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Frequency of Common Eye Diseases in Outpatient Department of Shifa ul mulk Memorial Hospital, Hamdard University, Karachi

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ABSTRACT: Major global health issues such as vision impairment and eye illness have been linked to higher morbidity and mortality as well as poorer quality of life. Quality of life is a crucial indicator of how eye health affects people's everyday activities, well-being, and visual function. It is also used increasingly to assess the effectiveness of new ophthalmic interventions and technological advancements. The purpose of current study is to determine the frequency of common eye diseases in outpatient department of Shifa ul Mulk Memorial Hospital, Hamdard University Gadap Town, Karachi. This study is based on diagnosis and their treatment of 1153 patients who came in Shifa ul Mulk Memorial Hospital with complaints of different eye conditions from June 2022 to March 2023. Detailed examination was done at Department of Ophthalmology. With the aid of a slit lamp and direct ophthalmoscope, the anterior portion was inspected. Using direct and indirect ophthalmoscopes, posterior segment examination was carried out after mydriatic drops were used to dilate the pupil. Where necessary, the intraocular pressure was determined. The proforma was filled out with all the data. Data were examined using SPSS 26. Age-related mean and standard deviation were calculated. For categorical factors like conjunctivitis, nasolacrimal duct obstruction, hypermetropia and myopia, etc., frequency and percentages were calculated. The study revealed that there were 580 (50.3%) female, 454 (39.4%) male, 50 (4.3%) pediatric female and 69 (6.0%) pediatric male. Frequency of commonest eye disease was conjunctivitis i.e. 25.7%, followed by congestion 11.9%, cataracts 11.8%, and refraction 9.9% are common eye problems that have been observed in patients while frequencies of common drugs that was given to the patients as methachlor 20.1%, deximox 9.9%, polyfax 8.9%, and blephamide 8.0%. Conjunctivitis is the most typical eye condition, and methachlor is the most typical medicine utilized. Those afflicted were more likely to be female than male.

KEYWORDS: Age, Gender, Eye conditions, Disease, Treatment.

INTRODUCTION

The eyes are among the organs of the visual system. They enable living creatures to perceive, analyze visual information, and carry out a variety of photo response tasks that are not vision-dependent. The eyes pick up light, which triggers electro-chemical impulses in the neurons. The eye is a highly developed optical system that collects light from the environment, regulates its intensity through a diaphragm, focuses it through a moveable assembly of lenses to form an image, converts this image into a set of electrical signals, and sends these signals to the brain via the optic nerve through complex neural pathways (1).

Around the world, eye illnesses present in a wide variety of ways (2, 3). Certain age groups, races, and professions are more likely to contract particular diseases (4, 5). For the majority of eye diseases, an early diagnosis is necessary to improve prognosis and prevent vision loss (6). Everyday tasks require vision, thus any visual impairment is a major and crippling condition (7). Finding out the trend of eye disorders is crucial because, while some eye morbidities are easily treatable, others, if not prevented or treated promptly, can result in vision loss and eventual blindness (8).Everywhere in the world; eye illnesses are quite prevalent and have an impact on people's quality of life at all ages. Ocular disorders vary in frequency not only from country to country but even from area to region within a same country. It could be caused by social, racial, environmental, climatic, and literacy variables (9).

42.5% of people worldwide have conjunctivitis. 27% of people have vernal keratoconjunctivitis, 30% have nasolacrimal duct obstruction, 8.4% have hypermetropia, and 6.3% have myopia. According to a global survey, 1.4 million of the 45 million individuals who were blind in 2000 were children, and the majority—unfortunately—lived in the most underdeveloped parts of Asia and Africa (10–14). Given that children under the age of 12 make up 42% of the population in Pakistan, childhood eye illness continues to be a serious public health concern (15).

There is currently a dearth of information on the frequency of eye illnesses in Pakistan's northwest. This study will contribute to gathering local data and assessing the impact of this issue on our society. Our study's goal was to ascertain the prevalence of common eye illnesses seen at Shifa ul Mulk Memorial Hospital's outpatient ophthalmology department in Karachi.

