

# The Frequency of Common Presenting Complaints of Patients from Out Patient Department of Ophthalmology in a Trust Hospital at Lahore

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## ABSTRACT

**Objective of study:** To study the frequency of common ocular presenting complaints of patients coming in outpatient department (OPD) of ophthalmology, in a trust hospital at Lahore

**Place and duration:** The data of all patients, who attended OPD of ophthalmology department, at Akhtar Saeed Trust Hospital of Lahore, was collected, over two years from first March 2019 to 30<sup>th</sup> March 2021.

**Study design:** It was a cross sectional survey. Non-probability conventional sample was used. The data was analyzed by SPSS-25 and presented in forms of bar charts and tables.

**Materials& methods:** Total 3089 patients were included from previous records of outpatient department of ophthalmology at Akhtar Saeed trust hospital over 02 years from first March 2019 to 30<sup>th</sup> March 2021. All patients were examined by a qualified ophthalmologist. Except for patients below 4 years all patients were examined by autorefractometer and non-contact air puff tonometer. Refraction was done by a qualified optometrist. Anterior segment examination was performed on Slit lamp and posterior segment examination done with 90 D lens or indirect ophthalmoscopy performed by ophthalmologist if required after dilating pupil with mydriatic eye drops. Data was entered in SPSS 25 and analyzed.

**Results:** Total 3089 patients were selected from previous hospital records, who attended OPD department of Ophthalmology, over the period of 2 years from March 2019 to March 2020. Out of total 3089 patients, 1785 (57.79%) were females and 1304 (42.21%) were males. Age range is minimal 1 month to maximum 100 years, mean age is 35.07 years. Most of the patients 1537 (49.76%) needed refraction, 1130 (36.58%) required treatment (topical drops or systemic medication), 368 (11.91%) needed admission and referral to other medical departments of hospitals was required for 54 (1.75%). Myopia was most common diagnosis found in 590 (19.10%), Presbyopia was second common among diagnosis, found in 565 (18.29%) patients. Conjunctivitis 467 (12.66%), cataract 391 (12.66%) and hypermetropia 168(5.44%) were respectively at third, fourth and fifth number. Dry eye was seen in 122 (3.95%). Frequency wise remaining patients coming in OPD had diagnosis of emmetropia 109 (3.53%) , astigmatism 82 (2.65%), corneal foreign bodies 62 (2.01%), pterygium 51 (1.65%), blepharitis 45 (1.46%), corneal ulcer 43 (1.39%), exophoria 43 (1.39%), glaucoma 41 (1.33%), chalazion 34 (1.10%), diabetic retinopathy 30 (0.97%), styte 26 (0.84%), branch retinal vein occlusion (BRVO) 25 (0.81%), nasolacrimal duct block (NLD) 22 (0.71%) , age related macular degeneration (ARMD) 21 (0.68%), Esotropia 20 (0.65%), vernal keratoconjunctivitis (VKC) 20 (0.65%), amblyopia 18 (0.58%), corneal opacities 16 (0.52%), pre septal cellulitis 16 (0.52%), subconjunctival hemorrhage 15 (0.48%), Tractional retinal detachment (TRD) 12 (0.39%), dacryocystitis 6 (0.19%), hypertensive retinopathy 6 (0.19%), keratoconus 5 (0.16%), Rhegmatogenous retinal detachment (RRD) 5 (0.16%), chemical burn 3 (0.09%), macular hole 3(0.09%) and proptosis 3 (0.09%).

**Conclusion:** The myopic refractive error was most frequent eye disease encountered. Increasing prevalence of this refractive error specially in younger age group is associated with multifactorial etiologies. Regular screening can reduce ocular morbidity. Cataract, conjunctivitis and presbyopia were among other frequent diagnosis in patients. There is need of educating general population regarding importance of eye protection during working hours and developing better ocular habits to avoid acquired myopia. Female patients were more than male patients. The data results can help medical educationists to include common ocular ailments in curriculum of undergraduate medical students.

**Keyword:** Myopia, presbyopia, refractive errors, conjunctivitis, cataract, OPD (outpatient department).

## INTRODUCTION

The prevalence of ocular diseases varies in different geographical areas of world. The difference is also obvious among developing and developed countries depending upon socioeconomic and cultural factors. Where poor countries are still fighting with vitamin A deficiency related ocular complications, trachoma and infective conjunctivitis, the rich countries are still searching suitable solution for age related macular degenerations<sup>1,2</sup>. The demography of ocular diseases is important as it can affect life quality. The early detection, prompt diagnosis and timely treatment can reduce incidence of ocular morbidity later in life.

Eye diseases are considered to be an important cause of non-fatal disabling conditions in developing countries<sup>3,4</sup> and public in general, needs awareness regarding common ocular problems. Pakistan is 6<sup>th</sup> most populous country in world located in Asia and in South Asian countries around 45 million population is blind<sup>5,6</sup>.

