

CORNEA AND ANTERIOR SEGMENT

Period Prevalence and Types of Corneal disorders among adult patients in a Tertiary Eye care facility in South-South Nigeria: A 5-Year Review

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Introduction: The cornea, the major refractive surface of the human eye accounts for three-fourth of the total refractive power of the eye (45.0 dioptres)^{1,2}. Corneal disorders, whether infectious or noninfectious in origin, alter the corneal configuration and transparency with resultant visual deterioration and blindness in extreme cases^{1,2,3}.

In the year 2020, 43 million people were estimated to be blind globally. Available data show that corneal blindness was among the top 5 causes of blindness^{4,5,6}. In West sub-Saharan Africa (SSA), it is the fourth leading cause of blindness,⁶ while in Nigeria, it is the third leading cause of blindness⁷.

Considerably seasonal, temporal and geographical variations in profile of corneal disorders have been widely observed⁸⁻¹². It is therefore pertinent to elucidate the prevalence and types of corneal disorders in each geographical area, in order to guide the situating of corneal services and programs based on evidence.

Although studies on pattern and spectrum of corneal disorders have been published in South-west and North-west Nigeria^{13,14}, only a few specific reports on enterococcal keratitis¹⁵, contact corneal thermal injury¹⁶, and corneal ulcers¹⁷ exist

in Cross River State, South-south Nigeria. This study aims to describe the prevalence and etiologic types of corneal disorders in University of Calabar Teaching Hospital, Calabar, Cross River State, over a five-year period. The findings of this study, as seen in a tertiary referral eye care facility, in Cross River State, Nigeria, will provide a baselinedata for planning of corneal services.

Materials and Methods: This is a retrospective hospital-based study involving the review of clinic register and medical records of patients (≥ 18 years) with the clinical diagnosis of any corneal pathology between January 2018 and December 2022. Data obtained were entered and analysed with STATA/IC version 15.0.

Results: A total of 15,423 patients aged 18 years and above were seen in the Eye Clinic, University of Calabar Teaching Hospital, Calabar, within the study period. A prevalence of corneal disorders of 3.0% was found. The peak ages at presentation was 21-40 years (51.3%), with a male to female ratio of 1.6:1.

Noninfectious corneal disorders were seen in 313 (63.0%) eyes, whereas 185 (37.0%) cases were infectious corneal disorders.

Whereas suppurative keratitis was the common clinical category of infectious corneal disorders 114 (61.6%), corneal scar was the most common clinical category of the noninfectious corneal disorders 85 (27.2%) [Tables 1 & 2].

Postinfectious keratitis was responsible for 56 cases (66.0%) of corneal opacity. On the whole, slightly over half 256 of 498 eyes (51.4%) were blind at presentation.

Conclusion: The hospital-based prevalence of corneal disorders of 3.0% found in this study from South-south Nigeria, is similar to the respective prevalence of 3.3% in the South-west and 4.1% in North-west Nigeria. Most of these corneal disorders profoundly depreciates vision, but are largely avoidable.

Obviously, corneal disorders constitute a social, economic and developmental issue. Therefore, healthcare reforms targeting corneal disorders including the establishment of a robust corneal

Table 1: Clinical categories of Infectious corneal disorders

Variables	Suppurative keratitis, n	Non-Suppurative keratitis, n	Total n (%)
Age (years)			
≤ 20	5	6	11 (6.0)
21 - 30	21	17	38 (20.5)
31 - 40	39	17	56 (30.3)
41 - 50	18	9	27 (14.6)
51 - 60	10	17	27 (14.6)
61 - 70	16	4	20 (10.8)
>70	5	1	6 (3.2)
Total n (%)	114 (61.6)	71 (38.4)	185 (100)
Mean ±SD (years)	42.71±15.35	40.48±14.59	41.85±15.06
Gender	n (%)	n (%)	n (%)
Male	59 (54.6)	49 (45.4)	108 (100.0)
Female	55 (71.4)	22 (28.6)	77 (100.0)
Total n (%)	114 (61.6)	71 (38.4)	185 (100.0)

Table 2: Clinical categories of Noninfectious corneal disorders by gender

Non-Infectious corneal disorders	Male, n	Female, n	Total n (%)
Traumatic corneal laceration	30	13	43 (13.7)
Corneal scar	44	41	85 (27.2)
Corneal perforation	11	10	21 (6.7)
Corneal foreign body	21	10	31 (9.9)
Bullous keratopathy	25	18	43 (13.7)
Allergic eye disease	20	6	26 (8.3)
Chemical keratitis	15	4	19 (6.1)
PUK/Mooren's ulcer	7	2	9 (2.9)
Corneal Abrasion	5	4	9 (2.9)
Post PKP	9	2	11 (3.5)
Others*	6	10	16 (5.1)
Total n (%)	193 (61.7)	120 (38.3)	313 (100.0)

*Others: keratoconus, corneal dystrophy, vortex keratopathy, irido-corneal endothelial syndrome, undetermined

transplant services in South-south Nigeria, will be a cost-effective strategy for sustainable economic productivity and achieving some of the SDGs (SDGs 1, 2, 3 and 8).

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- Paediatric corneal transplantation in Uyo, Nigeria: A report of two cases**
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