

**CAUSES OF OCULAR PRESENTATIONS AS SEEN IN A PRIVATE CLINIC IN SOUTH WEST NIGERIA****Josephine Nonye Ubah\***

Department of Ophthalmology, Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Osun State, Nigeria.

**\*Corresponding Author: Dr. Josephine Nonye Ubah**

Department of Ophthalmology, Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Osun State, Nigeria.

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**ABSTRACT**

There is currently a high burden of visual impairment and blindness especially from avoidable and treatable causes. All hands must be on deck to reduce the burden. This study was conducted to find out the causes of ocular morbidity in a private eye clinic. A retrospective study of 459 cases among patients who visited the clinic within a specific period was carried out. Male to female ratio was 1:1.8. The predominant age group was 66-76 years. The predominant eye diseases among all the patients were refractive error in 31.2%, cataract in 20.8% and glaucoma in 12.5%. In children, refractive error was the most recurring, followed by ocular allergy and trauma. In conclusion, the common causes of ocular presentation in this study are treatable. Frequent ocular examination and public health education are advised.

**KEYWORDS:** Ocular presentations, private eye clinic.**INTRODUCTION**

Prevalence of eye diseases, visual impairment and blindness vary depending on socioeconomic conditions,<sup>[1]</sup> availability of eyecare services and willingness to take up available services. Delay or lack of intervention can eventually lead to blindness, some of which may be irreversible. Different levels of eyecare services are involved in the care of persons with ocular disorders. Private institutions have an important role to play, thereby contribute to reduction of visual impairment and blindness. The Nigerian National Blindness and Visual Impairment survey reported severe visual impairment of 1.5% and blindness of 4.2%.<sup>[2]</sup>

Private institutions become more readily available complements for health care in areas where assessment of governmental institutions is rigorous or the institutions cannot cope with the teeming population of patients.

Studies on pattern of eye diseases in government owned institutions abound.<sup>[3-6]</sup>

Different patterns of presentations have been documented in different areas. In a rural population in Nigeria among young adults, refractive error was seen as the commonest presenting eye disease.<sup>[7,8]</sup> In another study in a university health service center, infective conjunctivitis dominated, followed by allergic conjunctivitis.<sup>[5]</sup> Among, health workers of a tertiary institution, presbyopia and refractive error were the most

prevalent.<sup>[9]</sup> In other studies carried out in Ghana, India and Pakistan, conjunctivitis was the commonest cause of ocular morbidity.<sup>[10-12]</sup>

With the contribution of the private sector in reducing the burden of ocular diseases, blindness and visual impairment, it is desirable to evaluate the category of eye disorders seen. Information from the study may be useful for planning and implementation.

**MATERIALS AND METHODS**

A retrospective study of all the new patients who visited a private eye clinic in South Western Nigeria from January, 2017 to December, 2018 was carried out. Their case notes were reviewed and information obtained included age, sex, nature of eye disorder and the eye involved. External ocular examination was carried out with the pen torch light and slit lamp, while posterior segment was examined using the direct ophthalmoscope and 78D fundus lens. Pupil was dilated as required for better view of the vitreous and retina. Central visual field was performed to confirm glaucoma cases. Ocular ultrasound was done where indicated.

Results obtained were summarised in tables and chart, and expressed in simple proportions.

**RESULTS**

Four hundred and fifty nine (459) case notes were retrieved. Age ranged from 1 to 105 years. The mean age

was 94.7 years. The age and sex distribution is shown in table 1.

Male to female ratio was 1:1.8. The predominant age group was 66-76 years. Seventy-one children aged 15 years and below constituted 15.5% (71/459) of the study population. Bilateral eye involvement was observed in

64.35% (295/459). The male to female ratio among the children was 1:1.3. In adults, 65.5% (254/388) had bilateral disease while in children, it was present in 57.7% (41/71). In children as well, bilateral disease was seen mostly in those with refractive error and ocular allergy.

