

CORNEA AND ANTERIOR SEGMENT

Presenting visual status of patients with corneal pathology

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Background: The cornea serves as a meniscus lens, accounting for up to three-fourths of the total optical power of the human eye.¹ Expectedly, any distortion of the cornea, even at an early stage, will profoundly impact on vision. Corneal disorders, whether infectious or non-infectious in origin, alter the corneal configuration and transparency with resultant visual deterioration and blindness in extreme cases.^{2,3} Therefore, this study seeks to determine the visual status at presentation of patients with corneal diseases.

Methods: It was a retrospective hospital-based cross-sectional study in the Eye Clinic, University of Calabar Teaching Hospital (UCTH), Cross River State, Nigeria. The records of patients (≥ 18 years) with clinical diagnosis of any corneal pathology between January 2018 and December 2022 were retrieved. Information retrieved included demographic characteristics, presenting visual acuity and clinical diagnosis. Data obtained were analysed with STATA/IC version 15.0. The study adhered to the tenets of the Declaration of Helsinki, and ethical approval was obtained from the Institutional Review Board of UCTH.

Results: A total of 462 patients with clinical diagnosis of various corneal diseases involving 498 eyes were identified. The patients' mean age was 41.9 ± 15.1 years, and the male-to-female ratio was 1.6:1. Patients aged 21 to 40 years accounted for 238 (51.3%) of the study population. Only one-fifth 99 (20.0%) of eyes presented with normal vision. The remaining four-fifths presented with vision impairment (VI); slightly over half, 256 eyes (51.4%) presented blind, while 43 (8.6%) eyes had mild VI (Figure 1). Infectious keratitis was the predominant primary disease, accounting for 258 (51.8%) eyes. Most (68.0%) of cases of infectious keratitis were preceded by trauma from vegetative matter.

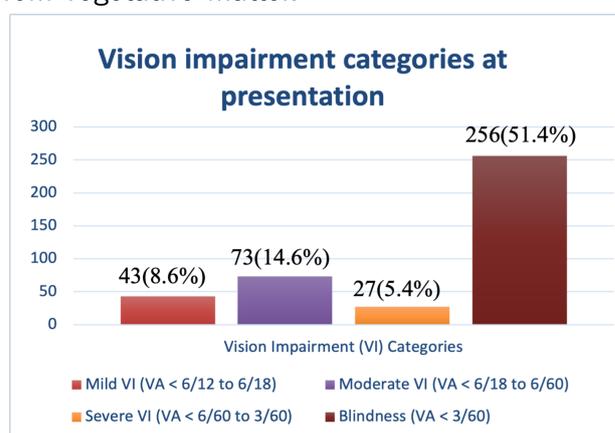


Figure 1: Vision impairment categories at presentation

Conclusion: Corneal diseases grievously distort vision, with most (51.4%) presenting blind. Unfortunately, the young adult male segment of the population, which accounts for the most productive workforce of any economy, is predominantly afflicted. Infectious keratitis, a largely avoidable cause of blindness, is the most implicated.

The foregoing is quite worrisome as corneal diseases may constitute a snag towards achieving critical Sustainable Development Goals (SDG 1-3, 5, 8, 10, 11). The resultant vision impairment can lead to decreased access to decent work, hinder inclusion and pose a threat to long-term health and wellbeing. Correspondingly, a recent report by the International Labour Organization (ILO) and the International Agency for the Prevention of

Blindness (IAPB) highlighted that eye health significantly affects labour: people with vision impairment are 30% less likely to be employed and productive compared to those without.⁴ This underscores the need for coordinated global, national and regional eye health initiatives towards eliminating corneal blinding conditions.

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Comparison of arclight loupe Vs traditional direct ophthalmoscope in evaluation of corneal epithelial defects by General practitioners: a proposal synopsis

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Background: Corneal blindness is the 5th, 4th and 3rd leading cause of blindness globally, in Sub-Saharan Africa and Nigeria, respectively.¹⁻³ Globally, corneal epithelial defects (CEDs), particularly corneal ulcers, constitute the major cause of corneal blindness.⁴ Regrettably, under-resourced areas and low- and middle-income countries (LMICs) with the least capacity to manage corneal lesions bear the greatest burden.⁴ Therefore, in order to encourage timely diagnosis of CEDs, the use of the +10 dioptre lens of the traditional direct ophthalmoscope (TDO) along with fluorescein dye has been advocated for use by non-ophthalmologists in the evaluation of suspected corneal lesions.⁵ Unfortunately, TDO use by non-ophthalmologists, including the general practitioners (GPs), the first-line physicians, is grossly limited. TDO skills deficiency, its bulk, relatively high cost, and sophistication are largely implicated.⁶ Arclight Loupe (AL), a portable, relatively low-cost and less sophisticated multipurpose diagnostic tool consisting of an anterior segment loupe, ophthalmoscope and otoscope, offers a reliable alternative to TDO.⁷ However, its utility in CEDs by GPs has not been assessed.

Objective: To compare the utility of AL vs TDO in the clinical examination of corneal epithelial defects by GPs.

Methods: A comparative cross-sectional study shall be undertaken. The study shall adhere to the tenets of the Declaration of Helsinki, and ethical approval shall be obtained from the Institutional Review Board of the University of Calabar Teaching Hospital, Calabar. Ten (10) TDO-exposed GPs will be recruited, trained and subsequently randomly assigned into two groups of 5 GPs each (group 1 & group 2). A cross-over design will be utilised in which group