

# GENERAL OPHTHALMOLOGY

## Pattern of eye diseases at a tertiary hospital in Southern Nigeria

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**Background:** The pattern of eye diseases varies from place to place and time to time. Therefore, it is important to review the pattern periodically to monitor trends. Globally, the commonest causes of visual impairment and blindness are uncorrected refractive error, cataract, age-related macular degeneration, glaucoma and diabetic retinopathy.<sup>1</sup> Studies from developing countries indicate that conjunctivitis, refractive error and cataract were the commonest eye diseases encountered.<sup>2-7</sup> The Nigerian National Blindness and Visual Impairment Survey<sup>8</sup> reported that the causes of blindness were avoidable (preventable and treatable) in 84% of the cases, and glaucoma was more prevalent in the Southern and Eastern regions of the country.<sup>9</sup>

**Objective:** To determine the pattern of eye diseases among patients attending a tertiary hospital in Southern Nigeria.

**Methods:** A retrospective hospital-based cross-sectional study was conducted. Data was obtained from the medical records of all consecutive patients who were managed between August 2022 and July 2024 at the Ophthalmology Department of the University of Uyo Teaching Hospital, Uyo. Data extracted included age, gender, presenting visual acuity, slit lamp anterior segment examination, fundal examination and refraction. Any p-value <0.05 was significant. Ethical approval was obtained from the ethical committee of the Hospital.

**Results:** A total of 6,382 patients were analyzed. There were more female (56.6%) than male (43.4%) patients with a Male/Female ratio of 1:1.3. This difference between the

proportions of male and female patients was statistically significant (p=0.047).

The mean age of patients was 43.5 ± 22.8 years. The largest proportion (43.7%) of the patients were aged between 41 and 65 years (Table 1).

**Table 1: Sociodemographic characteristics of patients**

Gender	n (%)	X <sup>2</sup>
Male	2,769 (43.4)	P=0.047
Female	3,613 (56.6)	
Total	6,382 (100)	
Age group in years	n (%)	Mean Age
0-18	1,194 (18.7)	43.5±22.8yrs
19-40	1,499 (23.5)	
41-65	2,788 (43.7)	
>65	901 (14.1)	
Total	6,382 (100)	

Unilateral and bilateral blindness (Visual acuity < 3/60) were reported in 16.8% and 1.8% of patients, respectively. The commonest causes of eye diseases were glaucoma (23%), cataract (12.9%), refractive errors (12.8%) and conjunctivitis (10.7%) (Table 2).

**Table 2: Causes of eye disorders**

Causes of eye disorders	n (%)
Glaucoma	1,468 (23.0)
Cataract	823 (12.9)
Refractive Error	817 (12.8)
Conjunctivitis	683 (10.7)
Pterygium & Benign Ocular lesions	287 (4.5)
Trauma	262 (4.1)
Retinopathies/Retina Diseases	242 (3.8)
Normal	446 (7.0)
Others	1,354 (21.2)
Total	6,382 (100)

**Discussion:** Glaucoma was the commonest disorder in this study, in other hospital-based studies<sup>2,10</sup>, and in a community-based study<sup>11</sup> in Southern Nigeria. The hype in glaucoma awareness campaigns may have contributed to this observation. Cataract, uncorrected

refractive error and conjunctivitis were the second, third and fourth commonest eye diseases observed. These three eye disorders contributed significantly to avoidable visual loss. Conjunctivitis is commoner in the younger populations<sup>7</sup> while presbyopia is commoner in persons above 40 years.<sup>11</sup> Contrary to the index study, cataract was the leading eye disorder in some other studies.<sup>12-13</sup> Improving the cataract surgical services with good outcomes will reduce the contribution of cataract to the burden of visual impairment and blindness.

**Conclusion:** Glaucoma was the major cause of eye disease in the hospital, emphasizing the need for screening and early treatment of the condition.

**Keywords:** Eye diseases, Southern Nigeria, tertiary hospital.

#### References:

1. Flaxman SR, Rupert R, Bourne A, Resnikoff S, Ackland P, Braithwaite T, *et al.* Global causes of blindness and distance vision impairment 1990–2020: a systematic review and meta-analysis; *The Lancet Global Health*: 5(12), 2017, e1221-e1234
2. Agyemang-Mireku F. Pattern of ocular conditions among patients attending an Eye Clinic in Ghana. *Optometry*. 2017; 2: 2476-2478.
3. Lakho, K. A. and Mohamed Ali A.B. Pattern of eye diseases at tertiary eye hospital in Sudan (Makah Eye Hospital, Khartoum): *Al-Basar International Journal of Ophthalmology* Jan–Jun 2015;3(1): 15-18
4. Edema OT, Okojie OH. Pattern of eye diseases in Benin City, Nigeria. *Afr J Med Pract*. 1997;4:86–90.
5. Ohwin PE, Abadom EG, Nwoguze BC, Nwabuoqu US, Beteren IG. Retrospective study of the pattern of eye disorders among patients in Delta State University Teaching Hospital, Oghara. *Calabar J Health Sci* 2023; 7:29-34.
6. Onyiaorah A A, Kizor-Akaraiwe NN, Nwosu SN. Pattern of Eye Diseases in Adults at the General Outpatient Clinic of a Tertiary Hospital in Nigeria. *Ann Afr Med*. 2022 ; 21(4): 421–425.
7. Oladigbolu KK, Abah ER, Chinda D, Anyebe EJ: Pattern of eye diseases in a university health service clinic in northern Nigeria; *Nigerian Journal of Medicine* 21(3):334-337
8. Abdull MM, Sivasubramaniam S, Murthy GV, Gilbert C, Abubakar T, Ezelum C, Rabi MM; Causes of blindness and visual impairment in Nigeria: the Nigeria national blindness and visual impairment survey. *Invest Ophthalmol Vis Sci* 2009 Sep;50(9):4114-4120.
9. Kyari F, Entekume G, Rabi M, Spry P, Wormald R, Nolan W, *et al.* A population-based survey of the prevalence and types of glaucoma in Nigeria: Results from the Nigeria National Blindness and Visual Impairment Survey. *BMC Ophthalmol*. 2015; 15:176.
10. Mahmoud AO, Olatunji FO and Buari SB. Survey of blindness and ocular morbidities in Kwara State, Nigeria. *Nig J Surg Sci*. 2005;15:26–30.
11. Chinawa N, Odogu V, Anyiam F. Ocular Morbidity Pattern and Presentation among Residents of a semi-urban community in Rivers State, Nigeria; *Asian Journal of Medicine and Health* 2020; 18; (8)30226
12. Abraham EG, Megbelayin EO; Pattern of eye diseases among participants of free eye screening program in Uyo, Akwa Ibom State, Nigeria. *Int J Community Med Public Health*. 2017 Mar;4(3):657-661
13. Adeoti CO, Akanbi A, Abioye-Kuteyi EA, Akintoye IO, Egbewale BE. Pattern of eye diseases in a tertiary hospital in Osogbo, Southwestern Nigeria. *Asian J Res Rep Ophthalmol*. 2020;3(1): 107-114.