**Table 1: Sex and age (years) distribution.**

| Age    | 0-15 | 16-25 | 26-35 | 36-45 | 46-55 | 56-65 | 66-75 | >75 |     |
|--------|------|-------|-------|-------|-------|-------|-------|-----|-----|
| Female | 41   | 19    | 15    | 35    | 36    | 28    | 42    | 32  | 248 |
| Male   | 30   | 16    | 21    | 29    | 23    | 38    | 34    | 20  | 211 |
|        | 71   | 35    | 36    | 64    | 59    | 60    | 76    | 52  | 459 |

Some persons presented with more than one ocular disease. Over all prevalence of ocular diseases is depicted in table 2 and chart (Fig.1). Cataract was 31.2%

in 198 patients, followed by refractive error in 132 (20.8%).

**Table 2: Eye diseases in all patients.**

| Eye disease                         | Frequency n=629 | Percentage (%) |
|-------------------------------------|-----------------|----------------|
| Refractive error                    | 198             | 31.2           |
| Cataract                            | 132             | 20.8           |
| Glaucoma                            | 79              | 12.5           |
| Pterygium                           | 45              | 7.1            |
| Ocular allergy                      | 42              | 6.6            |
| Retinal diseases                    | 33              | 5.2            |
| Conjunctivitis                      | 14              | 2.2            |
| Trauma                              | 13              | 2.1            |
| Presbyopia                          | 12              | 1.9            |
| Optic atrophy                       | 12              | 1.9            |
| Keratitis                           | 11              | 1.7            |
| Blind eye from chronic inflammation | 7               | 1.1            |
| Other diseases                      | 36              | 5.7            |
| Total                               | 634             | 100            |

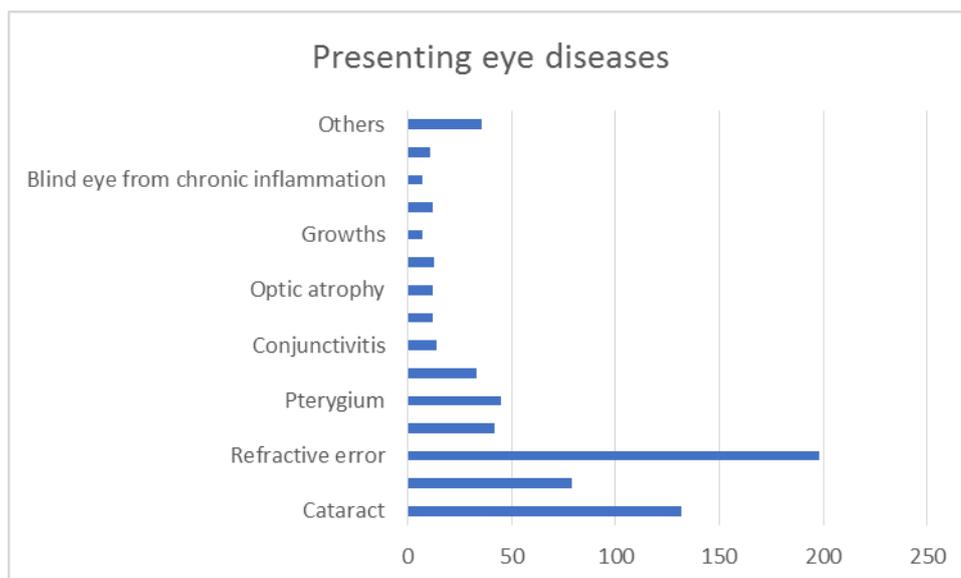
The other diseases of lower prevalence included dry eye disease (DED), aphakia, vitreous degeneration, posterior staphyloma, uveitis, lacrimal passage obstruction, herpes zoster ophthalmicus (HZO), trachoma, pigmented conjunctival lesions e.t.c. Retinal diseases included age related macular degeneration (ARMD), cystoid macular edema, chorioretinal scars, retinal detachment and

macular scars. Keratitis were findings such as cornea opacities, infective cornea lesions, cornea ulcers.