MATERIALS AND METHODS

A Cross-sectional descriptive research study was done from June 1, 2022, to March 30, 2023, in the ophthalmology department of Shifa ul Mulk Memorial Hospital Hamdard University, Karachi in which 1153 patients were examined on the basis of diagnosis and treatment who came in OPD. There was no upper age limit for participants in this study and both genders were participated with a variety of complaints, including reduced vision, burning, redness, itching, and hydrated eyes. After getting patients' full consent, a detailed history was collected and an examination was performed with the aid of a slit lamp and direct ophthalmoscope also the anterior portion of eye was inspected while posterior portion of eye was also examined after injecting mydriatic eye drops that was used to dilate the pupil.

Conjunctivitis, vernal keratoconjunctivitis, nasolacrimal duct obstruction, hypermetropia, and myopia were outcome variables that were quantified using operational definitions. All data were entered into an Excel proforma. SPSS (version 26) was used to enter and analyze the data that had been gathered. The ratio of men to women and the gender distribution were calculated. Standard and average age-related deviation was calculated. For categorical factors such as conjunctivitis, vernal keratoconjunctivitis, nasolacrimal duct obstruction, hypermetropia, myopia, and others, frequency and percentages were calculated. Additionally, using SPSS version 26 and Microsoft Excel, frequencies and percentages of various medications, including deximox, polyfax, blephamide and others were calculated.

RESULT

A total of 1153 patients were included in this study (male, female, pediatric male and pediatric female) altogether. There were 580 (50.3%) female, 454 (39.4%) male, 50 (4.3%) pediatric female and 69 (6.0%) pediatric male as presented in Table 1.

AGE DISTRIBUTION

One hundred and four patients (9%) were between 1 to 10 years, one hundred and six (9.2%) were between 11-20 years of age, two hundred and nine (18.1%) were between 21-30 years, two hundred and forty (20.8%) were between 31-40 years, two hundred and fifty one (21.8%) were between 41-50 years, one hundred and thirty three (11.5%) were between 51-60 years of age, eighty eight (7.6%) were between 61-70 years, nineteen (1.6%) were between 71-80 years, 2 (0.2%) were between 81-90 years and only 1 (0.1) is between 91-100 years of age as presented in Table 2.

Ophthalmic conditions affect people's possibilities for education, future employment, quality of life, and opportunities. Conjunctivitis, with a frequency of 297 cases (25.7%), congestion 138 (11.9%), cataract 136 (11.8%), and refraction 115 (9.9%) were the common eye conditions in the current study. In contrast, less frequent disorders include blepharitis, dry eyes, inflammation, infection, myopia, itching, irritation, NLD, pinguecula, PP, presbyopia, pterygium, trauma, VKC, watery eyes, etc. as shown in Table 5.

With respect to gender, frequencies of common eye conditions are presented in Table 6: Conjunctivitis is more common in female (146 cases), congestion is more common in male (62 cases), cataract is more common in female (65 cases) and the refraction is also more common in female (65 cases). In case of children, conjunctivitis is more common in pediatric males i.e. 18 cases, cataract is more common in pediatric females i.e. 10 cases, congestion and refraction are more common in pediatric males i.e. 11 cases.

For the treatment of various eye ailments, different medications were given to the patients such as Methachlor 276 (20.1%), deximox 136 (9.9%), polyfax 122 (8.9%), and blephamide 109 (8.0%) were the most commonly medications. While less frequently used medications included gentamycin, FML, moxigen, nepac, optacid, pred forte, tear plus, xepat forte, etc. The frequency of all drugs is presented in Table 7.

Based on gender most common medicine given to patients were methachlor (128) followed by deximox (85), polyfax (62) and blephamide (55) among all the females. While in males most common medicine were methachlor (112) followed by polyfax (50), blephamide (45), and deximox (44) among all the males. In contrast, all mentioned medicines (methachlor i.e. 23, polyfax i.e. 7 and blephamide i.e 6, deximox i.e. 4) were common among pediatric males while methachlor i.e. 13, blephamide i.e. 3, deximox i.e. 3, and polyfax i.e. 3 among pediatric females in this study, shown in Table 8.

