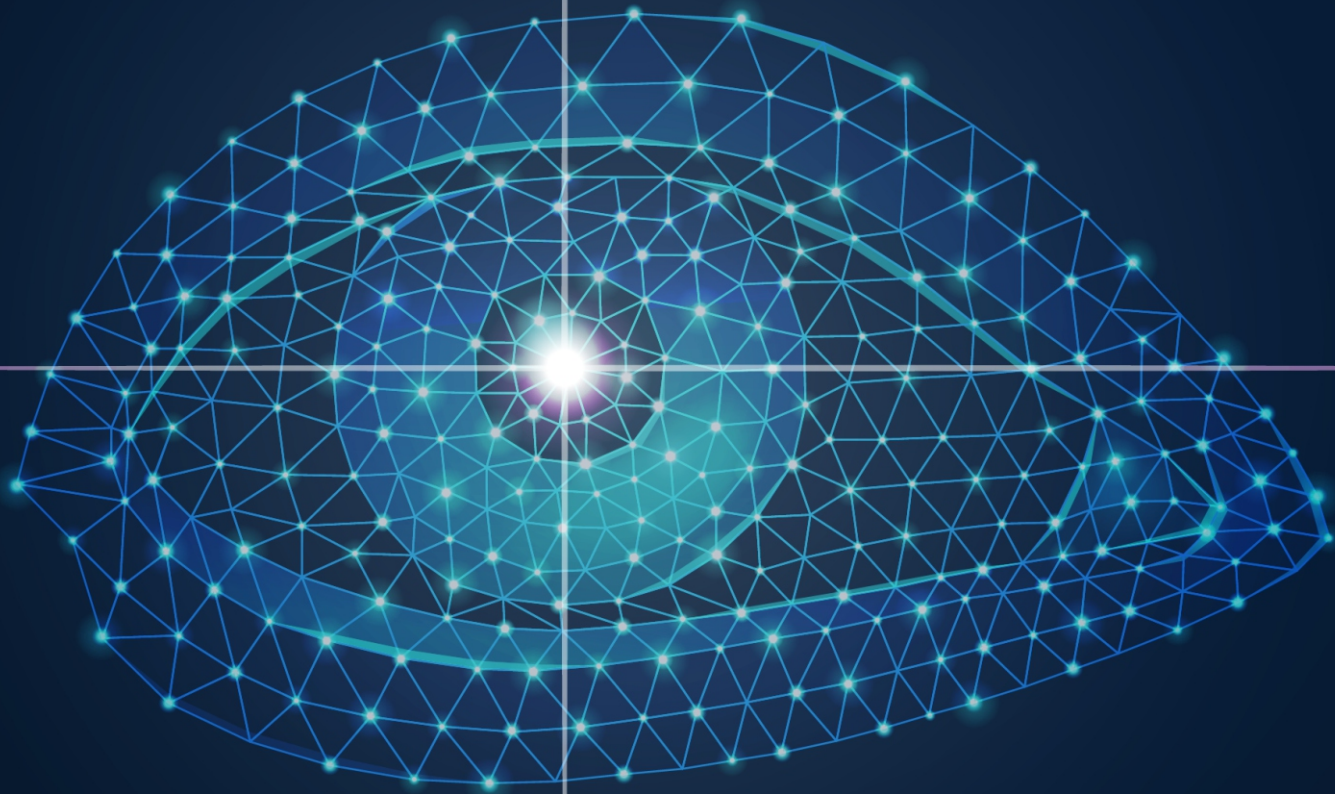




Al-Shifa

**Annual Research Report
2020**



PREPARED BY

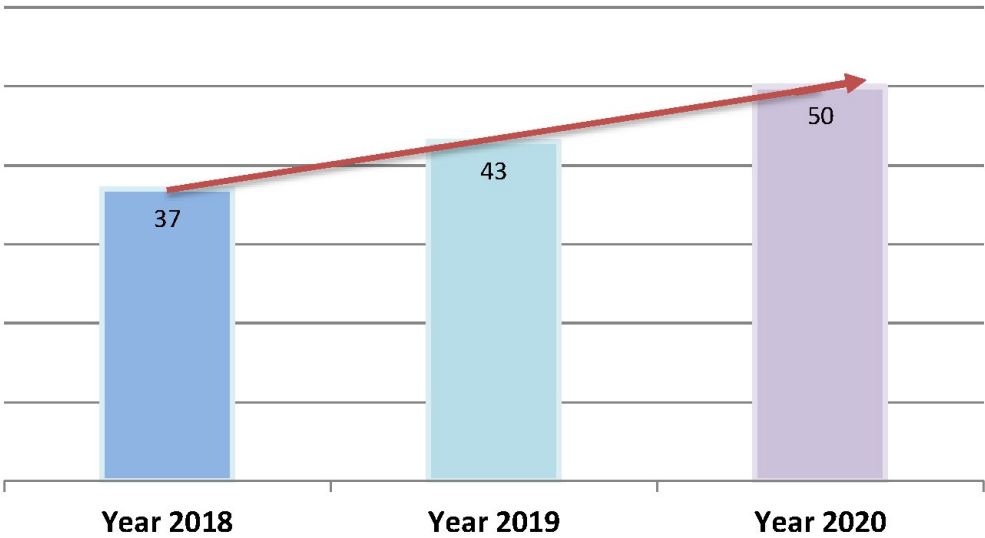
AL-SHIFA RESEARCH CENTRE

**Pakistan Institute Of Ophthalmology
Al-Shifa Trust Rawalpindi**



**Elements of health-care quality in the context of Eye Care
(WHO-World Report on vision 2019)**

No of Publications



Yearly Progress of Al Shifa Research

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Message from the President Al-Shifa Trust

Any crisis presents the opportunity to learn, cultivate compassion and increase resilience while building a safer and most caring community.

We experienced a public health emergency in the form of COVID-19 pandemic in this year. Having information and facts about Corona virus will help diminish fears and anxieties around the diseases and will support our ability to cope with any secondary impacts in our lives. An unprecedented amount of knowledge has to be generated in the form of research findings to fight with pandemic implications.

I am overwhelmed by the efforts of Al Shifa faculty and staff fir continuing serving the ailing humanity in these testing times. This pandemic has further enhanced the role of research and it is heartening to see Al Shifa Research Report Year 2020. It signifies that faculty has been continuously involved in scholarly activities and contributed their share for broadening the knowledge base to respond to the health care need of the society. I want all health care professionals to integrate the best scientific evidence from research with the patients' clinical experience and values.

I am happy that all our employees are working hard to support our community whether in the form of treating patients or by contributing through research.



Maj. Gen (R) Rehmat Khan

Message from the Dean

Year 2020 was a unique experience for the world due to COVID-19 which changed the perspective of mankind to so many issues related to health, economy, personnel life, human interaction, technology and travel etc. While there were innumerable challenges interims of loss of life, human sufferings and financial melt donor, at the same time host of opportunities arose in the form of distance learning, work from home, video conferences, artificial intelligence, new methods of vaccine preparation and so on.

At Al Shifa we had the opportunity to offer consultative services on line to our patients and conduct lectures and class work through video conferences and internet.

Throughout the year our faculty and students were conducting research as usual and managed to publish in international and national journals. Some of the experience of on line consultation during these months of lockdown and ocular signs in COVID -19 patients are being submitted for publications.

It is hearting to note that this is third year in a row that Al Shifa Research centre is publishing over 40 papers in prestigious national and international journals.

Another milestone which has been crossed is the partnership agreement of Al Shifa with COMSTECH will also help in establishing clinical trial centre and up gradation of Al Shifa Research Centre.

I would like to congratulate all our faculty members and students along with research centre staff for their efforts in publishing quality papers and progress report for year 2020.



Prof. Dr. Wajid Ali Khan

Annual Research Report 2020 by Research Associate

Although this was a testing year for all of us because of COVID-19 but I am pleased to share the 3rd Issue of Al-Shifa Research Booklet for the year 2020. This is a testimony that we really appreciate the value of scientific culture and scientific evidence.

This report lists the abstracts of peer reviewed Publications authored by faculty, trainees, and students of Al-Shifa along with the webinars and conferences attended by the faculty. Titles of dissertations written by students and trainees are also a part of it. A good number of 68 dissertations have been written this year by trainees and students of Al Shifa.

This year again we met our targets and published 50 research papers in high impact factor National and International journals like JAMA Oncology, Scientific Reports Journal, Clinical Genetics, Molecular Genetics and Genomic Medicine, Journal of Professional Nursing, Journal of Applied Pharmacy, International journal of Environmental Research and Public Health, Journal of Malaria and JPMA. One of our authors has contributed in writing book chapter also.

I would like to extend my gratitude to all the contributing authors in sharing their scholarly work in the form of scientific papers, conference presentations and dissertations. Let's keep on working hard in research for unlocking creative and imaginative ideas for addressing health challenges faced by our society.



Dr. Ume Sughra

**“The Research is the easiest. The outline is the most fun.
The first draft is the hardest because every word of the outline
has to be fleshed out.**

The rewrite is very satisfying.”

Ken Follett

Publications

1. Extraocular Muscle Imbalance and Outcomes of Scleral Buckling Surgery for Primary Rhegmatogenous Retinal Detachment

How to Cite: Nawaz, S & Kawish, A & Tahir . (2020). Extraocular Muscle Imbalance and Outcomes of Scleral Buckling Surgery for Primary Rhegmatogenous Retinal Detachment. The International Journal of Frontier Sciences. 4. 40-43. 10.37978/tijfs.v4i1.70.

Objective: The objective was to study the muscle imbalance, restrictive motility in unlike gazes and the outcomes of the sclera buckling surgery for rhegmatogenous retinal detachment.

Study design: Prospective follow-up study

Setting²s and duration: The study was conducted at Al-Shifa Trust Eye Hospital Rawalpindi from Aug 2015 to Jan 2016.

Methodology: The patients were checked prior to surgery and two follow up visits were done afterwards. Thorough history was taken along with full orthoptic assessment and ocular motility in all four main gazes including elevation, depression, adduction and abduction. Vision, type and position of explants, site of detachment, and risk factors of detachment were also observed.

Results: A total of 48 eyes of 46 patients were taken. Mean age of the study participants was 37.16 ± 20.37 years. Horizontal, vertical and combined deviations were observed in study population. Exo deviation was most common deviation among patients. Most reported risk factors of retinal detachment included trauma, pseudophakia, aphakia and myopia. Motility limitations of all four gazes was observed and it was found out that after buckling the squint and restriction is been increased up till two months.

Conclusion: Ocular restriction among the patients was observed over a period of 2 months and it depicted that encircling with sclera buckling elicited an increase in restrictive ocular motility from pre-operative to 1 week and 2 months after surgery.

2. Efficacy of Supratarsal Injections versus Topical Steroids for Treatment of Vernal Keratoconjunctivitis In Children

How to cite: Rehman H , Shahnam T , Aslam I K, Ahmed W , Sharif N, Hassan S. Al-Shifa Journal of Ophthalmology 2019; 15(2): 58-64.

Purpose: Aim of the study was to compare efficacy of supratarsal triamcinolone acetonide injection, supratarsal dexamethasone sodium phosphate and topical Prednisolone 1% eye drops in the treatment of resistant cases of Vernal Keratoconjunctivitis (VKC) in children

Study design: It was a prospective comparative randomized case series

Place and duration: This study was conducted in Eye Unit Hayatabad Medical Complex Peshawar. Duration of study was 2 years.

Materials and Methods: A total of 90 eyes (45 patients) were included in this study.

Symptoms and signs of vernal keratoconjunctivitis were recorded after which these eyes were divided into three groups. Group A included 30 eyes (15 Patients) who received supratarsal injection of Triamcinolone acetonide 20 mg, Group B with 30 eyes (15 Patients) who received supratarsal dexamethasone 2 mg injection and Group C with 30 eyes (15 Patients) who took topical Prednisolone acetate 1% eye drops. Patients were evaluated at regular intervals and resolution, remission and recurrence of symptoms and signs of VKC was noted. **Results:** There was no statistically significant difference in remission of sign and symptoms between triamcinolone acetonide and dexamethasone phosphate injections group ($P < 0.05$) but the supratarsal injections group showed effective remission of signs and symptoms of VKC in comparison to topical steroids group. Eyes in group A and B (Supratarsal Injections) had very low recurrence rate and delayed recurrence in comparison to group C (topical Prednisolone eye drops). Moreover, no complications of the procedure were noted in all groups.

Conclusion: Our study concluded that supratarsal injections of triamcinolone acetonide and dexamethasone phosphate are an efficacious, easy and safe technique in the management of treatment resistant VKC in children.

3. Impact of Diabetes Mellitus on the Variation of Central Corneal Thickness

How to cite: Munir MS, Abbas MA, Sharif N, Hassan S. Impact of Diabetes Mellitus on the Variation of Central Corneal Thickness. *Al Shifa Journal of Ophthalmology* 2019; 15(2): 78-81.

Purpose: This clinical study was conducted to validate the existence of a correlation between thickness of the central cornea and diabetes.

Study Design: This was a cross-sectional case study.

Place and Duration of Study: The study was conducted in the Ophthalmology out-patients departments of Central Punjab over a period of one year.

Materials and Methods: A total of 930 patients were examined for measurement of central corneal thickness (CCT) by ultrasound pachymetry and eyes examination was done on the slit lamp. The sample was divided into two groups; 700 eyes of 350 non-diabetics and 1160 eyes of 580 diabetic patients. SPSS version 20.0 was used to analyze the results and t test was used to check the significance.

Results: The average variation of the central corneal thickness in the diabetic patients was 576.43 ± 16.52 microns with a range between 514–626 microns. In non-diabetic patients the average central corneal thickness was 516.86 ± 22.74 microns with a range between 448-649 microns. Statistically significant increase in the thickness of central cornea was noticed in diabetic patients relative to non-diabetic patients ($p < 0.001$)

Conclusion: Diabetic patients were found to have thicker central cornea as compared to the non-diabetic patients. While obtaining accurate IOP measurements in diabetic susceptible the association of diabetes mellitus with thickness of the central cornea should be considered.

