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Original Article

FACTORS ASSOCIATED WITH CONJUNCTIVAL GROWTHS AMONG PATIENTS ATTENDING HEALTH CARE SERVICES AT JINJA REGIONAL REFERRAL HOSPITAL EYE CLINIC. A CROSS SECTIONAL STUDY.

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ABSTRACT

Purpose of the study
To examine the factors associated with conjunctival growth among patients aged 26 years and above attending the health care services at Jinja Regional Referral Hospital eye clinic.

Study methods
The study used a cross sectional design employing quantitative methods of data collection. One hundred and one (101) respondents were chosen for the study and data was presented using frequency tables, pie charts, graphs, figures and texts.

Principal findings
From a total of 101 respondents, the associated factors were 64(63.37%) had never used sunglasses and 71(70.29%) reported to have never been diagnosed with a chronic illness, 66.34% reported to have family members with history of conjunctival growths.

Conclusion
The study established that, the associated factors for conjunctival growths are, exposure to ultra violet sunlight rays, people who smoke, family history, use of sunglasses. Surgical removal of the growth is the most effective means of management and also use of eye drops to manage in case of inflammation.

Recommendations
Equip all hospitals and health Centers with the necessary equipment. Recruit more eye health workers to different Health centers. Organize Continuous Medical Education (CMEs) about conjunctival growths and their management.

Keywords: Factors, Conjunctival Growth, Jinja Regional Referral Hospital, Eye Clinic
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Background
A conjunctival growth refers to an abnormal non-cancerous and cancerous degeneration of the conjunctiva. The common types of non-cancerous conjunctival growths include pterygium, pinguecula, concretions. A pterygium is a common chronic ophthalmic condition which can result in visual morbidity or lead to blindness in extreme cases.

The hazardous effect of ultra violet (U.V) radiation has been well documented as the major cause of ocular disorders. Particularly in the eye it has been associated with such conditions as pterygium, pinguecula, and squamous cell carcinoma, and photo kerato-conjunctivitis

Pinguecula refers to a yellowish white patch on the bulbar conjunctiva near the limbus it is non- cancerous.

Conjunctival concretions refer to small typically multiple, yellow white lesions commonly found on the palpebral conjunctiva of elderly individuals and those with chronic inflammation. They are thought to be wide spread and typically asymptomatic

Pterygium tends to be more prevalent in tropical and equatorial regions and has been strongly associated with exposure to sunshine

It is a wing shaped, triangular, superficial non –cancerous external mass of t bulbar conjunctiva, that is usually found I n the nasal or temporal side of the intra palpebral fissure. The exact cause of pterygium is not known but long term exposure to ultra violet light, dust, smoke, the may develop progressively or stop growing after some. Globally, its magnitude varies widely from 1.1% TO 53% .plos.org by Sofonias, et al, In Ethiopia it reaches from 8.8%to38.7% (Sofonias et al,, May 2019)

In East Africa there isn't much data that has been carried out about conjunctival growths

Uganda is in the equatorial region and over 72% of its predominantly dependent on Agriculture (statistics UBO, 2013) which exposes them to being outdoors for multiple hours and thus exposing them to UV radiations (Erima Denis et al, 2020). They get exposed to dust and wind which

are both implicated in formation of pterygium other factors such as age and social economic status, sex have been found to be associated with the occurrence of a pterygium (Erima Denis et al, 2020).

Cancerous conjunctival growth includes Ocular surface squamous neoplasia (OSSN) encompasses a wide range and varied spectrum of diseases involving abnormal growth of dysplastic squamous epithelial on the conjunctiva of the eye. These diseases include squamous cell carcinoma, epithelial plaque, Limbal epithelioma, ocular surface, epithelial dysplasia, etc.

Africa has the highest OSSN in the world, where males and females are equally affected unlike other continents where male disease pre dominates African women probably have increased risk due to their higher prevalence of HIV and HPV infections as the survival of HIV people increases and given no evidence that ART reduces the incidence of OSSN, the incidence of OSSN may reduce in the coming years (Stephen Gichuhi , et al, 2016). The purpose of the study is to evaluate the factors associated with conjunctival growth among patients receiving eye care services at Jinja regional referral hospital eye clinic.

METHODOLOGY

Study Design

A descriptive cross sectional study design was employed and quantitative methods were used to examine the factors associated with prevalence of conjunctival growth among patients attending eye care services at Jinja regional referral hospital eye clinic.