DISCUSSION

An effective screening process can identify a wide range of ocular conditions. Most developing nations and those with low to middle incomes do not have the luxury of having efficient screening systems. Different groups' disease prevalence is influenced by racial and cultural characteristics as well (16). Refractive error (26.8%), squint (0.9%), conjunctivitis (20.6%), lid irregularity (3.9%), and cataract (11.8%) were the most common eye illnesses, according to a study done in western Nepal, which included 915 patients in total. In their study of a sub-urban population; Murad et al. found that 52% of females and 48% of males had eye disorders. Conjunctivitis (21.4%), cataract (9.2%), refractive error (15.2%), dacryocystitis (6.51%), and blepharitis (3.2%) were among the many ocular diseases (18).Patients who came with infectious conjunctivitis (most commonly trachoma) (24%) and cataract (23.1%) were followed by patients who reported with refractive error (17.4%), according to a study done in Pakistan. Pterygium and corneal ulcer presentations were 11.0% and 3.02%, respectively. There were 2.8% and 1.28% cases of glaucoma and strabismus, respectively (19). Presbyopia (28.3%), allergic conjunctivitis (22.6%), pinguecula (18.0%), ocular hypertension

(8.8%), pterygium (8.3%), cataract (7.8%), and uncorrected refractive error (6.0%) were the most frequent ocular disorders observed in Nigeria, according to the study (20-22).

Our study includes a built-in constraint of fewer subjects, however this was because the study population was restricted to the area around Gaddap Town. On the other hand, it provided us with a chance to research the incidence of ocular morbidity in participants from various environments and geographical locations so that we could plan for better eye care services. Planning and managing an eye care facility with information on the epidemiology of eye diseases in that area reduces the burden of eye disorders. The prevalence of the most common eye illnesses found in this study was comparable to other studies from around the world. However, it is also important to keep in mind that different geographic areas experience distinct causes of eye issues due to the influence of environmental variables as well as local customs and lifestyles. Environmental variables, living in a group, work-related stress, and occupations all play a role in the onset and/or progression of various illnesses. Doctors are more equipped to implement preventive measures and plan for treatment modalities when they are aware of the disease profile.

CONCLUSION

The prevalence of different eye disorders varies according to socioeconomic and environmental factors in a community or region. This study provided us with insight into the prevalent patterns of eye problems in a certain population in various places, and it will help with developing the infrastructure and staffing of the eye care facility to deliver effective eye care. Conjunctivitis is the most common eye condition, and methachlor is the most commonly prescribed medication, according to the study's findings. Males have a lower risk of being impacted than females. By providing healthcare in rural locations, all practitioners should aim to address these issues.

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Table 1: Description of statistics on the basis of gender.

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	580	50.3	50.3	50.3
	Male	454	39.4	39.4	89.7

	Pediatric Female	50	4.3	4.3	94.0
	Pediatric Male	69	6.0	6.0	100.0
	Total	1153	100.0	100.0	

Table 2: Descriptive data about participants' ages.

Age groups		Frequency	Percent	Valid Percent
Valid	1-10	104	9.0	9.0
	11-20	106	9.2	9.2
	21-30	209	18.1	18.1
	31-40	240	20.8	20.8
	41-50	251	21.8	21.8
	51-60	133	11.5	11.5
	61-70	88	7.6	7.6
	71-80	19	1.6	1.6
	81-90	2	.2	.2
	91-100	1	.1	.1
	Total	1153	100.0	100.0

Table 3: Different eyes' conditions

Diseases	Frequency	Percent	Valid Percent
Cataract	136	11.8	11.8
Congestion	138	11.9	11.9
Conjunctivitis	297	25.7	25.7
Refraction	115	9.9	9.9

Table 4: Participants' medication regiment frequency

Medicine	Frequency	Percent	Valid Percent
Blephamide	109	8.0	8.0
Deximox	136	9.9	9.9