4. Role of Optometrist in Management of Retinitis Pigmentosa

How to cite; Ali M, Suman SR, Ahmad I. Role of Optometrist in Management of Retinitis Pigmentosa. Al-Shifa Journal of Ophthalmology 2019; 15(2): 82-86.

Objectives: The aim of the study was to identify role of optometrist in early detection of symptoms, signs and management of Retinitis Pigmentosa and to formulate recommendations for the awareness about hazards of retinitis pigmentosa.

Study Design: This was a descriptive cross-sectional study.

Materials and Method: This study was conducted during September to November 2018 involving the use of self-designed proforma. A sample size of total 31 retinitis pigmentosa patients was enrolled in this study. Patients' profile and clinical data were collected followed by low vision assessment and prescription of optical and non-optical devices and counseling of the patient. Results of this study were analyzed using SPSS version 20 and Microsoft Excel 2010.

Results: The study included a total of 31 retinitis pigmentosa patients. Out of 31 patients, 35.5% had severe visual impairment (low vision) category, 51.4% had moderate visual Impairment (low vision) category while 12.9% patients were clinically blind. Near vision add was appreciated by majority of patients.

Conclusion: This study concluded that an optometrist can assist in the management of RP by performing low vision assessment and prescribing patients with low vision devices like hand and stand magnifiers, optical and non-optical devices and thus help to improve patient's quality of life.

5. Outcome of Conjunctival Auto Graft Surgery in Pterygium

How To Cite: Sharif N, Munir MS, Arshad M, Nazir S, Hassan S, Ullah MR. Al-Shifa Journal of Ophthalmology 2019; 15(3): 130- 133

Introduction: Pterygium is a degenerative condition, more common in the dry and dusty environment. In Pakistan, its incidence is increasing because 70% of our population is related with the agriculture sector and many outdoors developmental projects are in progress.

Objectives: The main aim of the study was to report the outcomes of pterygium surgery with limbal conjunctival auto graft in terms of graft success and preventing the recurrence of pterygium.

Study Design: A prospective interventional study.

Material and Methods:

A total of 50 patients were selected from outpatient department on the basis of convenience sampling method from January 2018 to June 2019. The key point in excision of pterygium was to start the topical treatment with steroids and antibiotic combination to quite the inflamed tissue and then proceed with surgery. Pterygium was completely excised taking care to save the check ligaments and the medial rectus muscle. The success point of the surgery was that the graft tissue loosely attached to the margin of the tissue left behind after excision. Any cases of graft rejection or recurrence of disease were noted.

Results: Number of male patients was more compared to the females as they are more exposed to the outside environment in our country. In 49 (98%) eyes, graft was well taken up.

Only one case with graft failure was reported while one case required resuturing. Recurrence of pterygium after the graft was noted in one eye.

Conclusion: Conjunctival auto grafting is a useful technique in our country as recurrence rate is low and complications are very few

6. Determining Effect of Filters on Color Vision and Contrast Sensitivity among Low Vision Patients: A Cross-Sectional Survey

How to Cite: Kanwal S, Sharif H, Habib MK. Al-Shifa Journal of Ophthalmology 2019; 15(3): 134-142.

Objectives: To assess difference in readings of contrast sensitivity and color vision among low vision patients without filter and with yellow or pink filter, and also to check consistency in readings of contrast sensitivity and color vision.

Study design: A cross-sectional study. Place and duration: Study was conducted in low vision department of Al-Shifa Trust Eye Hospital from 1st of November 2018 to 31st of January 2019.

Materials and Methods: Two hundred and three patients having decimal visual acuity ($>6/240=1.60$ log-MAR) age ranged from 10-50 years (24.4 ± 12.6), were included in the study. Diagnosis of each patient was enrolled provided by senior Ophthalmologist. Pelli-Robson contrast chart and AHRR color vision test were used for study. Procedure followed at first without using any filter then yellow filter and at the end with pink filter. Patient's response was noted.

Results: Repeated measures ANOVA showed that contrast sensitivity and color vision were statistically different among without filter, yellow filter and pink filter (p-value value=0.0001) but in case of color vision medium agreement found.

Conclusion: Use of pink filter proved to be effective in increasing contrast color discrimination and also in providing soothing effect to eye among patients having reduced visual functions i.e. decreased contrast and defective color vision.

7. Intra-vitreous Bevacizumab (IVB): Safety of Multiple Doses Preparation from a Single Vial in Tertiary Care Centre

How To Cite: Asghar A, Rizwan A, Obaid N, Sughara U, Naeem BUT, Nazir T. Intra-vitreous Bevacizumab (IVB): Safety of Multiple Doses Preparation from a Single Vial in Tertiary Care Centre. *Pak J Ophthalmol* 2019, Vol. 35, No. 4

Purpose: To determine the safety of multiple doses preparation of bevacizumab from a single vial in minor operation theatre.

Study Design: Retrospective exposure assessment.

Place and Duration of Study: Department of Ophthalmology, Fauji Foundation Hospital (FFH), Rawalpindi, from June 2016 to March 2018.

Material and Methods: 1690 eyes belonging to 1001 patients were included using computer logs of patients receiving intravitreal bevacizumab (IVB). We allocated three consecutive days every month in order to administer IVB at FFH. Approximately 50 patients were given IVB over three-day period. 1-2 ml (depending upon the number of patients) of bevacizumab was withdrawn in a 3cc syringe.

Later 1 cc insulin syringe with 29 G needle was taken and, 0.05 ml (1.25 mg) bevacizumab was injected from behind using the 3cc syringe, resulting in preparation of 10-20 injections of IVB. The bevacizumab vial was then stored at 4 degrees Celsius.

Results: Total 1690 eyes belonging to 1001 patients were analyzed. The occurrence of endophthalmitis was 2/1690 (0.12%) corresponding to a 95% CI of 0.03%-0.43%, which does not represent an increase in cases as compared to endophthalmitis resulting from using a compounding pharmacy.

Conclusion: Preparation of IVB from single vial technique using proper sterilization protocols is safe and economical in a minor eye operation theater.

Key Words: Bevacizumab, Intravitreal injection, Endophthalmitis.

8. Novel mutations in the *PITX2* gene in Pakistani and Mexican families with Axenfeld-Rieger syndrome

How to Cite: Lo Faro V, Siddiqui SN, Khan MI, Villanueva-Mendoza C, Cortés-González V, Jansonius N, Bergen AAB, Micheal S. Novel mutations in the *PITX2* gene in Pakistani and Mexican families with Axenfeld-Rieger syndrome. *Mol Genet Genomic Med.* 2020 Jul;8(7):e1215. doi: 10.1002/mgg3.1215. Epub 2020 May 13. PMID: 32400113; PMCID: PMC7336731.

Purpose: Axenfeld-Rieger syndrome (ARS) is a rare autosomal dominant disorder that affects the anterior segment of the eye. The aim of this study was to examine the *PITX2* gene to identify possible novel mutations in Pakistani and Mexican families affected by the ARS phenotype.

Methods: Three unrelated probands with a diagnosis of ARS were recruited for this study. Genomic DNA was isolated from the peripheral blood of the probands and their family members. Polymerase chain reaction and Sanger sequencing were used for the analysis of coding exons and the flanking intronic regions of the *PITX2* gene. Bioinformatics tools and database (VarSome, Provean, and Mutation Taster, SIFT, PolyPhen-2, and HOPE) were evaluated to explore missense variants.

Results: We identified novel heterozygous variations in the *PITX2* gene that segregated with the ARS phenotype within the families. The variant NM_153426.2 (*PITX2*):c.226G > T or p.(Ala76Ser) and the mutation NM_153426.2(*PITX2*):c.455G > A or p.(Cys152Tyr) were identified in two Pakistani pedigrees, and the mutation NM_153426.2(*PITX2*):c.242_265del or p.(Lys81_Gln88del), segregated in a Mexican family.

Conclusion: Our study extends the spectrum of *PITX2* mutations in individuals with ARS, enabling an improved diagnosis of this rare but serious syndrome.

KEYWORDS: anterior segment dysgenesis, Axenfeld-Rieger, mutations, *PITX2*

9. Spectacle Use among Children: Compliance, Satisfaction, Barriers and Challenges

How To Cite: Nasim M, Masud H, Khan SA, Ullah MR. *Al-Shifa Journal of Ophthalmology* 2019; 15(3): 107-116.

Objective: To assess the compliance of students with spectacles as well as finding out the predictors for non-compliance. **Materials and Methods:** A cross sectional study was done over eight months period in which all secondary school children from 6th to 10th class were enrolled who were spectacle users. The list of public schools was taken from Federal

Government Directorate and short listed as per the criteria. Data was collected from a structured questionnaire based on previous literature and advice from experts in the field. The questionnaire collected information related to practice of spectacle use, determinants of spectacle use, impact of spectacle use on personality and barriers and problems associated with spectacle use etc.

Results:

A total of 302 students participated in the study having a mean age of 13.96 ± 1.28 . Regular use of spectacles was found to be associated with male gender ($p < 0.001$), longer time duration since glasses were prescribed ($p < 0.001$) and if the glasses were prescribed from optical shop ($p < 0.015$). However, choice of wearing glasses willingly or forcefully was not found to be associated with compliance ($p = 0.60$). Most reported problem with non-compliance was sweating (57.28%).

Conclusion:

Compliance with spectacles was low in students and an array of reasons were highlighted by the students including peer pressure, socially undesirable and material of spectacles etc. interventions to solve this can make a difference to people's quality of life and can enhance spectacle compliance.

10. Comparison of Effects of Topical Loteprednol Etabonate and Topical Dexamethasone on Intraocular Pressure after Cataract Surgery

How To Cite: Maqbool A, Bhatti RS, Arshad MU, Iqbal Z, Zia S, Hasan MU, Comparison of Effects of Topical Loteprednol Etabonate and Topical Dexamethasone on Intraocular Pressure after Cataract Surgery. Al-Shifa Journal of Ophthalmology 2019; 15(3): 100-106

Objective: To determine the efficacy of loteprednol etabonate in terms of maintaining intraocular pressure between 12-21mm of Hg after cataract surgery compared to dexamethasone.

Study Design: Randomized control trial. **Study Duration and Setting:** The study was conducted at the Department of Ophthalmology, Benazir Bhutto Hospital, and Rawalpindi between December 2015 to June 2016.

Materials and Methods: A total of 362 patients undergoing cataract extraction were included in the study. Any activity in terms of cells and flare was checked in the anterior chamber of the eye pre and postoperatively. Patients of group one was given loteprednol etabonate and patients of group two were given Dexamethasone. Later their intraocular pressure was checked with Goldman applanation tonometer one day before and 28 days after cataract extraction.

Results:

The mean + SD age of the study patients in group one was $54.5 + 3.56$ years ranging from 18 to 60 years while of study patients in group two was $53.87 + 4.49$ years ranging from 18 to 60. Out of 181 patients in group one 51.9% were males while in group two 50.8% were males. Mean IOP on day 01 in study patients of group one was $18.17 + 2.11$ and mean IOP on day 01

in study group two was 18.18 ± 2.17 . Mean IOP on day 28 in study group one was 19.04 ± 1.86 and of group two was 19.27 ± 2.07 .

Conclusion: Dexamethasone and Loteprednol have almost an overlapping spectrum in terms of controlling postoperative intraocular inflammation however Loteprednol Etabonate is better at maintaining the intraocular pressure after cataract surgery.

11. Effect of Panretinal Photocoagulation On Macular Thickness in Patients with Proliferative Diabetic Retinopathy

How To Cite: Bhatti RS , Maqbool A , Arshad MU, Iqbal Z , Zia S , Hasan MU. Effect of Panretinal Photocoagulation on Macular Thickness in Patients with Proliferative Diabetic Retinopathy. Al-Shifa Journal of Ophthalmology 2019; 15(4): 150-156.

Objective: To determine the mean change in macular thickness after panretinal photocoagulation in eyes with proliferative diabetic retinopathy.

Study design: Quasi experimental Setting and Duration of Study: Retina Clinic of Al-Shifa Trust Eye Hospital, Rawalpindi between September 2014 to March 2015 for six months.

Methodology: Total 126 adult patients between age 45-65 years, irrespective of gender with eyes affected by PDR in which media was sufficiently clear to perform Optical Coherence Tomography (OCT) were included in the study. All patients underwent Panretinal photocoagulation (PRP). Macular thickness was measured pre and 3-month post PRP by OCT.

Results: About half of the (65, 51%) of patients were males and 48.4% (n=61) of patients were females. The mean macular thickness was noted as $205.9 \mu\text{m} \pm 18.2 \text{ SD}$ pre PRP. After 3 months mean macular thickness was found to be $214.1 \mu\text{m} \pm 14.2 \text{ SD}$ ($P < 0.05$). **Conclusions:** PRP causes a significant increase in mean macular thickness at three months post-treatment in eyes with proliferative diabetic retinopathy.

12. Outcomes of Intravitreal Bevacizumab Injections as Primary Treatment for Diabetic Macular Edema

How to Cite: Adeeb L , Ishaq N , Iqbal Z , Akhtar F , Arain MA. Outcomes of Intravitreal Bevacizumab Injections as Primary Treatment for Diabetic Macular Edema. Al-Shifa Journal of Ophthalmology 2019; 15(4): 163-167.

Objective: To evaluate change in visual acuity and decrease in central macular thickness after using Intravitreal Bevacizumab (IVB) in primary treatment of diabetic macular edema (DME).

Study design: Quasi Experimental Study Place and Duration of study: Al Shifa Trust Eye Hospital Rawalpindi, from 01 June 2018 to 31 May 2019 **Methodology:** Only diagnosed diabetic patients were included. Exclusion criteria included patients having best corrected visual acuity (BCVA) better than 6/12 or worse than 6/60 or the central subfield thickness (CSFT) on spectral domain optical coherence tomography (OCT) less than 300 microns. No history of any previous treatment for DME was inclusion criteria. Efficacy of treatment was compared in terms of change in BCVA and CSFT on OCT. Intravitreal injection of 1.25 mg

of IVB was given on Day 0 and then monthly for next two months. Follow up was done after 04 weeks of third injection.