Study Area

The study was carried out from Jinja Regional Referral Hospital in Jinja district. The hospital is located in the south eastern region of the country in Jinja central division, Jinja City council near the source of the Nile. The hospital serves, Busoga region which includes districts of Jinja, Kamuli ,Iganga, Mayuge, Bugiri, Luuka ,Bugweri ,Buyende, Kaliro, Namutumba, Namayingo etc. it also serve the neighboring Buikwe, Njeru, Bugerere, Kayunga. It was founded in 1962 and has a bed capacity of 600.the hospital serves a number of patients across the region some of who are referred from other hospitals and health center IVs while others re self-referred. Among the services provided include Eye services medical, surgical, orthopedic, private, gynecology, pediatric, dental, ENT, lab, X-ray, scan, immunization, HIV testing, and counseling, reproductive health services and safe male circumcision. The hospital has 15 wards which include; surgical female/male, medical male/female, TB, Eye, Urological, Grade A, A annex, psychiatric and children's wards, intensive care unit, postnatal, and maternity wards. The research was carried out in August 2022 to April 2023.

Study Population

The study was carried out among patients with conjunctival growths attending to eye care services at the eye clinic of the OPD department at JRRH during the time of data collection for the study and some key informants for example the principal and hospital director

Selection Criteria

For participants to take part in this study, they had to be clients of the eye department at JRRH with conjunctival growths or eye specialists working at the hospital during the time of data collection. Participants of 26 years of age and above were also included in the study.

Exclusion criteria

Those who were below the age of 26 years, very ill patient.

Sample Size Determination

The sample size was calculated using the method below according to Mbuto Samuel (2004)

Sample size =(D*H)/T where

D= Number of days available for data collection

H= Number of hours per day

T= Total time that was spent on each event

D= 26 days, H=3hrs, T=46minutes

(26*180)/46= 101 patients

Sampling Technique

A simple random sampling was used for patients affected by conjunctival growths who attended to in Jinja regional referral hospital eye clinic and anyone who had any relevant information in Jinja district except those included in the exclusion criteria.

Sampling Procedure

For the reasons of ensuring random sampling, all patients were assigned a unique number. The numbers were written on small pieces of papers then folded and placed in the basin and were thoroughly mixed. After being blind folded, then they were opened and those with odd numbers were picked to participate in the study.

Quantitative Methods

This method was used in the study to compile data in form of tables, pie charts and bar chart

Data Collection method

Data was collected using interview by the researcher.

Data Collection tools

Data was collected using an interviewer administered questionnaire.

Data collection procedure
The study started by creating rapport with the respondents and reassuring them about confidentiality. The questions were read and interpreted for the respondents to understand. Answers were given in local language and written in English, and at the end the Patients were thanked for the co-operation.

Quality control
Pre-visiting
Prior to the study, Jinja regional referral Hospital Eye Department was visited to obtain permission from the relevant authorities to carry out the study and ascertain that the study is relevant and needed.

Research Assistants
The study had one research assistant who was selected according to his level of education (secondary level) communication skills, ability to speak the local language and English, and his knowledge about the research topic. He was first trained and then oriented about data collection process and was involved in the pre-testing of the questionnaire.

Pre-testing of the questionnaire
The pre-testing was done in Jinja regional referral Hospital, Jinja District among the patients. 12 questionnaires were used. This was aimed at evaluating validity and reliability of the questionnaire. The data tool was therefore revised to suite realities through reconstructing of questions and eliminating of useless questions.

Data processing, analysis and presentation
Data was processed quantitatively by tallying and using SPSS and be presented by narration, use of tables, bar graphs and pie charts.

Ethical consideration
A permission letter and an introductory letter from Principal of Ophthalmic Clinical Officers' training school was taken to the Hospital director who recommended the researcher to the In-charge of Jinja Regional Referral Hospital Eye Department who permitted to carry out the study.
Verbal consent was sought from the respondents after the explanation of the study topic. The respondents were assured of their right to consent.
Before data was collected, the respondents were assured that the information to be collected was to be kept confidential and was only be used for academic purposes and planning to promote better social life of patients. To further ensure this code numbers were used instead of the Patients' names as an assurance that no one knows from whom the information is was got from.

RESULTS

Social Demographic Data
Table 1 showing social demographic data of the respondents

Variable	Frequency (n=101)	Percentage (%)
Age		
26-30 years	04	3.96
31-36 years	20	19.8
37 and above	77	76.2
Sex		
Male	45	44.55
Female	56	55.45
Occupation		
Peasant	51	50.50
Civil servant	18	17.82
Others (Specify)	32	31.68
Tribe		
Musoga	58	57.43
Muganda	18	17.82
Mugisu	10	9.9
Others(specify)	15	14.85
Total	101	100

From Table 1, Conjunctival growths were noticed to be more prevalent among the ages of 37years and above (76.2%) and31 -36(19.8%) years
Compared to males, females were found out to also have a higher prevalence rate of conjunctival growths.

Most of the respondents that reported with conjunctival growths were mostly peasants (50.50%) and people working in dusty and sunny conditions "others" (31.68)
The most common tribe that reported with conjunctival growths were the Basoga (57.43%) followed by baganda

(17.82%). This was so because the area of study is located in Busoga region which is neighboring Buganda region just across River Nile

Associated factors of conjunctival growths

Table 2; shows respondents who use sunglasses and those who have never used the sunglasses, those who have ever been diagnosed with any chronic illness, and those who have never been diagnosed with any chronic illness.

