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Original Article

FACTORS ASSOCIATED WITH CORNEAL ULCER AMONG PATIENTS RECEIVING EYE CARE SERVICES AT EYE DEPARTMENT, JINJA REGIONAL REFERRAL HOSPITAL. A CROSS-SECTIONAL STUDY.

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ABSTRACT

Introduction

The aim of the study was factors associated with corneal ulcers among patients receiving eye care services at JRRH.

Specific objectives

the specific objectives were; to find out demographic and family factors, socioeconomic factors, and predisposing factors associated with corneal ulcers among patients receiving eye care services at among patients receiving eye care services at JRRH.

Methodology

A quantitative cross-sectional study was conducted.
Study methods. A hospital-based descriptive cross-sectional study methodology was used. Data was collected from 60 patients' questionnaires of those who had corneal ulcers at JRRH. The data was collected using questionnaires and was presented in tables, figures, and narratives.

Results

on predisposing factors the research revealed that the majority 83.3% of the patients who had corneal ulcers had a history of TEM use,80% had a history of trauma, and 66.7% with no protective gear at work, on the demographic factors; majority by 80% Lived in rural areas,66.3% were male and 51.6% were illiterates.

Conclusion

According to the study, most of the patients who had corneal ulcers lacked awareness of the effects of TEM use, had a history of trauma mostly from places of work because they had no eyewear which predisposed them to corneal ulcers, males engaged in risk activities e.g. motorcyclists, mining and farming.

Recommendations

Regular eye health education on TEM use, protective gear use, extensive training of community health personnel on primary screening, management, and referral of corneal ulcer patients. Ministry of Health together with other non-government organizations should make eye care services available at PHC centers, more OCOs, Ophthalmologists, and Opticians should be trained and employed to allow quick access to extensive management.

Keywords: Factors, Corneal Ulcer, Eye Care Services, Jinja Regional Referral Hospital
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Background to the study.

Corneal ulcer also known as keratitis is an open sore on the cornea. A corneal ulcer usually results from an eye infection but severe dry eye or other eye disorders can cause it (San Antonio Eye Center). A research study was conducted in India which revealed that corneal ulceration was a leading cause of visual impairment and most corneal ulcers occurred among agricultural workers in developing countries following corneal abrasion. (DR. M Srinivasan, 2017).

A research study was conducted in Nigeria on corneal ulcers that revealed that, Of the 101 records of corneal ulcers retrieved, 68% were Suppurative, 10%viral, 5% were Moore's, and 1% were shield ulcers (Affiong A., 2012).

A research study was conducted in Kenya about factors associated with corneal ulcers which found that Infections caused by bacteria, viruses, fungi, or parasites were among the potential causes of corneal ulcers (Salmon J. Kanksi's, 2022). A research study was conducted in Uganda to describe the epidemiology of microbial corneal ulcers on patients attending services in SU which revealed that trauma was reported by 29% and use of TEM by 60% (Arunga S, 2018).

The general objective of the study was to find out the demographic and family factors associated with corneal ulcers among patients who attend eye care services in the eye clinic at Jinja Regional Referral Hospital.

METHODOLOGY

Study Design

The study employed a Cross-sectional quantitative study design.

Study Area

This study was conducted at Jinja Regional Referral Hospital. This was because JRRH being a regional referral for many of the districts in Eastern Uganda, a large number of people were allowed to participate and benefit from the research. The study was conducted for a period of 6 months from June to November.

Participants

Study population

All patients with corneal ulcer/ corneal scars brought for eye care services at JRRH were the main study population.

Inclusion criteria

Only patients with corneal ulcers who came to receive eye care services at JRRH who consented to participate in the study were included.

Sample size determination.

The sample size was determined using the method below.

Sample size, S=GR/O (Button's 1995).

Where S= sample size.

G= Number of people interviewed per day

R= Maximum number of days for data collection.

O Maximum time an interviewer spends on each patient.