Results: Total 130 eyes of 102 patients were included in the study. Mean age of patients was 60.2 years +/- 6.23. Male to female ratio was 2:1. Mean pre op LogMAR visual acuity was 0.60+/-0.15 and mean pre op CSFT was 421.10+/-40.14 μm . Mean post op LogMAR visual acuity was 0.45+/-0.23 and mean post op CSFT was 318.82+/-35.22 μm . There was statistically significant difference in improvement of Log MAR BCVA and decrease in CSFT after treatment. ($p=0.01$ by paired t test).

Conclusion: Eyes with DME when treated with three IVB injections at monthly intervals resulted in improvement of visual acuity and reduction of CSFT at four weeks of last IVB injection.

13. Postoperative Refractive Outcome and Accuracy of Biometry in Pediatric Cataract with Primary Intraocular Lens Implantation

How To Cite: Habib MK , Saleem AA, Jabeen N, Ghuncha M , Najam M , Khan FA . Postoperative Refractive Outcome and Accuracy of Biometry in Pediatric Cataract with Primary Intraocular Lens Implantation. Al-Shifa Journal of Ophthalmology 2019; 15(4): 174-180.

Objectives: To show the refractive outcomes, accuracy of intraocular lens power selection. Place &. Duration of study: Paediatric ophthalmology department of Al-Shifa Trust Eye Hospital, Rawalpindi. 1st July 2014 to 31st December 2015.

Methodology: All post-operative patients of cataract surgery beneath 8 years of age. Patients with traumatic cataracts, with any other ocular illness were excluded. Dilated objective refraction was performed by retinoscopy on all the post-operative patients fulfilling inclusion criteria to observe whether they achieved the target post op refraction or not. Information regarding pre-operative biometry and power of IOL (intra ocular lens) implanted during the surgery was taken from patients' clinical data. The collected data was entered in computer software SPSS (Statistical Package for Social Sciences) version 19.0 and analyzed with same software.

Results: The results of the study showed that a large number of the patients didn't achieve the intended post-op target hyperopia. This study showed that the target post-op hyperopia was not achieved in a large number of patients (i.e. 17 patients out of 64 patients) with 13 patients becoming myopic and 04 patients becoming emmetropic after the surgery.

Conclusion: This study calls for an increase in the percentage reduction of the IOL power according to the age (in cases where percentage reduction method is implemented).

14. Pakistani nursing students' perspectives of compassion: A convergent mixed methods study.

How to Cite: Sundus, Amara & Younas, Ahtisham & Fakhar, Joel & Sughra, Ume. (2020). Pakistani nursing students' perspectives of compassion: A convergent mixed methods study. *Journal of Professional Nursing*. 10.1016/j.profnurs.2020.09.014.

Background: There has been increased research on the conceptualization of compassion in nursing. Nursing institutions expect educators to foster student compassion. However, limited research exists on students' perceptions of compassion in nursing.

Purpose: To develop a comprehensive understanding of students' perspectives of compassion and compassionate care.

Methods: A convergent mixed methods design. A purposive sample of 117 students completed an exploratory questionnaire and 17 participated in interviews. Descriptive analysis was used for quantitative data, thematic analysis for qualitative data, and joint displays for mixed analysis.

Results: In total, 83% of students described compassion as “understanding and sharing patients' suffering” and 88% indicated that compassionate care entails “consciously trying to understand patients, their needs, and their suffering”. The qualitative themes were meanings of compassion and compassionate care, ways of developing and fostering compassion, antecedents of compassion and compassionate care, and compassion in practice.

Conclusions: Nursing students realized the importance of compassion for patients and nurses and identified different acts of compassionate care. The students noted the compassionate care entails deliberately caring for the “whole person” and can be fostered through practice, observations, and reflection.

15. Intra-vitreous Bevacizumab (IVB): Safety of Multiple Doses Preparation from a Single Vial in Tertiary Care Centre

How to Cite; Asghar, Asfandyar & Rizwan, Amna & Obaid, Naila & Sughra, Ume & Naeem, Badar ud din & Nazir, Tehmina. (2020). Intra Vitreal Bevacizumab: Safety of Multiple doses Preparation from Single Vial in minor theatre in tertiary care centre. *Pakistan Journal of Ophthalmology*. 35. 235-241. 10.36351/pjo.v35i4.888.

Purpose: To determine the safety of multiple doses preparation of bevacizumab from a single vial in minor operation theatre.

Study Design: Retrospective exposure assessment. Place and Duration of Study: Department of Ophthalmology, Fauji Foundation Hospital (FFH), Rawalpindi, from June 2016 to March 2018.

Material and Methods: 1690 eyes belonging to 1001 patients were included using computer logs of patients receiving Intravitreal Bevacizumab (IVB). We allocated three consecutive days every month in order to administer IVB at FFH. Approximately 50 patients were given IVB over three-day period. 1-2 ml (depending upon the number of patients) of Bevacizumab was withdrawn in a 3cc syringe. Later 1 cc insulin syringe with 29 G needle was taken and, 0.05 ml (1.25 mg) bevacizumab was injected from behind using the 3cc syringe, resulting in preparation of 10-20 injections of IVB. The bevacizumab vial was then stored at 4 degrees Celsius.

Results: Total 1690 eyes belonging to 1001 patients were analyzed. The occurrence of endophthalmitis was 2/1690 (0.12%) corresponding to a 95% CI of 0.03%-0.43%, which does not represent an increase in cases as compared to endophthalmitis resulting from using a compounding pharmacy.

Conclusion: Preparation of IVB from single vial technique using proper sterilization protocols is safe and economical in a minor eye operation theater.

Key Words: Bevacizumab, Intravitreal injection, Endophthalmitis

16. Immuno histo chemical evaluation of oestrogen receptors in adenoid cystic carcinoma of salivary gland

How to Cite: Hasan Mujtaba, Muhammad Atique, Iffat Batool, Muhammad Farooq Umer. Journal of Ayub Medical College Abbottabad: 29(4); 535-

Background: Oestrogen has a physiological role throughout the body including oral cavity. The effects are mediated by binding to two receptors in nucleus alpha and beta, which are ligand-activated transcription factors. The alpha receptors have a prognostic significance in cancer of breast while in Adenoid cystic carcinoma of salivary glands the results are inconsistent. This study was conducted to determine the oestrogen receptor Alpha staining in adenoid cystic carcinoma of salivary gland.

Methods: Paraffin blocks of thirty cases of adenoid cystic carcinoma of salivary gland were retrieved and evaluated through immune histo chemistry by anti-oestrogen antibody clone 1D5. The intensity and proportion of nuclear staining was scored using Allred scoring system.

Results: From total of thirty cases, 5 cases expressed as mild staining of oestrogen receptors using Allred scoring system. Three cases of cribriform and two cases from tubular pattern expressed positivity. In the case series selection of our study cohort there was no association seen in age, gender, site and histological type of tumour with the expression of oestrogen receptor.

Conclusion: Role of oestrogen is well established in breast cancers, some of salivary gland adenoid cystic carcinoma also express these receptors and could be involved in the pathogenesis. Further studies are recommended to seek possible explanation of variable staining pattern observed in many other studies, and also to determine the possible therapeutic use of tamoxifen in such tumors.

17. Prevalence and associated factors of dental caries, gingivitis, and calculus deposits in school children of sargodha district, Pakistan

How to Cite: Muhammad Farooq Umer, Umer Farooq, Arham Shabbir, Shumaila Zofeen, Hasan Mujtaba, Muhammad Tahir. Journal of Ayub Medical College Abbottabad: 28(1);152-156

Background: According to a pathfinder survey conducted by World Health Organization, dental caries is the single most common chronic childhood disease in Pakistan. The update information regarding dental health of school children of Sargodha district is required to plan community caries prevention programs and for better understanding of existing situation, and may improve longevity, treatment, and care.

Methods: This cross sectional study was conducted in four randomly selected schools of Sargodha district, stratified by gender selected. Two well-trained dentists examined the oral cavities of children for dental caries, gingivitis, and calculus deposits. The sample consisted of children aged between 3–12 years.

Results: The overall prevalence rate of gingivitis, calculus, and dental caries was found as 14.5%, 14.3%, and 45.9% respectively. A significant association was found between DMFT score ($p < 0.001$), gingivitis ($p < 0.01$), and calculus ($p < 0.05$) with the increase in age of children. More children living in urban area were detected with gingivitis ($p < 0.01$), calculus ($p < 0.01$), and dental caries than children residing in rural areas. Incidence of gingivitis ($p < 0.05$), calculus, and dental caries in primary ($p < 0.001$) and permanent teeth were found higher in those children who were not brushing their teeth. Experience of dental caries in primary teeth was found higher ($p < 0.01$) in children who brushed occasionally. Study also showed that none of the children ever visited dentist for treatment.

Conclusions: The results emphasize the need for initiation of awareness programs to achieve 0 DMFT/df scores.

18. Awareness of diabetic retinopathy among diabetic patients. Journal of the Pakistan Medical Association.

How to Cite: Rizwan, Amna & Sufyan, Abu & Asghar, Asfandyar & Khan, Haamid & Rabbani, Muhammad. (2020). Awareness of diabetic retinopathy among diabetic patients. Journal of the Pakistan Medical Association. 10.47391/JPMA.897. 11

Objectives: To assess the awareness of diabetic patients about diabetic 12 retinopathy.
Method: The cross-sectional study was conducted at the Ophthalmology 14 Department, Fauji Foundation Hospital, Rawalpindi, Pakistan, from April 2018 to April 2019, and comprised diabetic patients of either gender aged 21-80 years. A pre-tested semi-structured questionnaire was used to collect data on 17 socio-demographic, diabetes and diabetic

retinopathy characteristics. 18 Fundoscopic examinations were done, and the presence and stage of diabetic retinopathy were documented. Data was analyzed using SPSS 20.

Results: Of the 132 subjects, 9(6.8%) were male and 123(93.2%) were females. The majority 64(48.5%) was aged 61-80 years. Overall, 74(56.1%) patients were aware that diabetes could affect their eyes, 57(43.2%) were never diagnosed with diabetic retinopathy, 76(57.6%) had gained information about diabetic retinopathy from ophthalmologists, 61(46.2%) and 29(22%) respondents reported that eyes should be examined 'only when vision is affected' and 'every 6 months' respectively, 98(74.2%) said the biggest barrier in getting eyes examined earlier was 'lack of knowledge', 23(17.4%) believed surgery was done for diabetic retinopathy treatment and 33(25%) believed that surgery, laser and injections all can be used. Significant relationship of diabetic retinopathy was found with duration of diabetes and the general health status ($p < 0.05$).
Conclusion: Though more than half the patients were aware that diabetes could affect the eyes, awareness of diabetic retinopathy and its consequences was low.

19. Immediate Effect of Intravitreal Bevacizumab Injection on Intraocular Pressure.

How to Cite: Zafar, Rabeeah & Rizwan, Amna & Naeem, Badar ud din & Asghar, Asfandyar & Obaid, Naila. (2020). Immediate Effect of Intravitreal Bevacizumab Injection on Intraocular Pressure. Pakistan Journal of Ophthalmology. 412-417. 10.36351/pjo.v36i4.1109.

Purpose: To determine the immediate effect of intravitreal Bevacizumab on intraocular pressure (IOP) in eyes with retinal vascular disorders.
Study Design: Interventional case series.

Methods: Patients of both genders between 15-80 years of age suffering from retinal pathologies and suitable for intravitreal bevacizumab were included in the study. Systemic diseases like diabetes mellitus, hypertension and asthma were also considered in the data as an effect modifier for IOP change. IOP was measured before intravitreal injection (baseline) and at 5 and 30 minutes post-injection. Descriptive statistics were obtained using SPSS version 21.0.

Results: One hundred and thirty-one eyes of 131 patients were included in the study out of which 23 (18%) were males and 108 (82.4%) were females. Mean age was 57.57 ± 13.09 years. Mean IOP at baseline was 16.16 ± 2.52 mm Hg which increased to a maximum of 44 mm Hg at 5 minutes after injection in 108 eyes (82.4%), $p = 0.005$ (≤ 0.05). At 30 minutes the IOP had fallen back to normal in 94 eyes (71.7%), $p = 0.081$. IOP rise was not significantly correlated to gender, age, hypertension and asthma at any interval (p value > 0.05). However, IOP rise was significantly correlated in diabetic patients at 30 minutes.

Conclusion: Significant IOP elevation has been observed after intravitreal bevacizumab in immediate post-injection period which warrants the monitoring of IOP in this critical period to avoid serious blinding complications.

20. Perception of peer learning, As an innovative learning strategy among first Year Medical Students lacking senior guidance.

How to Cite: Khalid AM, Sadiq N, Anjum AF, Hashmi IN, Aslam M, Hamid S, Hussain G, Hashmi SN, Safdar M. Perception of Peer learning, as an innovative learning strategy among first year medical students lacking senior guidance. Professional Med J 2020; 27(9):1895-1901.DOI: 10.29309/TPMJ/2020.27.09.4294

Objectives: To know the perception of peer-learning among first batch of 1st year medical students in CMH Kharian Medical College. Study Design: Cross-Sectional study. Setting: CMH Kharian Medical College. Period: June 2018 and September 2018. Material &

Methods: Questionnaire was distributed among hundred first year medical students on self-Reflection and feedback after 15 min power point presentation given by their fellow students based on different patho physiological scenarios.

Results: Out of 100 students, 85 filled out questionnaire form completely. 60% of students were of the opinion that peer-learning facilitated them to perform better in the exam, and can be continued for future batches. 50% of Students agreed that this innovative learning modality was conducted in a systematic manner, helped them to improve their understanding of the subject and learning was fostered based on the principles of self-reflection and feedback. Problem solving ability was improved by peer learning format according to 49% of students, while 47% of students reported that this innovative learning strategy provided them with a tool to improve their learning through interaction, while research capabilities of 37% students were improved. Conclusion: Majority of first year medical students lacking senior guidance learned better in a comfortable environment from their peers, and improved understanding of the core subject by realizing the implication of the concept of self-reflection and feedback.