Methachlor	276	20.1	20.1
Polyfax	122	8.9	8.9

Table 5: Eye conditions among patients

Diagnosis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Amplyopia	1	.1	.1	.1
	Arcus senilis	1	.1	.1	.2
	Astigmatism	1	.1	.1	.3
	Atrophy of iris	1	.1	.1	.3
	Blepharitis	38	3.3	3.3	3.6
	Blurred vision	4	.3	.3	4.0
	Bulged eye	1	.1	.1	4.1
	Burning in eye	1	.1	.1	4.2
	Cataract	136	11.8	11.8	15.9
	Chalazion	2	.2	.2	16.1
	Congestion	138	11.9	11.9	28.0
	Conjunctivitis	297	25.7	25.7	53.7
	Corneal infiltrate	1	.1	.1	53.8
	Dacryocystitis	1	.1	.1	53.9
	Dandruff on lashes	4	.3	.3	54.2
	Digitally raised eye	1	.1	.1	54.3
	Dilated fixed pupil	1	.1	.1	54.4
	Discharge	6	.5	.5	54.9
	Diversion	1	.1	.1	55.0
	Dry eyes	10	.9	.9	55.9
	Esotropia	1	.1	.1	56.0
	Excessive growth	1	.1	.1	56.1
	Eye blinking	1	.1	.1	56.1
	Floater	1	.1	.1	56.2
	Glaucoma	8	.7	.7	56.9
	Hemorrhage	3	.3	.3	57.2
	Hypermetropia	5	.4	.4	57.6
	Increased IOP	1	.1	.1	57.7
	Infection	25	2.2	2.2	59.9
	Inflammation	20	1.7	1.7	61.6
	Irregular pupil	1	.1	.1	61.7
	Irritation	15	1.3	1.3	63.0
	Itching	25	2.2	2.2	65.1
	Muddy eyes	1	.1	.1	65.2
	Myopia	11	1.0	1.0	66.2

Night blindness	3	.3	.3	66.4
NLD	22	1.9	1.9	68.3
Nystagmus	2	.2	.2	68.5
Pain in eye	6	.5	.5	69.0
PCO	3	.3	.3	69.3
Pinguecula	8	.7	.7	70.0
Poor lens implantation	1	.1	.1	70.1
PP	71	6.1	6.1	76.2
Presbyopia	20	1.7	1.7	77.9
PSC	1	.1	.1	78.0
Psychogenic reflection	1	.1	.1	78.1
Pterygium	53	4.6	4.6	82.7
Redness	5	.4	.4	83.1
Refraction	115	9.9	9.9	93.1
Spheroid degeneration	1	.1	.1	93.2
Squint	3	.3	.3	93.4
Sticky eyes	1	.1	.1	93.5
Stye	1	.1	.1	93.6
Swelling	2	.2	.2	93.8
Trauma	22	1.9	1.9	95.7
Ulcer	1	.1	.1	95.8
Upper lid cyst	1	.1	.1	95.8
Uveitis	2	.2	.2	96.0
Viral keratitis	1	.1	.1	96.1
VKC	21	1.8	1.8	97.9
Watery eyes	23	2.0	2.0	99.9
White iris	1	.1	.1	100.0
Total	1156	100.0	100.0	

Table 6: Common eye condition with respect to gender

	GENDER			
Diseases	**Females**	**Males**	**Pediatric Females**	**Pediatric Males**
Cataract	65	55	10	6
Congestion	59	62	6	11
Conjunctivitis	146	121	12	18
Refraction	65	32	7	11

Table 7: Different drugs used in study

Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beta bar	1	.1	.1	.1
	Blephamide	109	8.0	8.0	8.0
	C-spor	74	5.4	5.4	13.4
	Chloroptic	11	.8	.8	14.2
	Ciprobest	9	.7	.7	14.9
	Cyclo	2	.1	.1	15.0
	Deximox	136	9.9	9.9	24.9
	Diclopal	9	.7	.7	25.6
	FML	23	1.7	1.7	27.3
	Gen-levo	7	.5	.5	27.8
	Gentamycin	22	1.6	1.6	29.4
	Glasses	40	2.9	2.9	32.3
	Methachlor	276	20.1	20.1	52.4
	Moxigen	66	4.8	4.8	57.3
	Nepac	12	.9	.9	58.1
	OHS	1	.1	.1	58.2
	Optacid	65	4.7	4.7	62.9
	Optidine	18	1.3	1.3	64.3
	Polyfax	122	8.9	8.9	73.2
	Pred forte	66	4.8	4.8	78.0
	Referred	178	13.0	13.0	91.0
	Santovir	8	.6	.6	91.5
	Syrup augmenten	1	.1	.1	91.6
	Tear plus	47	3.4	3.4	95.0
	Vitamin A	2	.1	.1	95.2

	Xepat forte	66	4.8	4.8	100.0
	Total	1371	100.0	100.0	

Table 8: Different drugs with respect to gender

Medicine		GENDER Females	Males	Pediatric Females	Pediatric Males
	Blephamide	55	45	3	6
	Deximox	85	44	3	4
	Methachlor	128	112	13	23
	Polyfax	62	50	3	7