The objective of our study is to see the frequency of common ocular ailments among patients coming to a trust hospital and creating awareness among masses.

## MATERIALS AND METHODS

Total 3089 patients were included from previous records of outpatient department of ophthalmology at Akhtar Saeed trust hospital over 02 years from first March 2019 to 30<sup>th</sup> March 2021. This was same era when corona pandemic was prevailing. All patients were examined by a qualified ophthalmologist. Except for patients below 4 years all patients were examined by autorefractometer and non-contact air puff tonometer. Goldman tonometer was used to measure IOP (intra ocular pressure) if some difficulty found in air puff tonometry. Refraction was done by a qualified optometrist. Anterior segment examination was performed on Slit lamp and posterior segment examination done with 90 D lens on slit lamp or indirect ophthalmoscopy performed by ophthalmologist if required after dilating pupil with mydriatic eye drops. The demographic data of patient like age, gender, diagnosis and mode of treatment provided were noted. Data was analyzed by using SPSS 25.

## RESULTS

Total 3089 patients were examined over the period of 2 years. Among patients 1785 (57.79%) were females and 1304 (42.21%)

males (Table 2). Male to female ratio was 1:1.4. Age distribution of patients of different age groups is shown as a bar chart in Figure 1.

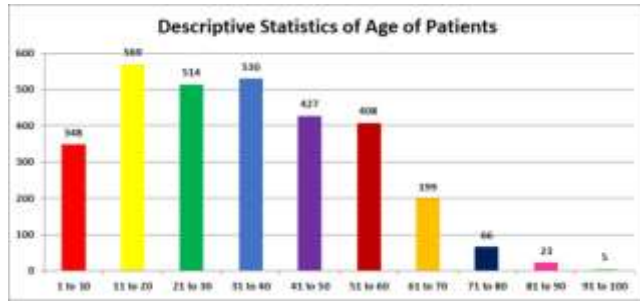


Fig: 1: bar chart showing no. Of patients in different age groups

Table 1: The table showing No. of Patients & Management Plan

Sr. #	Categories of patients	Number of patients	Percentage
1	Refraction	1537	49.76%
2	Treatment provided	1130	36.58%
3	Admitted	368	11.91%
4	Referred	54	1.75%
	Total	3089	100%

Table 2: The table showing Gender Distribution of patients

Sr. #	Gender	Number of patients	Percentage
1	Males	1304	42.21%
2	Females	1785	57.79%
	Total	3089	100%

Gender Distribution

Table 3: The table showing Diagnosis of Patients

Sr. #	Common complaint	Female	Male	Total	Percentage
1	Myopia	375	215	590	19.10%
2	Presbyopia	386	179	565	18.29%
3	Conjunctivitis	233	234	467	15.12%
4	Cataract	200	191	391	12.66%
5	Hypermetropia	111	57	168	5.44%
6	Dry eye	81	41	122	3.95%
7	Emmetropia	71	38	109	3.53%
8	Astigmatism	52	30	82	2.65%
9	Corneal foreign bodies	12	50	62	2.01%
10	Pterygium	18	33	51	1.65%
11	Blepharitis	30	15	45	1.46%
12	Corneal ulcer	17	26	43	1.39%
13	Exophoria	26	17	43	1.39%
14	Glaucoma	12	29	41	1.33%
15	Chalazion	12	22	34	1.10%
16	Diabetic retinopathy	17	13	30	0.97%
17	Stye	10	16	26	0.84%
18	BRVO	13	12	25	0.81%
19	NLD block	11	11	22	0.71%
20	ARMD	8	13	21	0.68%
21	Esotropia	12	8	20	0.65%
22	VKC	7	13	20	0.65%
23	Amblyopia	11	7	18	0.58%
24	Corneal opacities	8	8	16	0.52%
25	Pre septal cellulitis	5	11	16	0.52%
26	Subconjunctival hemorrhage	6	11	15	0.48%
27	TRD	7	5	12	0.39%
28	Dacryocystitis	10	0	10	0.32%
29	Hypertensive retinopathy	2	4	6	0.19%
31	Keratoconus	1	4	5	0.16%
32	RRD	1	4	5	0.16%
33	Chemical burn	0	3	3	0.09%
34	Macular hole	2	1	3	0.09%
35	Proptosis	2	1	3	0.09%
	TOTAL			3089	100%

Diagnosis

Age range is minimal 1 month to maximum 100 years, mean age 35.07 years with standard deviation 19.67 years. Most of the patients 1537 (49.76%) needed refraction, 1130 (36.58%) required treatment (topical drops or systemic medication), 368 (11.91%) needed admission and referral to other medical departments of hospitals was required for 54 (1.75%) shown in Table 1.

