PATTERN OF OCULAR DISEASES IN PATIENTS ATTENDING A TERTIARY EYE CARE CENTER IN SOUTHERN ODISHA.

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Abstract.

Objective:
This retrospective study aimed to know the pattern of eye diseases in southern Odisha.

Methods:
A retrospective review of 2348 patients who had attended the OPD of the ophthalmology department, MKCG Medical College Berhampur over 1.5 months. The needed information was taken from patients' medical records.

Results:
Out of 2348 patients 1364 (58.1%) were male and 984 (41.9%) were females with male to female ratio of 1.38:1.Refractive error (39.26%) was found to be the commonest ocular morbidity followed by conjunctival disorders (15.33%), cataract (14.6%), corneal disorders (10.52%), posterior segment disorders (5%), miscellaneous (4.77%), lid disorders (4%), trauma (3%), glaucoma (1.75%), and squint (1.15%). The study shows an exceeding number of male patients than females which implies that females are less aware of their health problems and ignorance and education an important causative factor.

Conclusion:
The leading causes of ocular morbidity in this study were refractive error, conjunctival disorder, cataracts, and corneal disorders.

Recommendation:
Preplacement vision screening and periodic vision screening are recommended for jobs that require visual acuity. Vision screening is recommended for post-injury and postoperative examinations.

Keywords: Ocular diseases, Refractive error, Cataract, Conjunctival disorder, Submission: 2023-08-25, Accepted: 2023-09-17

1. INTRODUCTION:

Ocular diseases constitute one of the most common problems presenting to the general practice clinic (10-21%) and could have significant socioeconomic consequences1. The study of ocular diseases is important because some are just causes of ocular morbidity while others invariably lead to blindness. Some conditions like refractive errors and cataracts are treatable while meals and vitamin A deficiencies are largely preventable 2.

Many people have eye disorders that result in visual loss. Routine examinations are useful in detecting diseases in which symptoms are few or absent. Increased awareness through education

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can reduce the burden of eye diseases in a population 3. Some ocular disorders can lead to permanent visual loss without appropriate intervention. Early diagnosis and treatment can often preserve sight and correct vision-threatening gross eye disorders 4. The causes of blindness and low vision differ in different parts of the world. So, the requirement for eye services also varies according to the needs of the native population. So, to build a better infrastructure for eye care facilities, studies showing patterns of ocular diseases are needed. A study in Pakistan found the prevalence of 'non-vision impairing conditions' (NVIC) to be 30.6% including presbyopia. After excluding presbyopia, the prevalence of NVIC was 14.6% with conjunctival disorders (e.g., allergic conjunctivitis) the leading cause5. Many other studies conducted in the developing world have also shown that uncorrected refractive errors and presbyopia as the leading causes of ocular morbidity. A clear knowledge of the pattern of eye diseases will form a framework that can be utilized to prevent or treat blinding diseases. This will reduce the needless blindness and visual impairment in the community. Keeping this in mind this retrospective study was conducted to know the pattern of eye diseases in southern Odisha.

2. MATERIALS AND METHODS:

2.1. Study design and location:

This is a retrospective review of 2348 patients who had attended the OPD dept. of Ophthalmology, MKCG Medical College Berhampur, Odisha over 1.5 months.

2.2. Data Collection:

The needed information was obtained from patients' medical records. The data analyzed were name, age, sex, registration number, ophthalmic history, visual acuity, examination of eye movements, and anterior and posterior ocular segments.

3. RESULTS:

A total of 2348 patients were included in this study. At the initial stage, several 2,500 patients were examined for eligibility; however, 152 patients were excluded from this study due to not being eligible. Out of the total num- ber of patients, 1364 (58.1%) were male and 984 (41.9%) were females with male to female ratio 1.38:1. Refractive error (39.26%) was found as commonest ocular morbidity in our study followed by Conjunctival disorders (conjunctivitis, pterygium, pinguicula, subconjunctival hemorrhages) (15.33%), cataract (14.6%), corneal disorders (keratitis, opacities, degenerations) (10.52%), posterior segment disorders (diabetic retinopathy, ARMD, retinal detachment) (5%), miscellaneous (4.77%), lid disorders (chalazion, entropion, ectropion, ptosis, blepharitis) (4%), trauma (lid injury, ocular foreign body, globe rupture, traumatic cataract, traumatic glaucoma) (3%), glaucoma (1.75%), and squint (1.15%). The most common age group presenting with eye disorders in our study were between 21 to 30 years (19.55%) with male (19.5%) and female (19.61%) and the least common age group were between 0 to 10 years (7.05%) with male (7.18%) and female (6.81%). Table II shows the age and gender distribution of patients having ocular diseases. The lid disorders in our study were chalazion (35.79%), entropion (18.94%), tumors (10.53%), ptosis (9.47%), ectropion (5.26%), and others (20%). Table III shows the gender distribution of lid-related disorders. The trauma-related disorders presented to our hospital were lid injury (30.38%), traumatic cataract (18.9%), rupture globe (15.2%), traumatic glauma (10.1%), intraocular foreign bodies (7.6%), and others (17.7%). Out of the posterior segment disorders retinal vascular diseases (39.3%), ARMD (27%), retinal detachment (10.6%), and others (22.9%). Table IV and V shows the gender distribution of trauma-related disorders and posterior segment disorders respectively.