G= 5 people

R= 6 days

O= (30/60) =0.5 Hours

Therefore, S= (5x6)/0.5= 60 respondents

Sampling technique

A probability sampling process was used since a specific group of patients with corneal ulcers was required among patients receiving eye care services at JRRH.

Sampling procedure

A random sampling procedure based on first come first served was used to get participants in the study. Whoever came early to the hospital met the required criteria and agreed to be part of the study was included in the study.

Data collection method

A quantitative survey method was used. The process of data collection began with self-introduction, and with the introductory letter from OCO training school in JRRH. The letter helped in obtaining permission from the hospital administration to carry out the research study.

Data collection tool

Questionnaires were used. Printed questionnaires were provided to respondents. Each filled questionnaire was checked for accuracy and completeness by the researcher and his team.

Data collection procedure

Patients who agreed to be part of the research study were presented with printed questionnaires and requested to fill them. The filled questionnaires were collected and the data was analyzed and recorded.

Study Variables

Independent variable:

Patients who received eye care services at the eye department at JRRH

Dependent variable:

Factors associated with corneal ulcers.

Quality control

Quality control was carried out through;

Pretesting of research tool

Questionnaires were checked for typing errors and mistakes and were pretested for completeness on six patients at JRRH.

Training of research assistants

A research assistant was trained, on how to conduct the research and told the requirements and the importance of the research study.

Adherence to the standard operating procedures (SOPs)

SOPs were observed through wearing of face masks, proper disposal of wastes, wearing of personal protective gear where required, and keeping a safe distance.

Data analysis and presentation

Completed questionnaires were edited for accuracy and consistency using Microsoft Excel and Microsoft Word, the data collected was presented in tables and figures using frequencies and percentages, and pie charts. The quantitative data was investigated for relevant information.

Ethical Consideration

A letter of introduction was provided by the principal of the Ophthalmic Clinical Officers training school and it was delivered to the hospital Director of JRRH who introduced me to the different hospital in-charges of the ward. Patients who were willing to take part in the research study were asked to consent. Confidentiality and autonomy were observed.

Table 1: Showing demographic factors associated with corneal ulcers among patients receiving eye care services at JRRH (n=60).

FACTOR	VARIABLE	CORNEAL ULCER	
		Frequency (n)	(%)
Age	10-30	20	33.3
	35-60	24	40
	60 AND ABOVE	16	26.7
Gender	Male	38	63.3
	Female	22	36.7
Occupation	Mining	5	8.3
	Peasant	20	33.3
	farming	25	41.7
	motorcyclist	10	16.7
Address	Village	48	80
	Town	12	20
Marital status	Single	15	25
	Married	16	26.7
	Separated	21	35
	other	8	13.3
Level of education	Primary	16	26.7
	Secondary	09	15
	Tertiary	04	6.7
	No education	31	51.6
Family history of corneal ulcers	Yes	38	63.3
	No	22	36.7
Number of eye check-ups	No	53	q88.3
	yes	07	11.6

RESULTS.

Demographic factors associated with corneal ulcers among patients receiving eye care services at eye clinic JRRH

According to Table 1, 60 respondents participated in the study, out of which 63.3% were male, 36.7% were females, 33.3% were 10-30 years 40%35-60years, 26.7% were above 60 years 41.7%were farmers33.3were peasants 16.7%were motorcyclists 8.3%were miners 80% lived in villages while 20% lived in urban areas 51.6 %were illiterate48.4% were literates 63.3% had family history of corneal ulcer/ scar while 36.7% had no history of corneal

ulcers 88.3% had never had any eye checkups, 11.7% had eye check up,35% had separated from marriage 26.7% were married and 25% were single.

DISCUSSION.

Demographic and family factors associated with corneal ulcers among patients receiving eye care services at JRRH.

