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### Clinical and Demographic Review of Corneal Ulcers in University of Ilorin Teaching Hospital, 2017-2021

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**Background:** Corneal ulceration is a generic term denoting a full thickness breach in the corneal epithelium from various causes. It can occur from various causes including trauma, infection, chemical irritation, contact lens usage or from endogenous causes in association with a systemic illness.<sup>1-3</sup> Corneal ulceration is one of the major causes of avoidable blindness and visual impairment globally.<sup>3-6</sup> This study analysed clinical and demographic data of corneal ulcers at the Department of Ophthalmology, University of Ilorin Teaching Hospital, Nigeria, 2017-2021 in order to aid designs and execution of strategies for improved prevention and care.

**Methods:** A retrospective survey of all cases of corneal ulcer was done, demographic data on age, sex, marital status and occupation were retrieved from the records. Information on visual acuity at presentation, risk factors, diagnosis, management challenges and treatment outcome were collated. These data were analysed using the Statistical Package for Social Sciences (SPSS) version 20.

**Results:** A total of 92 cases were reviewed, consisting of 66 males (71.7%) and 26 females (29.3%), majority (76.1%) were married. The age

ranged from 6 months to 78 years, average age was 41.2 years. The majority of affected patients were traders, artisans and civil servants. The identified risk factors include; trauma (16.3%), harmful traditional medicine (13%), foreign body (10.9%), 35.9% are from unidentifiable/ unknown factors. 82.6% of the patients presented with visual acuity of <3/60 to No Perception of Light (NPL) while 10.9% presented with visual acuity of 6/6 to 6/18. The

dominant causes of Cornea ulcers were Microbial Keratitis (72.8%), Hypopyon Keratitis (12.5%) and Shield Ulcer (4.3%). 33 patients (37.1%) presented within one week of onset, 29 patients (32.6%) presented after a week, the others presented over a month (30.3%) after onset. After treatment, the distribution of visual acuity categories were as follows: 3/60 to No Perception of Light (NPL) -69.5%, 6/6 to 6/18 - 21.7% and 6/18 to 3/60 -8.7%.

**Table 1: Demographic profile of patients with corneal ulcers**

Item	Parameters	Number of patients Frequency (n=92)	%
<b>Age (years)</b>	Mean ( ± SD)	41.2 ± 19.1	
	Minimum	0.5	
	Maximum	78	
<b>Age Categories (years)</b>	0.5 - 18 (Children)	12	13.3
	19-44 (Young Adults)	38	42.2
	45 - 59 (Middle-age Adults)	24	26.7
	>60 (Elderly)	16	17.8
<b>Sex</b>	Female	26	28.3
	Male	66	71.7
<b>Marital status</b>	Married	70	76.1
	Single	20	21.7
	Widow	2	2.2
<b>Occupation</b>	Trader	34	36.8
	Artisan	16	17.5
	Civil Servant	12	13.1
	Student	8	8.7
	Child (Underage)	8	8.7
	Farmer	10	10.9
	Driver	4	4.3

**Table 2: Changes in distribution of Visual Acuity categories following treatment of patients with corneal ulcers**

	VA at Presentation		VA after Treatment	
	Frequency (n=92)	%	Frequency (n=92)	%
VA of ≥ 6/18	10	10.9	20	21.7
VA of ≥ 3/60	16	17.4	28	30.4
VA of ≥ LP	86	93.5	78	84.8

VA = Visual acuity

Five patients had evisceration two out of which occurred by auto-evisceration. Corneal scarring, phthisis bulbi were other significant findings.

**Conclusion:** Ocular trauma was the most common risk factor with Microbial Keratitis as most dominant cause of cornea ulcer. Poor treatment outcome result from late presentation with established complications. Appropriate health promotion activities to address the identified risk factors at all levels of care can reverse this ugly trend. Availability of better yield in microscopy culture and sensitivity, amniotic membranes, adhesive glues, cornea cross linking cornea transplant may improve outcome.

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