4. DISCUSSION:

Refractive error (39.26%) was found to be the most common ocular morbidity in this study. A study by Haq et al reported that refractive er-

Table 1: **Pattern of ocular disorders.**

DISEASES	NO. OF PATIENTS	PERCENTAGE
Refractive error	922	39.26
Cataract	343	14.6
Conjunctival disorders	360	15.33
Corneal disorders	247	10.52
Lid disorders	95	4
Trauma related conditions	79	3
Posterior segment diseases	122	5
Glaucoma	41	1.75
Squint	27	1.15
Miscellaneous	112	4.77

Table 2: **Age and gender distribution of patients.**

AGE IN YRS	NO. OF MALE	PERCENTAGE	NO. OF FEMALE	PERCENTAGE
< 10	98	7.18	67	6.81
10-20	194	14.22	157	15.95
21-30	266	19.5	193	19.61
31-40	199	14.59	162	16.46
41-50	211	15.47	158	16.05
51-60	180	13.2	139	14.13
>61	216	15.83	108	10.97

Table 3: **Gender distribution of patients with lid related disorders.**

LID RELATED DISORDERS	MALE	FEMALE	TOTAL	PERCENTAGE
Chalazion/ stye	19	15	34	35.79
Entropion	10	8	18	18.94
Ptosis	6	3	9	9.47
Ectropion	2	3	5	5.26
Tumors	7	3	10	10.53
Others	12	7	19	20

Table 4: **Gender distribution of patients having trauma related disorders.**

TRAUMA RELATED DISEASES	MALE	FEMALE	TOTAL	PERCENTAGE
Lid injury	13	11	24	30.38
Ocular foreign body	4	2	6	7.6
Rupture globe	10	2	12	15.2
Traumatic cataract	8	7	15	18.9
Traumatic glaucoma	6	2	8	10.12
Others	6	8	14	17.72

September 22, 2023

Table 5: **Gender distribution of patients having posterior segment disorders.**

POSTERIOR SEGMENT DISEASES	MALE	FEMALE	TOTAL	PERCENTAGE
Retinal vascular diseases	28	20	48	39.3
ARMD	18	15	33	27
Retinal detachment	8	5	13	10.6
Others	18	10	28	22.9

ror was present in 25%.6 Study by Singh et al in rural setting reported that prevalence of refractive error to be 40.8%.7Conjunctival disorder (15.33%) was found to be the second most frequent eye disorder in our study. A study in Nepal found refractive error in 2.36% of their cohort. The Nepalese work found conjunctivitis as the second most frequent eye problem (1.71%).8 Another Nepalese9 study reported the refractive error as the commonest disorder (22.5%). This was followed by age-related cataracts (17.5%) and extraocular diseases (14.9%). Olukorede reported allergic conjunctivitis as the most common cause in a hospital-based study 10. Cataract (14.6%) was the third most common ocular morbidity in our study. Adeoye and Omotoye however reported higher figures of 26% for cataracts in their study.11 Haq et al also reported that cataract prevalence was 21.7% in their study. A study by Singh et al stated that cataract prevalence was 40.4%. Other eye diseases found in our study were corneal disorders (10.52%), posterior segment disorders (5%), miscellaneous (4.77%), lid disorders (4%), trauma (3%), glaucoma (1.75%), and squint (1.15%. A study conducted in the Eye Clinic at Imam Khomeini Hospital of Urmia, which showed the following results: cataract 104 (20.8%), refractive errors 96 cases (19.2%), conjunctivitis 50 cases (10%), eyelid disease 46 cases (9.2%), pterygium 28 cases (5.6%), glaucoma 13 cases (2.6%), cornea disease 12 cases (2.4%), amblyopia 5 cases (1%), dry eye 4 cases(0.8%), strabismus 2 cases (0.4%).12 In our study 41.52% were between 0 to 30 years of age, 44.67% were between 31 to 60 years of age and 14% were above 61 years of age. Similar to our result a study was done where they found 42% within the 0-30 age group, 44 % within the 31-60 age group, and 14% between 61-90.13

5. CONCLUSION:

The leading causes of ocular diseases in our study were refractive error, conjunctivitis, cataracts, and corneal disorders. The high prevalence of refractive errors and cataracts shows that hospital still requires an improved infrastructure with spectacle provision to the patients and mobile eye care units to collect cataract patients from rural areas for operating them in the hospital. More male attendance than females shows that females are less aware of health problems. So female education is needed to avail them of better health care facilities.

6. LIMITATIONS.

The limitations of this study include a small sample population who were included in this study. The findings of this study cannot be generalized for a larger sample population. Furthermore, the lack of a comparison group also poses a limitation for this study's findings.

7. RECOMMENDATION:

Preplacement vision screening and periodic vision screening are recommended for jobs that require visual acuity. Vision screening is recommended for post-injury and postoperative examinations.

8. ACKNOWLEDGEMENT:

September 22, 2023

9. LIST OF ABBREVIATIONS:

NVIC- non-vision impairing conditions
OPD- Outpatient Department
ARMD- Age-related macular degeneration

10. SOURCE OF FUNDING:

The study was not funded.

11. CONFLICT OF INTEREST:

The authors report no conflicts of interest in this work.

12. Publisher details:

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September 22, 2023