Occupation; Most patients with corneal ulcers had a history of trauma (80%) this depended mostly on the risk economic activities like farming, mining, motorcyclists, and peasants which were predisposed to corneal ulcers since most of them had no protective gear at work while carrying out risk economic activities. This agrees with (Zainu S, 2022) who reported that Ocular trauma was the most common predisposing factor to corneal ulcers, patients who were involved in occupations having a high risk of ocular trauma(89.5%) did not have the habit of wearing protective goggles at places of work. Education level; The majority lacked knowledge on the impacts of TEM use because most patients were illiterates hence self-awareness of the negative impacts of TEM use was inadequate creating a gap for strong belief in local herbs as a remedy hence predisposing them to corneal ulcers. This agrees with Arunga S, (2018) "TEM use was linked to strong cultural beliefs and this seemed to be related to the level of education. In the model, people with no or little education were more likely to use TEM". It was worrying that people did not perceive TEM use as potentially dangerous.

Gender; males were more affected than females due to their economic activities like farming motorcyclists, peasants, and mining In addition, most of them had no protective gear which predisposed them to ocular trauma hence corneal ulcers. However, most corneal ulcers in women and children were due to accidents and domestic violence. This agrees with Hem S, (2016) who reported that corneal ulcers were found to be more common in males than females,

Address; most patients lived in rural areas with long distances to reach health centers which reduced the number of eye checkups and sometimes they overstayed at the facility before being attended to or ended up missing services this was due to very many patients to health worker ratio since JRRH is the main RRH serving over four districts. This agrees with

Affiong A, (2012) reported that corneal ulcer was also commonly observed in people living in rural areas, limited access to eye care was a major driver of TEM use whereby the majority of TEM users came from districts relatively far away where no eye care facilities were situated. Multiple people commented on the lack of eye health services in the nearby health facilities.

Monthly income; the level of monthly income to a lesser extent predisposed patients to corneal ulcers the patients ended up participating in risky economic activities to sustain their families, low-income earners couldn't get eye care services in time and most of them reported either a scar or referral for evisceration. In their report, they urged that the medication was too expensive and the frequency was short 2hrly hence ended up with poor outcomes. Due to lack of transport, the patients sometimes ended up using TEM or self-medication since it was available and free of charge, those who attended couldn't buy medication up to healing hence poor prognosis.

CONCLUSIONS.

This research study specifically sought to find out demographic factors associated with corneal ulcers among patients receiving eye care services at JRRH. The study established that trauma, TEM use, self-medication, risk activities, lack of protective gear, inadequate health services, long distances, low incomes, and illiteracy were the major factors associated with corneal ulcers among patients receiving eye care services at JRRH. Given these findings, these results are to help fill the gaps right from patients to health workers since all causes are deeply addressed and discussed. This can put a strong basis for the efforts needed to eradicate corneal ulcers and their complications among the natives of the Jinja district at large.

RECOMMENDATIONS.

There is a need for awareness campaigns and community education on TEM use by health workers, and village Health Teams through organizing camps, through various media

like radios, and house to house, in community meetings through community mobilization.

There is a need for the provision of diagnostic tools for corneal ulcerations to eye care health workers at their places of work for example fluorescein stains, examination loops, and slit lamps which help in the diagnosis of corneal ulcers hence proper management.

Patients and community health teams must be encouraged to reach out to nearby health services for consultation as fast as possible to avoid complications like blindness, corneal scarring, and evisceration which are irreversible impacts.

Patients participating in risk activities like mining, riding, and agriculture, should be encouraged to use protective gear at places of work.

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"MAY THE GOOD LORD REWARD YOU ABOUNDANTLY"

LIST OF ABBREVIATIONS AND ACRONYMS.

ECS: Eye Care Services.

HSV: Herpes Simplex Virus.

JRRH: Jinja Regional Referral Hospital.

OE: Ocular Emergency.
SAARC: South Asian Association for Regional Cooperation.
SEAR: South Eastern Asia Region.
SU: Southern Uganda.
TEM: Traditional Eye Medicine.
TPK: Treatment Plasty Keratitis.
WHO: World Health Organization.

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