Key words: Feedback, Peer-Learning, Questionnaire, Self-Reflection.

21. Preferences of visiting Fast food outlets and nutritional knowledge among adolescents in Rawalpindi City.

How to Cite: Gulrukh, Saba & Kawish, Ayesha & Sharif, Hina. (2020). Preferences of visiting Fast food outlets and nutritional knowledge among adolescents in Rawalpindi City. International Journal of Advanced Research. 08. 603-611. 10.21474/IJAR01/10817.

Objective: This study was designed to measure the various preferences for visiting fast food and general nutritional knowledge of adolescents in international fast food outlets of Rawalpindi city.

Methods: A cross-sectional study was done in Rawalpindi city using a multistage random sampling method to select 330 respondents in the age group of 13 to 19 years selected conveniently. A data tool comprising a self-administered structured questionnaire was applied.

The tool gathered Socio demographic, Preference, and General Nutritional Knowledge data. Chi-square test was applied to determine the associations of the independent variable (Socio demographic characteristics) with the two dependent variables (Preferences of fast food and General Nutritional Knowledge).

Results: Overall, 66.2% of adolescents were visiting fast food outlets more than once per week. The primary preference for visiting fast food outlets in adolescents was entertainment (49.4%) and convenience (43.9%). The distance of outlets and working status of parents were also important factors (59.9% and 60.1% respectively) their significant p-values were p-value = 0.021 and p-value = 0.011 respectively. However, General nutritional knowledge was poor (~52%). Financial stability determined by permanent housing and distance were significant with the knowledge their p-values were (p-value = 0.010 and p-value = 0.000 respectively)

Conclusion: The study concluded that preferences behind fast food eating are entertainment and convenience which is linked with the working status of parents and outlet distance while those have permanent houses and again a close distance of outlets is linked with knowledge. It seems like financial stability can lead to better education and hence can be one of the factors of better overall general nutritional knowledge. However, there is no relationship between preferences and nutritional knowledge.

22. Association of Critical Thinking and Curriculum for college students; A challenge for developing countries to achieve SDG four.

How to Cite: Ellahi A, Sharif H. Association of Critical Thinking and Curriculum for college students; A challenge for developing countries to achieve SDG four. JAMC. Vol 32, No 2 (2020)

Background: Present challenge for sustainable development goal four is quality of education for all. Critical thinking is the most important skill that an educational institute gives to students and it should be learning outcome at all levels of education. This study aimed to identify critical thinking and its association with curriculum among college students of Rawalpindi, Pakistan.

Methods: It was cross-sectional study with 400 college students from federal and Cambridge system selected by multistage random sampling. Structured questionnaire was used with two sections, i.e., demographic and Cornell critical thinking version X. Cronbach's alpha was 0.85. Chi square test of association was used for overall and stratified data for inferential analysis.

Results: Study showed that overall, 64% of students had high critical thinking (40.2 ± 10.4). Chi-square test of independence showed significant relation of critical thinking with curriculum, family economic status, being first child, extra-curricular activities, availability of school playground and career counseling services to the students (p-value < 0.05). Stratified analysis showed gender and availability of play ground to be associated with critical thinking for federal while for Cambridge system, living with single or both parents, working status of father, sports week and school playground were significantly associated.

Conclusion: Overall results suggested that curriculum does have an effect on the critical thinking of students along with facilities available at school. There is need to synergize theoretical and practical approaches in all curriculums to reduce educational inequities. It is needed for growth of our students and to achieve SDG 4 (to ensure inclusive and equitable quality education) in true spirit.

Keywords: Critical thinking; Cornell critical thinking tool; Curriculum; Students; Cambridge system; Federal system; Pakistan

23. Knowledge and perception of expecting and Lactating women about Exclusive Breast feeding attending Ayub Teaching Hospital, Abotabad

How to Cite: Kiran Tariq, Babar Tasneem Shaikh, Naila Azam, Farrah Pervaiz, Ayesha Babar Kawish, Nigarish Javaid, Fazeela Younis, Humaira Mahmood. Knowledge and perception of expecting and Lactating women about Exclusive Breast feeding attending Ayub Teaching Hospital, Abotabad. 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 <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 un employed (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 newborn upto 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 breastfeeding, Prolactal feeding, Working mother, Workplace.

24. Job satisfaction and its determinants among child protection officers Punjab Pakistan. A Cross-Sectional Survey.

How to Cite: Zahoor, T., Kawish, A., Khan, N., Abid, A., Sharif, H., Urooj, U., & Butt, T. (2020). Job satisfaction and its determinants among child protection officers Punjab Pakistan. A Cross-Sectional Survey. Pakistan Armed Forces Medical Journal, 70(4), 1193-1200. Retrieved from <https://www.pafmj.org/index.php/PAFMJ/article/view/5120>

Objective: To assess the job satisfaction among officers, working in Child Protection and Welfare Bureau of Punjab (CPWB). Study Design: Cross sectional study. Place and Duration of Study: Study conducted in 7 working Child Protection and Welfare Bureaus of Punjab, from Nov 2018 to May 2019.

Methodology: There are 7 Child Protection and Welfare Bureaus in Punjab and 75 child protection officers all are selected for census data collection. The study has been done on child protection officers of Punjab.

Results: Fifty three percent were male respondents and female were 47% while married respondents were 40 (60%). Education status was postgraduate and M. Phil 18 (25%). Permanent employees were 40(57%) and mostly (40%) had experience of work more than 10 years. Fifty seven percent (n=40) child protection officers were unsatisfied for nature of work. Sixty two (88.6%) were unsatisfied with their interpersonal relationships with co-workers. Thirty seven (52.9%) were unsatisfied due to their pay & allowances. Thirty eight (54.3%) were unsatisfied from working environment. Thirty eight (54.3%) were unsatisfied from training.

Conclusion: In conclusion, this study identified multiple factors that contribute to worker satisfaction. When adequate support is provided, there is a reduction in stress, which leads to higher levels of job satisfaction, and ultimately retention of staff.

Keywords: Child protection, Interpersonal relationship, Job satisfaction, Work experience

25. Frequency of major types of manifest strabismus among patients of age group 1 to 25 years presented to Benazir Bhutto Hospital, Rawalpindi

How to Cite: Asif, Muhammad & Habiba, Ume & Khan, Waqas & Kawish, Ayesha & Aneeb-ur-Rehman. (2017). Frequency of major types of manifest strabismus among patients of age group 1 to 25 years presented to Benazir Bhutto Hospital, Rawalpindi. Pakistan Journal of Medical and Biological Sciences. 1. 30-34.

Objectives: To find out the occurrence of different types of manifest strabismus in patients among the age group of (1-25 years) attending ophthalmology out-patient department at Benazir Bhutto Hospital Rawalpindi. Study Design: This was a cross-sectional study conducted within the time period of four months (Sep 2015 to Dec 2015).

Methods: By using Consecutive sampling technique a total of 150 strabismus patients were examined. Detailed evaluation of strabismus was carried out which included Visual Acuity measurement with Snellen chart and Lea symbols or assessed qualitatively through light fixation and follow; and by performing Cover tests and Krimsky test. All the tests were carried out with and without glasses, and at near and distance both. Cycloplegic refraction was done on children, by dilating them with 1% cyclopentolate eyedrops. Data was recorded on a performa.

Results: Overall occurrence of manifest strabismus was found to be 3.9%, with much greater frequency of Comitant type. 48.48% had ET out of which 51.56% was Accommodative ET, followed by 42.19% Constant ET & 6.25% Infantile ET. 51.51% had XT out of which 69.12% was Constant XT followed by 30.88% Intermittent XT. No pure vertical deviations were seen but 11.33% patients had co-existing vertical deviations with horizontal deviations. **Conclusion:** Comitant strabismus is more occurring than incomitant, with ET and XT having almost same proportion. Mostly occurring types are Accommodative ET, Constant ET, Constant XT and Intermittent XT. Amblyopia and refractive errors are often associated with it.

26. Chest X-rays findings in COVID 19 patients at a University Teaching Hospital - A descriptive study.

How to Cite: Durrani, Misbah & Haq, Inam & Kalsoom, Ume. (2020). Chest X-rays findings in COVID 19 patients at a University Teaching Hospital - A descriptive study. Pakistan Journal of Medical Sciences. 36. 10.12669/pjms.36.COVID19-S4.2778.

Objective: To analyze Chest X-ray findings in COVID 19 positive patients, presented at corona filtration center, Benazir Bhutto Hospital Rawalpindi, based on CXR classification of British Society of Thoracic Imaging (BSTI).

Methods: In this study, all RT-PCR COVID-19 positive patients screened at corona filtration center, Benazir Bhutto hospital Rawalpindi from 20th March 2020 to 10th April 2020 were included. Mean age of the cohort with age range was calculated. Presenting complaints & Co-morbid were analyzed and tabulated in frequencies and percentages.

Portable CXR findings were classified according to BSTI classification and documented in frequencies and percentages.

Results: Mean age of the patients was 44 years. Presenting complaints were cough 20 (67%), fever 18 (60%), shortness of breath 11 (37%), sore throat six (20%), loss of sense of taste and smell four (13%). Main co-morbid was hypertension six (20%). Two (7%) patients had normal and seven (23%) had classical COVID CXRs. 21 (70%) patients were in indeterminate group with only one (3%) having unilateral lung disease. Three (10%) patients had diffuse lung involvement and 18(60%) had peripheral lung involvement. Majority of patients 19 (63%), had bilateral middle and lower zonal involvement.

Conclusions: In this study, COVID-19 CXRs generally manifested a spectrum of pure ground glass, mixed ground glass opacities to consolidation in bilateral peripheral middle and lower lung zones. BSTI CXR reporting classification of COVID-19 is valid in our patients with addition of middle zonal involvement in classical COVID-19 criteria as opposed to just lower zone involvement.

27. Pars Plana Vitrectomy for Resistant Cystoid Macular Edema

How to Cite: Edema.Khan, Furqan & Qureshi, Naveed. (2019). Pars Plana Vitrectomy for Resistant Cystoid Macular Edema. Journal of the College of Physicians and Surgeons--Pakistan: JCPSP. 29. 1165-1168. 10.29271/jcpsp.2019.12.1165.

Objective: To evaluate the results of pars plana vitrectomy for cystoid macular edema (CME) resistant to medical treatment.

Study design: Quasi-experimental study Place and Duration of Study: Al-Shifa Trust Eye Hospital, Rawalpindi, from January to July 2019.

Methodology: This study recruited 30 eyes of 30 patients with cystoid macular edema confirmed on optical coherence tomography that was refractory to medical treatment. Eyes with diabetic fibrous proliferation, optic atrophy, neo-vascular glaucoma, membrane and macular retinal pigment epithelial atrophy were excluded from the study. All patients underwent 23 G pars plana vitrectomy followed by epiretinal membrane / internal limiting membrane (ERM/ILM) peeling and gas injection. In 11 eyes, perfluoropropane gas was injected; while in 19 eyes, sulfurhexafluoride gas was injected. Main outcome measures included pre- and post-op Snellen's visual acuity and central macular thickness (CMT). All patients completed their follow-up of six months.

Results: Mean age of 16 male and 14 female patients was 54.30 ± 3.70 years. Postoperative Snellen's visual acuity improved to 0.61 ± 0.08 from 0.11 ± 0.04 and postoperative central macular thickness improved to $223.80 \pm 40.20 \mu\text{m}$ from $578.00 \pm 26.57 \mu\text{m}$. Both differences were statistically significant ($p < 0.001$).

Conclusion: Pars plana vitrectomy with ERM / ILM peel and gas injection for CME refractory to medical treatment is an effective treatment. There was significantly improved

best corrected visual acuity (BCVA) postoperatively along with decreased CMT on optical coherence tomography (OCT).

28. Prophylaxis of Macular Edema with Peroperative Intravitreal Bevacizumab in Patients with Diabetic Retinopathy Undergoing Phacoemulsification

How to Cite: Sidra Jabeen, Rizwan Khan, Ali Raza. Prophylaxis of Macular Edema with Peroperative Intravitreal Bevacizumab in Patients with Diabetic Retinopathy Undergoing Phacoemulsification. Pak J Ophthalmol 2019, Vol. 35, No. 1

Purpose: To determine frequency of post-operative macular edema in patients with diabetic retinopathy receiving peroperative Intravitreal bevacizumab, as compared to controls after phacoemulsification cataract surgery.

Study Design: Randomized control trial. Place and Duration of Study: Ophthalmology department holy family hospital Rawalpindi from July, 2016 to January, 2017.

Materials and Methods: 60 patients who reported at the health care facility with diabetic retinopathy were included in the study. Out of these 30 were kept as control and 30 as cases. Data was collected and entered into SPSS version 19.0. Numerical variables were accounted for as mean and standard deviation whereas qualitative variables were accounted for as frequency and percentages. To compare the occurrence of macular edema at completion of 6 weeks in both study groups, Pearson's chi-square test at 5% level of significance was applied. A p-value of 0.05 was considered as statistically significant. To control effect modifier by gender, and age, stratified analysis was also executed.

Results: The participants of the study had mean age of 61.97 ± 5.7 years. Out of the 60 patients 33 (55%) were female. Analysis of both groups showed that macular edema was found in 4 (13.33%) patients in control group and 17 (56.67%) patients in group B. Most significant macular edema was seen in 11 patients in age group of 61-70 years. Gender wise stratification showed that 9 (56.5%) female patients reported with macular edema. **Conclusion:** Preoperative Intravitreal Bevacizumab is effective in prophylaxis of macular edema in patients with mild to moderate NPDR, as compared to controls,

Keywords: NPDR, Intravitreal Bevacizumab, Diabetic Retinopathy, Macular edema, Phacoemulsification surgery.