Myopia was most common diagnosis found in 590 (19.10%), Presbyopia was second common, seen in 565 (18.29%). Conjunctivitis 467 (12.66%), cataract 391 (12.66%) and hypermetropia 168(5.44%) were respectively at third, fourth and fifth number. Dry eye was seen in 122 (3.95%). Frequency wise remaining patients coming in OPD had diagnosis of emmetropia 109 (3.53%) , astigmatism 82 (2.65%), corneal foreign bodies 62 (2.01%), pterygium 51 (1.65%), blepharitis 45 (1.46%), corneal ulcer 43 (1.39%), exophoria 43 (1.39%), glaucoma 41 (1.33%), chalazion 34 (1.10%), diabetic retinopathy 30 (0.97%), stye 26 (0.84%), branch retinal vein occlusion (BRVO) 25 (0.81%), nasolacrimal duct blockage (NLD block) 22 (0.71%) , age related macular degeneration (ARMD) 21 (0.68%), Esotropia 20 (0.65%), VKC 20 (0.65%), amblyopia 18 (0.58%), corneal opacities 16 (0.52%), pre septal cellulitis 16 (0.52%), subconjunctival hemorrhage 15 (0.48%), tractional retinal detachment 12 (0.39%), dacryocystitis 6 (0.19%), hypertensive retinopathy 6 (0.19%), keratoconus 5 (0.16%), Rhegmatogenous retinal detachment(RRD) 5 (0.16%), chemical burn 3 (0.09%), macular hole 3(0.09%) and proptosis 3 (0.09%). Diagnosis of different patients is shown in Table 3.

## DISCUSSION

Most of the patients presenting in eye outpatient department were females. It's against the myth that women belonging to lower socioeconomic status were deprived of health facilities. It may be related to increased concerns of ladies regarding visual complaints of them and their kids. As data was collected from a trust hospital so more than 80% patients belong to poor families and 58% of total patients were females <sup>7-8</sup>.

Regarding Age of patients, attending OPD of eye department, an interesting observation was that maximum number of patients belong to younger ages from 11 to 20 years (18.42%) and second peak was observed for patients of age range 31 to 40 years (17.2%). Myopic refractive error was common in first group <sup>9</sup> and presbyopia <sup>10</sup> in second group respectively. The patients above 80 years of age were less than 1% of total patients. Nearly 50% (47.62%) of total patients were in age group of 21 to 50 years and one third (33.80%) were in age group 21 to 40 years. It shows that most of patients were of younger age. Similar trends also seen in international studies by Imsuwan et al. <sup>11</sup> in Thailand, Flex et al. in Ghana<sup>12</sup>.

The ratio of females and males were particularly similar in our data for cataract and conjunctivitis but presbyopic ladies were more than double than males (2:1). Similar trend of female preponderance was also seen for hypermetropia, dacryocystitis and dry eye whereas more male prevalence observed regarding pterygium, trauma, glaucoma and corneal ulcer <sup>13,14</sup>. The young male welders presenting with corneal metallic foreign bodies were more than double than females and mostly admitted that they were doing their work without using eye protective glasses <sup>15</sup>. Corneal diseases are more serious as they can lead to permanent blindness and need to be addressed urgently. In a study done in Peshawar, Pakistan by Fatima et al. found that for ocular diseases among pediatric age group, male patients were more than females <sup>16</sup> but in studies done on adult population majority of patients were females as shown in results of our study too. Similar results were also observed in studies from Sudan, Africa <sup>17</sup>.

Refractive errors were most common, including myopia <sup>18-19</sup> in 590 (19.10%), hypermetropia in 565 (18.29%) and astigmatism in 82 (2.65%). About 4 % patients turned out to be emmetropic on examination. Combinedly these were 1237 patients, which make 40% of total patients. The increased prevalence of myopia can be attributed to increased use of electronic digital devices and

mandatory on-line classes during Corona pandemic, as many young children presented in Eye OPD with myopic refractive error because of excessive near work, increased screen time and avoiding out door physical activities like sports<sup>20-21</sup>. Presbyopia was also frequently seen, more in ladies, 565 (18.29%). Similar trends were also seen in studies conducted on black population, in Nigeria<sup>22</sup> conducted by Ejimadu et al. who also found that presbyopia was observed in ladies even younger than 40 years, unlike usual age of Presbyopia mentioned in ophthalmology text books that is forty years.

It was commonly observed that most of parents of children, bringing their kids to OPD, who were diagnosed to have any refractive error after examination or wearing glasses with already diagnosed refractive error, coming for first time or for follow up, didn't bring patient previous records, which created some obscurity for patients and optometrist.

## CONCLUSION

The myopic refractive error was most frequent eye disease encountered. Increasing prevalence of this refractive error specially in younger age group is associated with multifactorial etiologies. Regular screening can reduce ocular morbidity. Cataract, conjunctivitis and presbyopia were among other frequent diagnosis in patients. There is need of educating general population regarding importance of eye protection during work hours and developing better ocular habits to avoid acquired myopia. Female patients were more than male patients. The study data can also help medical educationists to include common ocular ailments in curriculum of undergraduate medical students.

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