The most recurring eye problems in the children were refractive error in 43.7% (30/71), ocular allergy, in 28.2% (20/71) and trauma 11.3%, table 3.

**Table 3: Common eye diseases in children.**

| Eye disease                   | Frequency n=71 | Percentage (%) |
|-------------------------------|----------------|----------------|
| Refractive error              | 30             | 42.3           |
| Ocular allergy                | 20             | 28.2           |
| Trauma                        | 8              | 11.3           |
| Conjunctivitis                | 3              | 4.2            |
| Chalazion                     | 2              | 2.8            |
| Cataract                      | 2              | 2.8            |
| Nasolacrimal duct obstruction | 1              | 1.4            |
| Corneal opacity               | 1              | 1.4            |
| Amblyopia (ametropic)         | 1              | 1.4            |
| Glaucoma                      | 1              | 1.4            |
| Normal eyes                   | 2              | 2.8            |
| Total                         | 71             | 100            |



**Figure 1: Prevalence of eye diseases in the sample population.**

## DISCUSSION

In this study, refractive error was the commonest eye disorder, in 31.2%, followed by cataract in 20.8%, glaucoma in 12.5% and pterygium in 7.1%. In a previous teaching hospital based study in Nigeria, refractive error was also found to be the highest recurring eye disease, followed by conjunctivitis and cataract.<sup>[4]</sup> In many other studies, the commonest causes were in order of prevalence, cataract, retinal diseases and ocular trauma in a general hospital based study,<sup>3</sup> presbyopia, refractive error, allergic conjunctivitis and pterygium in young adults in Sudan.<sup>[6]</sup> Conjunctivitis and cataract were the most common in some centers in Ghana,<sup>[10]</sup> and Pakistan,<sup>[12]</sup> followed by cornea ulcer and glaucoma respectively. Presbyopia, refractive error, allergic conjunctivitis were observed in another study.<sup>[7]</sup> Cataract, glaucoma, and refractive error were reported from a University Medical Center in Malaysia,<sup>[13]</sup> as the commonest causes from screening studies. The most recurring were among some students in Nigeria,<sup>[14]</sup> were allergic conjunctivitis, refractive error and eyelid disorders while presbyopia and refractive error were commonest among health workers at a tertiary institution.<sup>9</sup> Refractive error and cataract, which were the commonest causes of ocular morbidity in the current study also featured in many other studies already mentioned above. The three most common causes of ocular morbidity in this study is in keeping with findings in many of the studies above, and are among the common causes of visual impairment and blindness globally,<sup>[15]</sup> and in Nigeria.<sup>[16]</sup>

Females were more than males like in some studies.<sup>[4,10]</sup> but in others, males featured more with little difference.<sup>[8,11]</sup> The reason for this may be greater awareness among women, who are also financially empowered to take care of their health needs.

Refractive error, ocular allergy and trauma are the top three childhood eye diseases in this study. This is close to findings in previous studies in Nigeria.<sup>[17-19]</sup> The peculiarity of the present study however is that refractive error was the leading presentation. This differs from findings in an Ethiopian study where the commonest presenting eye disorders in children were ocular surface and eyelid infections, followed by ocular allergy,<sup>[20]</sup> and a study on pattern of common eye diseases in children in a tertiary institution in Karachi where the commonest disorders were vernal keratoconjunctivitis and squint.<sup>[21]</sup>

## CONCLUSION

The commonest eyes disorders which have been identified in this study in patients visiting a private eye clinic were refractive error, cataract and glaucoma in all age groups, but in children refractive error, allergic conjunctivitis and trauma predominated.

These causes are treatable. More frequent ocular examination from 40 years of age and public health education are advised to reduce morbidity associated with these conditions.

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