29. Frequency of Helicobacter Pylori in Patients with Primary Open Angle Glaucoma

How to Cite: Muhammad Sufyan Aneeq Ansari, Faisal Mah ZKOM. Frequency of Helicobacter Pylori in Patients with Primary Open Angle Glaucoma. pjo [Internet]. 1Jul.2019 [cited 16Dec.2020]; 35(3). Available from: <https://pjo.org.pk/index.php/pjo/article/view/962>

Purpose: To find out the frequency of Helicobacter pylori (H. pylori) antibody in the serum of people with established POAG.

Study Design: Cross Sectional Study. Place & Duration of Study: LRBT Free Eye Hospital, Lahore from 1st July 2012 to 1st January 2013.

Material and Methods: All patients attending the glaucoma unit of the outpatient department with primary open angle glaucoma willing to be included in the study were enrolled using consecutive sampling. After collecting demographic information of the patients 3 ml of venous blood was withdrawn. Later on processing was done using the chemiluminescent enzyme immunoassay of the Immulite 2000 systems analyzers H. pylori IgG detection kit. Quantitative variable such as age was presented as mean and standard deviation while qualitative variables such as gender and H. pylori status (positive or negative) were expressed as frequencies and percentages.

Results: There were 100 patients included in the study with mean age of 50.45 \pm 6.16 years. There were 49 (49%) male and 51 (51%) female patients. The mean antibody level of patients was 3.80 \pm 2.57 with a range of 9.39. The minimum and maximum antibody levels were 0.07 and 9.46 respectively. There were 75 (75%) patients having primary open angle glaucoma who were diagnosed positive with H. pylori. Conclusion: The study shows high frequency of H. pylori antibody in patients with Open Angle Glaucoma.

Key Words: Optic Neuropathy, Open angle Glaucoma, Helicobacter Pylori.

30. Manual Sutureless Cataract Surgery (MSCS) in Patients with Pseudo-Exfoliation

How to Cite: Iqbal Y, Khan QA, Qureshi MUA, Hassan M. Manual Sutureless Cataract Surgery (MSCS) in Patients with Pseudo-Exfoliation. Pak J Ophthalmol. 2020; 36(4):391-395. Doi: <https://doi.org/10.36351/pjo.v36i4.1097>

Purpose: To document the complications of Manual suture-less cataract surgery in eyes with pseudo-exfoliation.

Study Design: Interventional case series.

Place and Duration of Study: Naseer memorial hospital, Dadyal, Azad Jammu Kashmir, from 4 July 2017 to 3 July 2019. **Methods:** One hundred and fifty patients with pseudo-exfoliation (PEX) and cataract were selected by convenient sampling. Patients with systemic diseases, history of trauma, intraocular pressure ≥ 15 mm Hg on Applanation tonometry and any other associated ocular disease for example retinal detachment or retinal disease, previous history of glaucoma or narrow/closed angle on Gonioscopy were excluded from the study. Dark brown cataracts were also excluded. Pseudo-exfoliation was diagnosed on slit lamp on the basis of presence of dandruff like material on the pupil and the anterior lens capsule. The patients underwent manual suture less cataract surgery under local anesthesia. Intraoperative and post-operative complications were noted. First day postoperatively. The collected data and analyzed using statistical package for social sciences (SPSS) version 21 for analysis.

Results: The study group consisted of 64% males and 36% females with mean age of 65 ± 15.32 years. The most common difficulty encountered was poor pupil dilatation in 37.3% cases followed by Zonular dehiscence in 7.3%. On the first post-operative day of, the most common complication was intraocular lens decentration in 2.6% of the cases.

Conclusion: Pupils of patients with pseudo-exfoliation dilate poorly and makes surgery difficult. With good pupillary dilatation, careful capsulorhexis and minimal stress on the zonules, MSCS can be safely performed in eyes with cataract and PEX.

Key Words: Pseudo-exfoliation, Cataract, Pupil.

31. Incidence of micro detachments and sclera buckling surgery for macula off retinal detachments

How to Cite: Abdullah Naeem Syed, Isra Batool, Haleema Masud, Nadeem Qureshi Al-Shifa Trust Eye Hospital, Rawalpindi Pakistan

Objective: To determine the incidence of micro detachments and change in mean height of persistent sub-retinal fluid (SRF) in eyes that underwent successful scleral buckling surgery for macula-off rhegmatogenous retinal detachment (RRD).

Study Design: Prospective cohort study. Place and Duration of Study: Retina Department, Al Shifa Trust Eye Hospital Rawalpindi, from Jan 2016 to Dec 2016. Methodology: Thirty two patients that underwent successful scleral buckling surgery for macula-off RD were included in the study. Pre-operative assessment including retinal examination by slit-lamp bio microscopy was carried out before surgery. Post-operative assessment included best corrected visual acuity (BCVA) with a Snellen chart and optical coherence tomography (OCT) by OCT Spectralis, Heidelberg Engineering. The post-operative assessment was performed at 1 week, 1 month, 3 months and 6 months after surgery.

Results: The incidence of micro detachments was 31.25% (10 patients) as detected by presence of sub-retinal fluid on optical coherence tomography at one week postoperative and 9.38% (3 patients) at six months after surgery while the base population was considered to be 32. The mean height of persistent sub-retinal fluid decreased significantly at all 4 time-points after the surgery. Mean height of SRF at 1 week, 1 month, 3 months and 6 months after surgery was $357.42 \pm 114.25\mu\text{m}$, $303.67 \pm 107.57\mu\text{m}$, $267.36 \pm 106.79\mu\text{m}$ and $240.45 \pm 19.77\mu\text{m}$ respectively.

Conclusion: Incidence of micro detachments decreased significantly after scleral buckling surgery up to a period of 6 months with only a small fraction of patients having persistent sub-retinal fluid after 6 months of surgery.

Keywords: Macula-off retinal detachment, Micro detachments, Scleral buckling surgery

32. Barriers towards cataract surgery among patients visiting tertiary eye care hospital Rawalpindi

How to Cite: Asifa Nawaz, Ume Sughra, Sultana Kausar. Barriers towards cataract surgery among patients visiting tertiary eye care hospital Rawalpindi. ASJO.

Background: Cataract is one of the commonest causes of avoidable blindness in Pakistan. So Barriers that delay the surgical uptake in cataract patients become important investigation.

Objective: To evaluate the barriers towards cataract surgery among patients visiting the Out Patient Department of Tertiary Eye Care Hospital, Rawalpindi.

Materials and methods: It was a cross sectional study which was carried out at general OPDs (both paid and non-paid categories) of Tertiary Eye Care Hospital, Rawalpindi. Three hundreds and forty patients were interviewed by consecutive non-random sampling technique. Structured questionnaire was used with informed consent to collect the data.

Results: Major barriers reported in the study were non-availability of eye hospital near home 69.7% (237), unawareness of cost effective treatment of cataract 67.1% (228), fear of surgery 58.2% (198), lack of knowledge about eye hospital in public/private sector 56.2 (191), difficulty to visit an eye hospital 54.7% (186) and non-affordability of free surgery locally as 51.8% (176) pay more than thousand rupees fare for one turn to go an eye hospital.

Conclusions: Non- availability, lack of awareness, non-affordability, transport and fear of surgery were the major factors delaying cataract surgery.

Key Words: Cataract, Barriers, Cataract surgery, awareness

33. MULTIDRUG-RESISTANT TUBERCULOSIS AMONG CHILDREN UNDER 15 YEARS OF AGE IN KHYBER PAKHTUNKHWA PROVINCE AND FEDERALLY ADMINISTERED TRIBAL AREAS PAKISTAN

How to Cite: Umer Farooq, Ayesha Babar, Ume Sughra et al. Multidrug-Resistant Tuberculosis among children under 15 years of age in Khyber Pakhtunkhwa province and Federally Administered Tribal Areas Pakistan. J App Pharm. Vol. 12: 2020. p. 82

Background: Tuberculosis is re-emerging in the form of drug resistant causing deaths of humans throughout the world. In 2015, WHO estimates, this disease developed in 10.4 million and causes death in 1.8 million human population. Moreover, new challenges like TB/HIV coinfection, MDR-TB is resisting to the preventive measures for controlling TB worldwide. Emergence of MDR-TB is becoming a global threat now.

Objectives: To find out the frequency and associated factors of MDR-TB among children under 15 years of age in KPK province and FATA Pakistan. Methods: Cross sectional and quantitative study design was applied. Data was collected from patient's registration files (n = 100) at four (4) PMDT sites of National Tuberculosis control program Pakistan in Khyber Pakhtunkhwa Province and FATA.

Results: Children having previously history for TB treatment failure were found 4-9 times more probable (95% CI, Odds Ratio 4.08,8.864) to develop MDR-TB while 64-84% of other previously treated patient by private sectors are not likely to developed MDR-TB (95% CI, Odds Ratio 0.158,0.366) than all other types of previously treated cases. National TB control program Pakistan may be able to use these findings to develop strategic programs to address the treatment failure.

Conclusion: The public and private health care providers need proper monitoring and surveillance, which may potentially, improved the overall quality of health care services and assures the treatment of the resistant TB among children less than 15 years of age in developing countries. We may then achieve the Millennium Development Goals of World Health Organization. Keywords: Tuberculosis, children, Pediatric, epidemiology, drug resistance, DOT Plus, overcrowding, childhood illness, respiratory tract infection, PMDT.

34. Global Retinoblastoma Presentation and Analysis by National Income Level Global Retinoblastoma Study Group

How to Cite: Global Retinoblastoma Study Group. Global Retinoblastoma Presentation and Analysis by National Income Level. *JAMA Oncol.* 2020;6(5):685–695. doi:10.1001/jamaoncol.2019.6716

OBJECTIVES: To report the retinoblastoma stage at diagnosis in patients across the world during a single year, to investigate associations between clinical variables and national income level, and to investigate risk factors for advanced disease at diagnosis.

DESIGN, SETTING, AND PARTICIPANTS: A total of 278 retinoblastoma treatment centers were recruited from June 2017 through December 2018 to participate in a cross-sectional analysis of treatment-naïve patients with retinoblastoma who were diagnosed in 2017.

MAIN OUTCOMES AND MEASURES: Age at presentation, proportion of familial history of retinoblastoma, and tumor stage and metastasis.

RESULTS: The cohort included 4351 new patients from 153 countries; the median age at diagnosis was 30.5 (interquartile range, 18.3-45.9) months, and 1976 patients (45.4%) were female. Most patients (n = 3685 [84.7%]) were from low- and middle-income countries (LMICs). Globally, the most common indication for referral was leukocoria (n = 2638 [62.8%]), followed by strabismus (n = 429 [10.2%]) and proptosis (n = 309 [7.4%]). Patients from high-income countries (HICs) were diagnosed at a median age of 14.1 months, with 656 of 666 (98.5%) patients having intraocular retinoblastoma and 2 (0.3%) having metastasis. Patients from low-income countries were diagnosed at a median age of 30.5 months, with 256 of 521 (49.1%) having extraocular retinoblastoma and 94 of 498 (18.9%) having metastasis. Lower national income level was associated with older presentation age, higher proportion of locally advanced disease and distant metastasis, and smaller proportion of familial history of retinoblastoma. Advanced disease at diagnosis was more common in LMICs even after adjusting for age (odds ratio for low-income countries vs upper-middle-income countries and

HICs, 17.92 [95% CI, 12.94-24.80], and for lower-middle-income countries vs upper-middle-income countries and HICs, 5.74 [95% CI, 4.30-7.68]).

CONCLUSIONS AND RELEVANCE: This study is estimated to have included more than half of all new retinoblastoma cases worldwide in 2017. Children from LMICs, where the main global retinoblastoma burden lies, presented at an older age with more advanced disease and demonstrated a smaller proportion of familial history of retinoblastoma, likely because many do not reach a childbearing age. Given that retinoblastoma is curable, these data are concerning and mandate intervention at national and international levels. Further studies are needed to investigate factors, other than age at presentation, that may be associated with advanced disease in LMICs

35. Effect of trabeculectomy on corneal astigmatism in glaucoma patients: A Hospital Based Study

How to Cite: Daniyal Ali Hashmi, Ume Sughra, Kausar Sultana. Effect of trabeculectomy on corneal astigmatism in glaucoma patients: A Hospital Based Study. PJO. 2021; 15(3)

Purpose:

The purpose of the study was to find out the effect of trabeculectomy on corneal astigmatism among glaucoma patients.

Material and Method:

A quasi experimental study was conducted in glaucoma department of tertiary eye care hospital Rawalpindi from August 2015 to February 2016 on thirty glaucoma patients who were advised trabeculectomy. Pre and post trabeculectomy data was collected by a structured questionnaire with clinical proforma. Snellen chart was used to measure visual acuity. Autorefractometer was used to find K-readings, corneal astigmatism and its axis. Data was entered in SPSS 22. Descriptive analysis was done to report frequencies and 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 were males (19, 76%). Mean visual acuity pre trabeculectomy was found 0.81 ± 1.33 logmar and 0.84 ± 1.37 logmar post trabeculectomy. There was a statistically significant difference in overall corneal astigmatic power (Diopters) pre and post trabeculectomy has found ($p < 0.05$).

Conclusion: The trabeculectomy procedure results in significant change of corneal curvature in both meridians.

Key Words: Glaucoma, Trabeculectomy, Corneal Astigmatism, Visual acuity, K- Readings

36. Uncovering the reasons and ethical concerns behind publishing in a Predatory journal

How to Cite: Dr. Ume Sughra, Dr. Muhammad Imran, Sultana Kausar. ISRA Med Journal. Preprint

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 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

37. Prevalence and determinants of smoking among male medical students of twin cities of Pakistan

How to Cite: Sughra U, Imran M. (2020). Prevalence and determinants of smoking among male medical students of twin cities of Pakistan. . *Isra Med J.* 2019; 11(5): 407-410.

Abstract: This descriptive cross-sectional study was conducted at Foundation University Medical College (FUMC) Islamabad from 1st January - 30th September, 2014 to determine the prevalence and determinants of smoking, among male medical students of Rawalpindi and Islamabad. The results shows that out of the total 23% of the participants were smokers, 10.3% were ex-smokers and 66.7% did not smoke ever. Among smokers 57% were already smoking and 43% after joining the medical school. Stress was considered as a major triggering factor for smoking by 44% of the students. Among all students 95% were well aware of its side-effects while 51% of smoker students tried to quit among which relapse was seen in 44%. These results showed that high prevalence of smoking was observed among male medical students of Rawalpindi and Islamabad. Stress was found to be the major triggering factor for smoking followed by fun seeking and peer pressure.

Keywords: Smoking, Prevalence, Male medical students, Medical institutions, Stress

38. Exome sequencing in patients with microphthalmia, anophthalmia and coloboma (MAC) from a consanguineous population

How to Cite: Islam, F., Htun, S., Lai, L. W., Krall, M., Poranki, M., Martin, P. M., Sobreira, N., Wohler, E. S., Yu, J., Moore, A. T., & Slavotinek, A. M. (2020). Exome sequencing in patients with microphthalmia, anophthalmia, and coloboma (MAC) from a consanguineous population. *Clinical genetics*, 98(5), 499–506.

Abstract

Next-generation sequencing strategies have resulted in mutation detection rates of 21-61% in small cohorts of patients with microphthalmia, anophthalmia and coloboma (MAC), but despite progress in identifying novel causative genes, many patients remain without a genetic diagnosis. We studied a cohort of 19 patients with MAC who were ascertained from a population with high rates of consanguinity. Using single nucleotide polymorphism (SNP) arrays and whole exome sequencing (WES), we identified one pathogenic variant in *TENM3* in a patient with cataracts in addition to MAC. We also detected novel variants of unknown significance in genes that have previously been associated with MAC, including *KIF26B*, *MICU1* and *CDON*, and identified variants in candidate genes for MAC from the Wnt signaling pathway, comprising *LRP6*, *WNT2B* and *IQGAP1*, but our findings do not prove causality. Plausible variants were not found for many of the cases, indicating that our current understanding of the pathogenesis of MAC, a highly heterogeneous group of ocular defects, remains incomplete.

39. Publishing in a Predatory Journal: An Ethical Dilemma

How to Cite: Sughra U. Publishing in a Predatory Journal: An Ethical Dilemma. *Al-Shifa Journal of Ophthalmology* 2019; 15(4): 174-180.

Abstract: Journals that lack the heart of prestigious scholarly journals that is peer review and editorial board are known as predatory journals. There are certain hallmark features of these predatory journals in addition to processing fee and lack of peer review. The journal's title includes national or international affiliation that does not match its editorial board, poorly maintained website, date for release of issue that never appears on due date and errors in titles and abstracts.

40. Spatiotemporal Clustering Analysis of Malaria Infection in Pakistan

How to Cite: Umer MF, Zofeen S, Majeed A, Hu W, Qi X, Zhuang G. Spatiotemporal Clustering Analysis of Malaria Infection in Pakistan. *Int J Environ Res Public Health*. 2018 Jun 7;15(6):1202. doi: 10.3390/ijerph15061202. PMID: 29880778; PMCID: PMC6025434.

Abstract: Despite tremendous progress, malaria remains a serious public health problem in Pakistan. Very few studies have been done on spatiotemporal evaluation of malaria infection in Pakistan. The study aimed to detect the spatiotemporal pattern of malaria infection at the district level in Pakistan, and to identify the clusters of high-risk disease areas in the country. Annual data on malaria for two dominant species (*Plasmodium falciparum*, *Plasmodium vivax*) and mixed infections from 2011 to 2016 were obtained from the Directorate of Malaria Control Program, Pakistan. Population data were collected from the Pakistan Bureau of Statistics. A geographical information system was used to display the spatial distribution of malaria at the district level throughout Pakistan. Purely spatiotemporal clustering analysis was performed to identify the high-risk areas of malaria infection in Pakistan. A total of 1,593,409 positive cases were included in this study over a period of 6 years (2011–2016). The maximum number of *P. vivax* cases (474,478) was reported in Khyber Pakhtunkhwa (KPK). The highest burden of *P. falciparum* (145,445) was in Balochistan, while the highest counts of mixed *Plasmodium* cases

were reported in Sindh (22,421) and Balochistan (22,229), respectively. In Balochistan, incidence of all three types of malaria was very high. Cluster analysis showed that primary clusters of *P. vivax* malaria were in the same districts in 2014, 2015 and 2106 (total 24 districts, 12 in Federally Administered Tribal Areas (FATA), 9 in KPK, 2 in Punjab and 1 in Balochistan); those of *P. falciparum* malaria were unchanged in 2012 and 2013 (total 18 districts, all in Balochistan), and mixed infections remained the same in 2014 and 2015 (total 7 districts, 6 in Balochistan and 1 in FATA). This study indicated that the transmission cycles of malaria infection vary in different spatiotemporal settings in Pakistan. Efforts in controlling *P. vivax* malaria in particular need to be enhanced in high-risk areas. Based on these findings, further research is needed to investigate the impact of risk factors on transmission of malaria in Pakistan.

Keywords: Malaria; incidence rate; spatiotemporal clustering; spatial cluster analysis; Pakistan

41. Effects of Socio-Environmental Factors on Malaria Infection in Pakistan: A Bayesian Spatial Analysis

How to Cite: Umer MF, Zofeen S, Majeed A, Hu W, Qi X, Zhuang G. Effects of Socio-Environmental Factors on Malaria Infection in Pakistan: A Bayesian Spatial Analysis. *Int J Environ Res Public Health*. 2019 Apr 16;16(8):1365. doi: 10.3390/ijerph16081365. PMID: 30995744; PMCID: PMC6517989.

Abstract: The role of socio-environmental factors in shaping malaria dynamics is complex and inconsistent. Effects of socio-environmental factors on malaria in Pakistan at district level were examined. Annual malaria cases data were obtained from Directorate of Malaria Control Program, Pakistan. Meteorological data were supplied by Pakistan Meteorological Department. A major limitation was the use of yearly, rather than monthly/weekly malaria data in this study. Population data, socio-economic data and education score data were downloaded from internet. Bayesian conditional autoregressive model was used to find the statistical association of socio-environmental factors with malaria in Pakistan. From 136/146 districts in Pakistan, >750,000 confirmed malaria cases were included, over a three years' period (2013–2015). Socioeconomic status ((posterior mean value -3.965 , (2.5% quintile, -6.297%), (97.5% quintile, -1.754%)) and human population density (-7.41×10^{-4} , -0.001406% , -1.05×10^{-4} %) were inversely related, while minimum temperature (0.1398, 0.05275%, 0.2145%) was directly proportional to malaria in Pakistan during the study period. Spatial random effect maps presented that moderate relative risk (RR, 0.75 to 1.24) and high RR (1.25 to 1.99) clusters were scattered throughout the country, outnumbering the ones' with low RR (0.23 to 0.74). Socio-environmental variables influence annual malaria incidence in Pakistan and needs further evaluation.

Keywords: Socio-climate variables; malaria; Pakistan; Bayesian CAR model

42. Spatiotemporal clustering analysis of Expanded Program on Immunization (EPI) vaccination coverage in Pakistan

How to Cite: Umer MF, Zofeen S, Hu W, Qi X, Zhuang G. Spatiotemporal clustering analysis of Expanded Program on Immunization (EPI) vaccination coverage in Pakistan. *Sci Rep.* 2020 Jul 3;10(1):10980. doi: 10.1038/s41598-020-67839-0. PMID: 32620798; PMCID: PMC7335212.

Abstract: Universal vaccination coverage is still far from desired targets in many global regions including Pakistan, despite the success stories and its scientifically proven benefits. EPI Pakistan vaccination coverage data 2012–2016, at district level was collected from Federal EPI Pakistan. District-wise population data were collected from Pakistan Bureau of Statistics. Descriptive statistics and sequence plots were performed in SPSS 13.0. Purely spatial scanning analysis was done in SaTScan 9.4.4 using discrete Poisson model for detection of low vaccination coverage clusters. Geographical information system (GIS) was used to display spatial patterns and clusters of low vaccination coverage districts in Pakistan. Average annual EPI vaccination coverage in each study year were; 70.98 in 2012, 69.39% in 2013, 66.74% in 2014, 61.47% in 2015, and 67.01% in 2016, respectively. Cumulative average national vaccination rate (2012–2016) for all types of EPI vaccines was 60.60%. Average national vaccination rate for BCG, OPV3, pentavalent3 and measles1 was 67.12%, 58.53%, 58.47%, and 58.29%, respectively. Spatial cluster analysis demonstrated that most of low coverage districts for BCG, OPV3 and pentavalent3 were from FATA and KPK; while measles1 low coverage districts belonged to Balochistan. Future research should probe factors involved in low vaccination coverage in high risk districts.

43. Spatiotemporal cluster analysis of malaria incidence in Pakistan, 2011-2016

How To Cite: Muhammad Farooq Umer, Shumaila Zofeen, Guihua Zhuang, Wenbiao Hu, Xin Qi: *Journal Malaria Journal*;16 (1):1-12

Abstract

Despite tremendous progress, malaria remains a serious public health problem in Pakistan. Very few studies have been done on spatiotemporal evaluation of malaria infection in Pakistan. The study aimed to detect the spatiotemporal pattern of malaria infection at the district level in Pakistan, and to identify the clusters of high-risk disease areas in the country. Annual data on malaria for two dominant species (*Plasmodium falciparum*, *Plasmodium vivax*) and mixed infections from 2011 to 2016 were obtained from the Directorate of Malaria Control Program, Pakistan. Population data were collected from the Pakistan Bureau of Statistics. A geographical information system was used to display the spatial distribution of malaria at the district level throughout Pakistan. Purely spatiotemporal clustering analysis was performed to identify the high-risk areas of malaria infection in Pakistan. A total of 1,593,409 positive cases were included in this study over a period of 6 years (2011–2016). The maximum number of *P. vivax* cases (474,478) was reported in Khyber Pakhtunkhwa (KPK). The highest burden of *P. falciparum* (145,445) was in Balochistan, while the highest counts of mixed *Plasmodium* cases

were reported in Sindh (22,421) and Balochistan (22,229), respectively. In Balochistan, incidence of all three types of malaria was very high. Cluster analysis showed that primary clusters of *P. vivax* malaria were in the same districts in 2014, 2015 and 2106 (total 24 districts, 12 in Federally Administered Tribal Areas (FATA), 9 in KPK, 2 in Punjab and 1 in Balochistan); those of *P. falciparum* malaria were unchanged in 2012 and 2013 (total 18 districts, all in Balochistan), and mixed infections remained the same in 2014 and 2015 (total 7 districts, 6 in Balochistan and 1 in FATA). This study indicated that the transmission cycles of malaria infection vary in different spatiotemporal settings in Pakistan. Efforts in controlling *P. vivax* malaria in particular need to be enhanced in high-risk areas. Based on these findings, further research is needed to investigate the impact of risk factors on transmission of malaria in Pakistan. Keywords: malaria; incidence rate; spatiotemporal clustering; spatial cluster analysis; Pakistan

44. Assessment of diabetic retinopathy and diabetes management systems in Pakistan using a WHO tool

How to Cite: Afghani, Tayyab & Khan, Samina & Mansoor, Hassan & Nisar, Sana & Waseem, Shehzad. (2020). Assessment of diabetic retinopathy and diabetes management systems in Pakistan using a WHO tool. *Journal of the Pakistan Medical Association*. 70. 1. 10.5455/JPMA.12450

Abstract: Using WHO questionnaire known as TADDS (Tool for Assessment of Diabetic Retinopathy and Diabetes Management System), a country wide survey was conducted to assess the health care system for diabetes mellitus (DM) and diabetic retinopathy (DR). This would also provide any evidence of the presence and usefulness of links between the two. A total of 190 key informants for DR and DM services from 47 districts were interviewed. The answers were reviewed and any disagreement was resolved through discussion with stakeholders'. The final results were disseminated. The results showed that diabetes is listed as a priority; national plan exists but programme has not been implemented. Health professionals are unaware about Ministry of Health guidelines. There is infrequent networking between DM and DR care providers. Transport and cost are the main barriers for accessing these services. Out of pocket expenses provide 55% of health care financing.

45. Current Trends and Future Perspective of Mesenchymal Stem Cells and Exosomes in Corneal Diseases

How to Cite: Mansoor H, Ong HS, Riau AK, Stanzel TP, Mehta JS, Yam GH. Current Trends and Future Perspective of Mesenchymal Stem Cells and Exosomes in Corneal Diseases. *Int J Mol Sci*. 2019 Jun 12;20(12):2853. doi: 10.3390/ijms20122853. PMID: 31212734; PMCID: PMC6627168.

Abstract: The corneal functions (transparency, refractivity and mechanical strength) deteriorate in many corneal diseases but can be restored after corneal transplantation (penetrating and lamellar keratoplasties). However, the global shortage of transplantable donor

corneas remains significant and patients are subject to life-long risk of immune response and graft rejection. Various studies have shown the differentiation of multipotent mesenchymal stem cells (MSCs) into various corneal cell types. With the unique properties of immunomodulation, anti-angiogenesis and anti-inflammation, they offer the advantages in corneal reconstruction. These effects are widely mediated by MSC differentiation and paracrine signaling via exosomes. Besides the cell-free nature of exosomes in circumventing the problems of cell-fate control and tumorigenesis, the vesicle content can be genetically modified for optimal therapeutic affinity. The pharmacology and toxicology, xeno-free processing with sustained delivery, scale-up production in compliant to Good Manufacturing Practice regulations, and cost-effectiveness are the current foci of research. Routes of administration via injection, topical and/or engineered bioscaffolds are also explored for its applicability in treating corneal diseases.

Keywords: angiogenesis; corneal regeneration; exosomes; immunomodulation; inflammation; mesenchymal stem cells.

46. Conjunctival sparing femtosecond laser-assisted conjunctival autografts for double-headed pterygium surgery

How to Cite: Mansoor, H., Liu, Y.-C., Ang, M. and Mehta, J.S. (2020), Conjunctival sparing femtosecond laser-assisted conjunctival autografts for double-headed pterygium surgery. *Clin Experiment Ophthalmol*, 48: 1115-1118

Abstract: Double-headed pterygium, the presence of both nasal and temporal pterygia in the same eye, is uncommon with a reported incidence of 2.5%.¹ Various surgical techniques, including split-conjunctival grafts,¹ amniotic membrane transplantation (AMT)² or combination of conjunctival autograft (CAG) with AMT,³ are effective in the management of double-headed pterygia. However, limitations such as conjunctival donor site scarring after extensive dissection for split-conjunctival grafts, and availability of amniotic membrane,¹ restrict their widespread adoption. Recently, femtosecond laser-assisted pterygium surgery (FLAPS) with LDV Z8 platform (Ziemer Ophthalmic Systems AG, Port, Switzerland) has been reported for its feasibility,⁴ safety and efficacy in patients with a single-headed pterygium.⁵ We hypothesized that the femtosecond laser (FSL) could prepare two customized-sized CAGs, to cover the conjunctival defects after excising a double-headed pterygium. This could potentially reduce the total area of the harvested CAG, curtail the surgery time, avoid extensive conjunctival dissection, decrease postoperative discomfort and reduce the risk of donor-site scarring. We herein describe two different strategies for the preparation of two ultrathin CAGs using FSL and report their surgical outcomes. Ethical approval for this study was obtained from the Institutional Review Board of SingHealth, Singapore.

47. Diabetic Corneal Neuropathy

How to Cite: Mansoor H, Tan HC, Lin MT, Mehta JS, Liu YC. Diabetic Corneal Neuropathy. *J Clin Med*. 2020 Dec 6;9(12):3956. doi: 10.3390/jcm9123956. PMID: 33291308; PMCID: PMC7762152.

Abstract: Diabetic keratopathy (DK) is a common, but underdiagnosed, ocular complication of diabetes mellitus (DM) that has a significant economic burden. It is characterised by progressive damage of corneal nerves, due to DM-induced chronic hyperglycaemia and its associated metabolic changes. With advances in corneal nerve imaging and quantitative analytic tools, studies have shown that the severity of diabetic corneal neuropathy correlates with the status of diabetic peripheral neuropathy. The corneal nerve plexus is, therefore, considered as an important surrogate marker of diabetic peripheral neuropathy and helps in the evaluation of interventional efficacy in the management of DM. The clinical manifestations of DK depend on the disease severity and vary from decreased corneal sensitivity to sight-threatening corneal infections and neurotrophic ulcers. The severity of diabetic corneal neuropathy and resultant DK determines its management plan, and a step-wise approach is generally suggested. Future work would focus on the exploration of biomarkers for diabetic corneal neuropathy, the development of new treatment for corneal nerve protection, and the improvement in the clinical assessment, as well as current imaging technique and analysis, to help clinicians detect diabetic corneal neuropathy earlier and monitor the sub-clinical progression more reliably.

Keywords: corneal nerves; diabetic keratopathy; diabetes mellitus; diabetic neuropathy; neurotrophic keratopathy

48. Chronic Unilateral Conjunctivitis: Diagnosis and Management

How to Cite: Maram E.A. Abdalla Elsayed, MD, Yahya Al-Najmi, MD, and Hassan Mansoor. <https://www.aao.org/eyenet/article/chronic-unilateral-conjunctivitis?november-2020>

Abstract

Conjunctivitis is an inflammation of the thin, transparent, continuous mucous membrane that covers the inside of the eyelids and sclera. Most cases seen by ophthalmologists are bilateral and are most commonly caused by adenovirus. Unilateral conjunctivitis is seen less frequently, and chronic unilateral conjunctivitis is even more uncommon. (Conjunctivitis lasting longer than three weeks can be considered chronic.) A thorough differential diagnosis for chronic unilateral conjunctivitis is vital to avoid overlooking or misdiagnosing potentially dangerous disease. In addition, it facilitates identification of easily treatable conditions that might otherwise lead to multiple unnecessary trips to the clinic—and patient frustration. The list ranges from relatively benign episodes of toxic or allergic conjunctivitis to more serious ocular and even life-threatening conditions, such as lymphoma, ocular surface neoplasms, or carotid cavernous fistula.

49. EXTERNAL EYE DISEASE AND UVEITIS Pearls for the Ophthalmic Resident.

Contributing Author: Dr. Mahmood Ali

How To Cite: Akram A. Habib M. EXTERNAL EYE DISEASE AND UVEITIS Pearls for the Ophthalmic Resident. Paramount Books (Pvt.) Ltd. First Edition 2020

50. Evaluation of femtosecond laser-assisted anterior capsulotomy in the presence of ophthalmic viscoelastic devices (OVDs)

How to Cite: Mansoor, Hassan & Liu, Yu-Chi & Wong, Yoke & Lwin, Nyein Chan & Mehta, Jodhbir. (2020). Evaluation of femtosecond laser-assisted anterior capsulotomy in the presence of ophthalmic viscoelastic devices (OVDs). Scientific Reports. 10. 21542. 10.1038/s41598-020-78361-8.

Abstract: The introduction of femtosecond laser-assisted cataract surgery is an alternative approach to conventional cataract surgery. Our study aimed to determine the effectiveness of femtosecond laser-assisted capsulotomy in the presence of different ophthalmic viscoelastic devices (OVDs) in the anterior chamber. Fresh porcine eyes (n = 96) underwent LDV Z8-assisted anterior capsulotomy, either in the presence of an OVD (Viscoat, Provisc, Healon, Healon GV or HPMC) or without, using 90% and 150% energies respectively. Following that, the capsule circularity, tag's arc-length, tag-length, tag-area and rupture strength (mN) of the residual capsular bag were evaluated. We found that increasing energy from 90 to 150% across the OVD sub-groups improved the studied capsulotomy parameters. Amongst the 90% energy sub-groups, the circularity and tag-parameters were worse with Viscoat and Healon GV, which have higher refractive index and viscosity compared to the aqueous humour. Using 150% energy, Healon GV showed a significantly worse total arc-length (p = 0.01), total tag-length (p = 0.03) and total tag-area (p = 0.05) compared to the control group. We concluded that; an OVD with a refractive index similar to aqueous humour and lower viscosity, such as Healon or Provisc, as well as a higher energy setting, are recommended, to enhance the efficacy of laser capsulotomy.

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Research Universities need excellent means to communicate
and express their results to regular people’

John Maeds



DISSERTATIONS

Sr#	Student	Topic	Supervisors
1.	Tooba Tufail	To assess awareness of Low Vision rehabilitation among ophthalmologists in public & private hospitals of Rawalpindi & Islamabad.	Dr. Saman Waqar Miss Maryam
3.	Tayyaba Arif	Range of services provided by optometrists in Rawalpindi, A cross-sectional study.	Dr. Ume Sughra
4.	Aiman fayyaz	Knowledge & practices about self-medication in ophthalmology in twin cities.	Dr. Kashif Dr. Khizar
5.	Asifa Nawaz	Barriers toward delay in seeking eye care in patients of cataract visiting Al-Shifa Trust Eye Hospital, Rawalpindi.	Dr. Ume Sughra Miss Maryam
6.	Fatima Rizwan	Effect of preventive health education on visual display unit related asthenopic symptoms among optometry students of PIO.	Dr. Tayyab Afghani Mr. Saad Alam Khan
7.	Maham Fatima	Barriers causing delay in seeking eye care in patient of strabismus in tertiary eye care hospital Rawalpindi.	Dr. Tayyab Afghani Dr. Saman waqar
8.	Shanza Khan	Association of consanguinity with keratoconus. A case-control study.	Dr. Ayesha Babar Miss. Midhet
9.	Khadija Rasheed	Effect of indoor and outdoor activities on myopia among children coming to Al-Shifa Trust Eye Hospital.	Dr. Ayesha Babar Miss. Sadaf
10.	Labina Amrat	Knowledge and attitude regarding consanguineous marriage effect on eye health in rural and urban Chakwal.	Dr. Khizar Miss. Sadaf
11.	Noor-ul-Huda	Endothelial cell count before and after CXL	Dr. Moqeet Dr. Ume Sughra
12.	Hijab Arshad	Factors influencing late presentation of glaucoma at Tertiary eye care hospital, Rawalpindi.	Dr. Mehmood Mr. SaadAlam Khan
13.	Hira Ajmal	Knowledge attitude practice and the factors that motivates screening for diabetic retinopathy among diabetic patients in Rawalpindi	Miss. Hina Miss. Sadaf
14.	Tayyaba Shafqat	Association of asthenopia and pre-presbyopia in workers of hand crafting in Rawalpindi city.	Miss. Hina Miss. Midhet
15.	Tayyaba Muzaffar	Association of risk factors for developing age related macular de generation among adult population in a Tertiary eye care hospital Rawalpindi	Dr. Saman Waqar Miss. Midhet

16.	Naima Shakeel	Awareness of parents towards children suffering from strabismus and amblyopia presenting in Al-Shifa trust Eye Hospital	Dr. Ayesha Babar Miss. Sadaf
17.	Faiza Shahid	Knowledge and practices about ocular hazards, its safety and the factors influencing use of protective eyewear's among workers of capital city of Pakistan	Dr. Qurat-ul-Ain Miss. Nisma
18.	Sumaira Arif	Comparison of stereopsis in refractive error patient with and without glasses	Dr. Qurat-ul-Ain Miss Maryam
19.	Samreen Qadir	Awareness and attitude of spectacle wearers towards refractive surgery	Dr. Moqees Dr. Qurat-ul-Ain
20	Roma Salman	Association of service Quality Standards With Perceived Maternal Care Satisfaction in Tertiary Care Public Hospitals, Bahawalpur.	Dr. Khizar Nabeel
21	Unber Shafique	Physical Activity Levels and its Determinants Among Adolescents in Public and Private High Schools of Rural and Urban Rawalpindi.	Dr. Ayesha Babar
22	Aleena Khan	Polypharmacy and Barriers to Medication Adherence Among the Elderly With Chronic Diseases Attending a Tertiary Care Hospital in Rawalpindi.	Dr. Ume Sughra
23	Maleeha Arshad	The Association of Self-Image and Lifestyle with Cyber Addiction Among University Students of Islamabad, Pakistan.	Ms. Hina Sharif
25	Fakhra Ikhlq	Early Childhood Caries: Knowledge and Associated Factors Amongst Parents of Preschool Children of Rawalpindi City.	Ms. Qandeel Tahir
26	Afifa Binte Irfan	Evaluating the Psychosocial Impact of Dental Aesthetics in Young Adults in Rawalpindi.	Dr. Saman Waqar
27	Sultana Kausar	Parental Influence on Screen Time of Pre-school and School Going Children in Rawalpindi City: A Cross Sectional Study.	Dr. Ayesha Babar
28	Aqsa Batool	Post-Partum Depression; its awareness, Knowledge and Social Support Among Individual of Twin Cities (Rawalpindi, Islamabad) a Mixed Method Study.	Ms. Qandeel Tahir
29	Maryam Abbas	Assessment of Comprehensive Emergency Obstetric Care Services Responsiveness in Health System Perspective at Tertiary Care Hospital of Rawalpindi, Pakistan.	Dr. Saman Waqar
30	Syeda Faria Batool	Prevalence of Superstitious Beliefs and its effect on Health Seeking behaviors of Caregivers in Rawalpindi, Pakistan.	Ms. Hina Sharif



31	Sidra Afzal	Impact of Visual Impairment on Quality of Life in Low Vision Patients Visiting Tertiary Care Eye Hospital, Rawalpindi.	Dr. Khizar Nabeel
32	Rubab Asghar	Low Back Pain and Associated Risk Factors Among School Teachers in Rawalpindi, Pakistan.	Dr. Khizar Nabeel
33	Iqra Noushad	Assessing Psychosocial Adjustment and Its Determinants in Lower Limb Prosthetic Users.	Ms. Hina Sharif
34	Bilal Khalid	Assessment of standards of Care With Reference To Minimum Service Delivery Standards (MSDS) In Tertiary Healthcare Facilities of Azad Kashmir.	Dr. Ayesha Babar
35	Roma Salman	Association of service Quality Standards With Perceived Maternal Care Satisfaction in Tertiary Care Public Hospitals, Bahawalpur.	Dr. Khizar Nabeel
36	Unber Shafique	Physical Activity Levels and its Determinants Among Adolescents in Public and Private High Schools of Rural and Urban Rawalpindi.	Dr. Ayesha Babar
37	Aleena Khan	Poly pharmacy and Barriers to Medication Adherence Among the Elderly With Chronic Diseases Attending a Tertiary Care Hospital in Rawalpindi.	Dr. Ume Sughra
38	Anila Rehman	Attitudes of Health Care Professionals towards Persons with Disability, in Public and Private Tertiary Care Hospitals of Rawalpindi City	Dr. Ayesha Babar Kawish
39	Faryal Yousaf Zai	Cause of Job Stress among Special School Teachers in Rawalpindi City	Dr. Qurat Ul Ain
40	Fatima Ali Raza	Association between Sexual Harassment of Female Doctors and Their Mental Health: a Cross Sectional Study from Rawalpindi	Ms. Hina Sharif
41	Fatima Ashraf	Night Eating Syndrome and Its Association with Sleep Patterns among Young Adults of District Quetta	Dr. Ume Sughra
42	Naveed Atta Malik	Health Assessment of Railway Pilots of Fast Moving Trains Under CPEC Project At Rawalpindi Division, Pakistan	Dr. Ayesha Babar Kawish
43	Noor Fatima	Nutritional Knowledge of Mothers and its association with Toddlers' Nutritional Status Visiting Vaccination Centers in Gujranwala City".	Dr. Khizar Nabeel
44	Qurat Ul Ain	Prevalence of functional disability in elderly population of Sialkot City	Dr. Ume Sughra

46	Syeda Mariam Batool Kazmi	Knowledge and Attitude of Cancer Patients Regarding Online Pharmaceutical Services in Public and private Tertiary Care Hospitals of Rawalpindi and Islamabad	Dr. Ayesha Babar Kawish
47	Sobia Khateeb	Public Sexual Harassment and its Association with Common Mental Disorders among young Women in Tehsil Kotli, Azad Kashmir.	Dr. Saman Waqar
48	Sonia Pervaiz	Knowledge about Multi-Drug Resistance among Typhoid Fever Patients in Public and Private Tertiary Care Hospital, Rawalpindi	Dr. Qurat Ul Ain
49	Sabeen Shakoor	Knowledge & Attitude Regarding Household Waste Management Among Residents of Rawalpindi Cantt	Dr. Khizar Nabeel
50	Abeer Shahzadi	Association of Employment –Based Health Insurance & Healthcare Utilization of Private Sector Employees of Islamabad City	Dr. Khizar Nabeel
51	Amara Saeed	Impact of Pharmacist Led Pharmaceutical care on Patient Medication Therapy Using Prompt-Qol in Tertiary Care Hospital Rawalpindi, A Randomized Controlled Trail	Dr. Ume Sughra
52	Bushra Faqir	Knowledge and Practices of Emergency Contraceptive pills in married women of urban slum in Lahore, Pakistan	Dr. Khizar Nabeel
53	Fahmeeda Idrees	The lived experiences and coping strategies of Domestically abused in Islamabad: A phenomenological study	Dr. Saman Waqar
54	Farzana Ahmad	Effect of Kangaroo mother care in weight gain of pre-term neonates in District Chakwal, Pakistan	Dr. Ume Sughra
55	Fatima Aleem Siddiqi	Attitudes and Practices of Community Pharmacists Towards Public Health activates and Barriers to their Participation in Community Pharmacies of twin cities	Ms. Qandeel Tahir
56	Irem	Assessment of Empathy among Intensive Care Unit Nurses in Tertiary Care Hospitals of Rawalpindi City	Ms. Hina Sharif
57	Javed Iqbal Soomro	Knowledge and Barriers to Utilization of Maternal Health Services among Pregnant Women in Basic Health Units of Tehsil Kahuta	Dr. Ayesha Babar Kawish
58	Naila Muzaffar	The Effect of Parentification and Internal Locus of Control on Behavioral Problems among siblings of Developmentally Disable Children in Pakistan	Dr. Qurat Ul Ain



59	Noor Ul Ain Anayat	Effect of TV food advertisements on the eating preferences of children in Rawalpindi	Dr. Ume Sughra
60	Noor Ul Ain Jahangir	Sub-Optimal Health and its Association with oral Health (WHO Criteria) Among Young Adults Visiting Private Dental Teaching Hospitals of Rawalpindi City, Pakistan	Ms. Hina Sharif
61	Saad Alam Khan	Barriers Towards Evidence-Based Eye Health Policy Formulation in Pakistan: A Grounded Theory Study	Dr. Saman Waqar
62	Sadaf Parveen	Client Satisfaction and Associated Barriers towards the Service Delivery of Assistive Technology for Physical Mobility in Rehabilitation Centers of Rawalpindi City	Dr. Ayesha Babar Kawish
63	Sohail Ahmed Hanif	Parental Knowledge and attitude towards childhood immunization in urban areas of Rawalpindi City.	Dr. Qurat Ul Ain
64	Fariya Anam	Barriers against-Public Partnership for service delivery in tertiary facilities of Islamabad Capital Territory	Ms. Hina Sharif
65	Hira Javed	Quality of Dental Care Services Perceived by Patients Visiting Tertiary Care Dental Hospitals of Islamabad.	Ms. Qandeel Tahir
66	Fatima Mehtab	Assessment of Nutritional Knowledge and Practices among the Pregnant Ladies Seeking Antenatal Care in Public Hospital	Dr. Ayesha Babar Kawish
67	Arooba Sayed	Effects of parenting styles on Prosocial behaviors of Adolescents.	Dr. Ume Sughra
68	Saeed Ahmed	Knowledge, attitude and practices on Food safety and Hygiene among food handlers in restaurants of Islamabad	Dr. Ume Sughra
69	Muhammad Shahzad	Knowledge and Practices of people regarding irrational use of medicines in Rawalpindi	Dr. Saman Waqar

CONFERENCES & WEBINARS

	Participating Faculty	Title
1	Dr. Wajid Ali Khan	International CXL meeting
2	Dr. Hassan Mansoor	World Keratoconus meeting
3	Dr. Ume Sughra	Gender Responsive agenda
4	Dr. Hassan Mansoor	NIIOS corneal evening
5	Dr. Ume Sughra	Build Back Better Health System
6	Dr. Ayesha Babar Kawish	Sehat Mand Pakistan-Gov. Initiative For Nutritional Advocacy
7	Dr. Ume Sughra	Crowd source data on COVID 19
8	Dr. Ayesha Babar Kawish	Innovations in management of children respiratory illnesses
9	Dr. Ume Sughra	Global Health Policy and its best
10	Dr. Mahmood Ali	Virtual ophthalmic conference update 2020-Glaucoma ExMex
11	Dr. Ayesha Babar Kawish	Sehat Mand Pakistan-Gov. Initiative For Nutritional Advocacy
12	Dr. Wajid Ali Khan	NIIOS corneal evening
13	Dr. Ume Sughra	Funding Women movements mean funding health for all
14	Dr. Ume Sughra	International network for health work force education
15	Dr. Ayesha Babar Kawish	Challenges to Education and Health in time of Covid 19
16	Dr. Ume Sughra	Gender Responsive agenda
17	Dr. Ayesha Babar Kawish	Women empowerment and leadership
18	Dr. Ayesha Babar Kawish	Emerging threats of Noval coronavirus, seminar
19	Dr. Ayesha Babar Kawish	Gender equality in Mother and child health
20	Dr. Ume Sughra	Strengthening research planning using Elsevier Tools – Scopus, Science Direct and Mendley
21	Dr. Ayesha Babar Kawish	Virtual training workshop of healthcare providers for sexual reproductive health care providers for sexual Reproductive Health
22	Nisma Sehar	A Practice based approach to assess and manage A Patient presenting with ocular trauma
23	Dr. Ayesha Babar Kawish	Breast feeding ,Myths& Misconceptions in Covid 19
24	Dr. Ayesha Babar Kawish	Combating of Eye cancers, policy options & Role of Al-Shifa Eye Hospital
25	Dr. Hassan Mansoor	KKESH online webinar: Forefront refractive surgery course from the London vision clinic
26	Dr. Ayesha Babar Kawish	Dialogue on Women choices for better choices in family planning
27	Dr. Ayesha Babar Kawish	Nutrition for vulnerable populations

28	Dr. Qurat ul Ain	Clinical Research Made Easy
29	Dr. Ayesha Babar Kawish	Virtual training workshop of Health care providers for newborn care at time of birth
30	Dr. Farah Akhter	Does glaucoma fulfill the criteria for a public health issue?
31	Dr. Ayesha Babar Kawish	Family Planning Innovations ,Training of skilled birth attendants
32	Dr. Mahmood Ali	Newer options in the medical management of glaucoma
33	Dr. Wajid Ali Khan	Webinar with Prof. Ali Djalilian-ocular surface insights
34	Dr. Ayesha Babar Kawish	Reasons to Invest in Family Planning & Impact on Health of Nation
35	Dr. Mahmood Ali	Online training course 2019
36	Dr. Hassan Mansoor	Zoom conferencing with everlight international USA
37	Dr. Mahmood Ali	Newer options in the medical management of glaucoma
38	Nisma Sehar	Investigation and management of Acute Diplopia
39	Dr. Wajid Ali Khan	Eye Banking association of America-Cornea and eye banking Forum
40	Nisma Sehar	Infection prevention and control (IPC) for Novel Coronavirus (COVID-19)
41	Dr. Wajid Ali Khan	Zoom conferencing with everlight international USA
42	Dr. Hassan Mansoor	Webinar with Prof. Ali Djalilian-ocular surface insights
43	Dr. Mahmood Ali	Outcomes of various treatment modalities used in the management of Neovascularization glaucoma due to diabetic retinopathy
44	Dr. Hassan Mansoor	Eye Banking association of America-Cornea and eye banking Forum
45	Nisma Sehar	Peripheral Retinal pathology : Clinical Features and examination
46	Dr. Hassan Mansoor	GERSO corneal and refractive meeting
47	Dr. Ayesha Babar Kawish	Covid 19 pandemic & Health options for Pakistan
48	Dr. Hassan Mansoor	World webinar on cataract and refractive surgery

Al-Shifa Trust and COMSTECH Entered into MoU to Enhance Research in Ophthalmology

COMSTECH and Al-Shifa Trust have signed MoU for capacity building and research collaboration in Ophthalmology. Dr. Muhammad Iqbal Choudhary, Coordinator General of COMSTECH and President Al-Shifa Trust signed MoU, this partnership will aim to end preventable blindness in the OIC member states. According to the MoU, COMSTECH and Al-Shifa Trust will collaborate in following three domains:

1. Al-Shifa Trust in partnership with COMSTECH will invite research collaborations from OIC member states.
2. Al-Shifa Trust will offer observer ship to candidates from OIC member states in subspecialties of Ophthalmology.
3. Al-Shifa Trust will also extend its help to fight preventable blindness in OIC member states by sending its highly qualified and experienced surgeons to undertake surgical camps for cataract. First two camps are planned in Kampala, Uganda and Niamey Niger.





President Al Shifa Trust and Coordinator General COMSTECH signing the MoU.



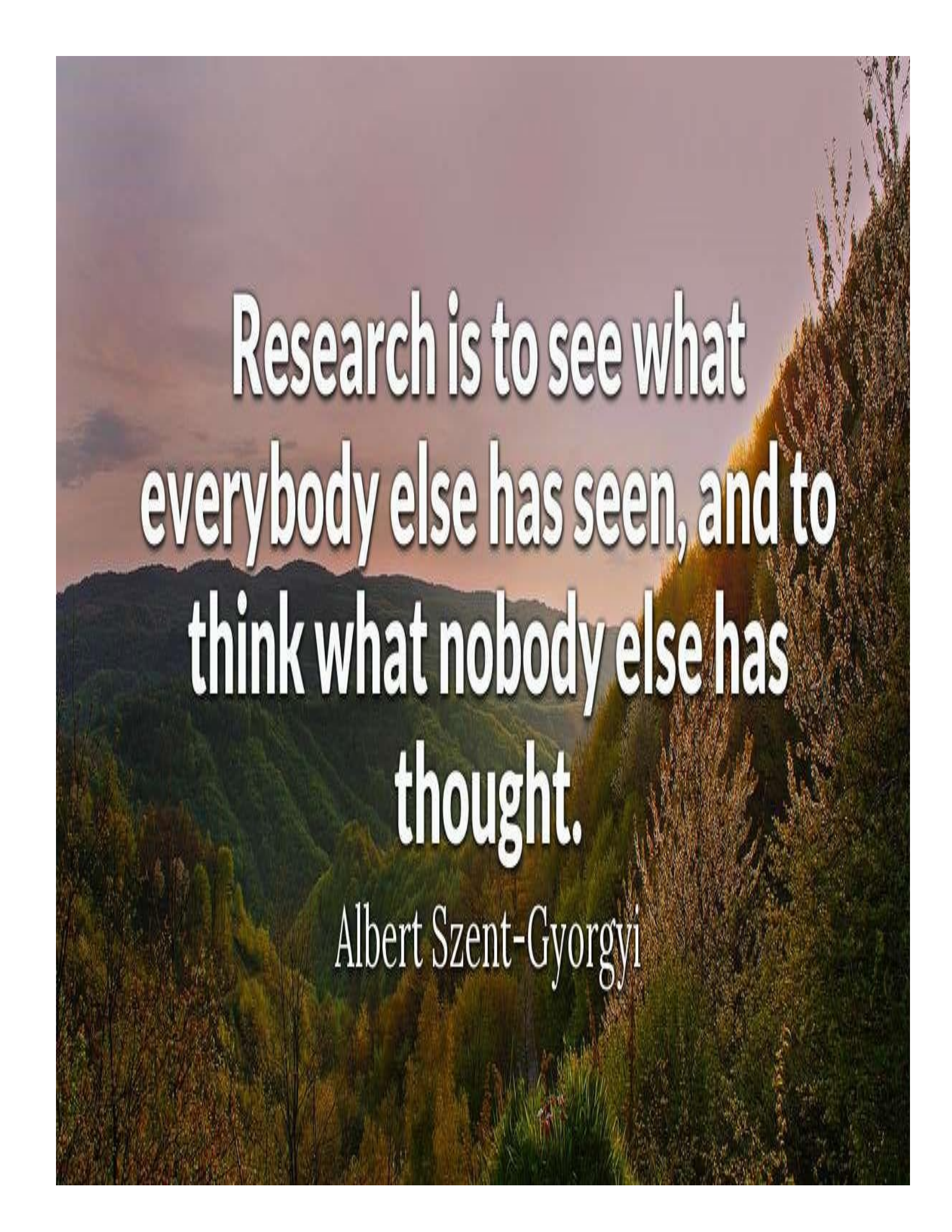


Al-Shifa Research Centre was established in 2018 with a mandate to promote, conduct and coordinate health research particularly in the field of ophthalmology that is one of the core strategies of Al-Shifa Trust. Its objective is to provide operational support to the institutions 'research activities/programs and to play a central role in achieving the research outcomes. A comprehensive research profile is also maintained at the centre. It is situated in Pakistan Institute of Ophthalmology on its second floor.

We have geared ourselves to become Clinical Trial site (CTS) and aspiring to have a visit by Drug Regulatory Authority of Pakistan for its recognition as CTS.





A scenic landscape featuring rolling green hills and a forested ridge. The sky is a soft, hazy mix of purple and blue, suggesting dawn or dusk. The foreground shows dense green foliage and trees, with a path or ridge leading into the distance.

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

Albert Szent-Gyorgyi

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