Question	Variable	Frequency	Percentage (%)
Do you wear sunglasses?	Yes	37	36.63
	No	64	63.37
	Total	**101**	**100**
Question	**variable**	**Frequency**	**Percentage (%)**
Have you ever been diagnosed with any chronic illness?	Yes	30	29.71
	No	71	70.29
	Total	**101**	**100**

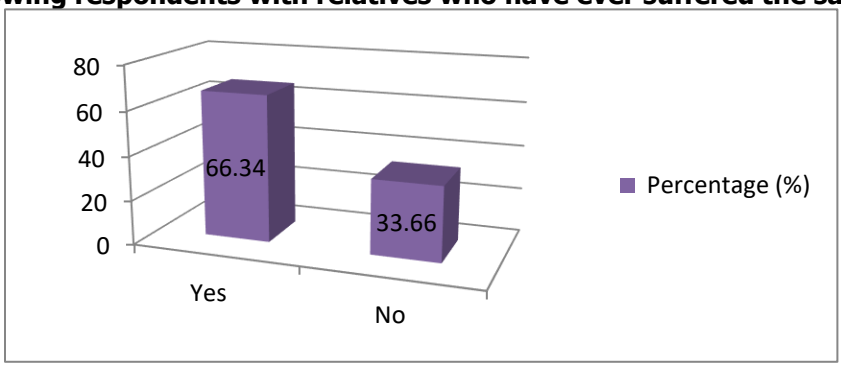
From Table 2, the majority 64(63.3%) of the respondents had never used sun glasses while the minority 37(36.63%) had ever used sun glasses. The majority 71(70.29%) had never been diagnosed with any chronic illness while the minority 30(29.71) had ever been diagnosed of a chronic illness.

Table 3; showing respondents who do smoke, take alcohol and those that don't smoke, don't take alcohol.

Question	Variable	Frequency	Percentage (%)
Do you smoke?	Yes	10	9.9
	No	91	90.1
	Total	**101**	**100**
Do you take alcohol?	**variable**	**frequency**	**Percentage(%)**
	Yes	**20**	**19.8**
	No	**81**	**80.2**
	total	**101**	**100**

From Table 3, the majority of the respondents don't smoke (90.1%) and the minority (9.9%) smoke, the majority of the respondents don't take alcohol (80.20%) and minority (19.80) take alcohol

Figure 1; showing respondents with relatives who have ever suffered the same condition



From Figure 1, the majority of the respondents had relatives who have ever suffered the same condition 66.34% while the minority 33.66%didn't have relatives who had ever suffered the same condition.

DISCUSION OF RESULTS

The associated factors for conjunctival growths.

Most of the respondents 64(63.37%) have never used sunglasses and minority 37(36.63%) have ever used sunglasses, this means that majority of the victims were exposed to sunlight which agrees with a study done by (Labuschagne MJ, 2013) who stated that exposure to sunlight, especially ultraviolet (UV) type B (UVB) radiation, may play an important role in the development of p53 mutations (tumour-suppressor genes) within the limbal epithelial cells, which contribute to the growth of pingueculae, pterygia and limbal tumors (Labuschagne MJ, 2013).

Most 30(29.70%) of the respondents were not suffering from any chronic disease and the least 71(70.29%) were suffering from chronic diseases.

From the study majority 91(90.1%) of the respondents did not smoke and minority 10(9.9%) smoke. This is in line with Rashima Asokan, et al, 2011) who found out that the presence of pterygium and pinguecula was not associated with smoking, use of alcohol, nature of work, diabetes and hypertension (Rashima Asokan, et al, 2011).

From the study the number 67(66.34%) of respondents who had relatives who had ever suffered from the same disease was more than the number of respondents whose relatives had never.34(33.66).

Conclusion

The study established that the associated factors for conjunctival growths are, exposure to ultra violet sunlight rays and in people who smoke. Also the study established that conjunctival growths can be as a result of inheritance from relatives.

Recommendations.

The ministry of health should equip all hospitals and health Centres with the necessary equipment to enable Ophthalmologists, Ophthalmic clinical officers, ophthalmic assistants and Eye health workers diagnose conjunctiva growths and effectively manage.

The Government of Uganda should also recruit more eye health workers to different Health centres. This can help in quick diagnosing of conjunctival growths that more people take for granted and also health educate them about the condition and its dangers.

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ABBREVIATIONS

JRRH	–	Jinja Regional Referral hospital
OPD	–	Out patient department
IPD	–	Inpatient department
OCO	–	OPHTHALMIC CLINICAL OFFICER
U.v	-	Ultra Violet
M.O.H	–	Ministry of health
OSSN.	-	Ocular surface squamous Neoplasms

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Conflict of interest

The author had no conflict of interest

REFERENCES

1) ophthalmic and physiological optics ISSN 0275-5408 "prevalence and associated factors for pterygium and pinguecula in a south indian population" by Rashima ASokan, Ramesh S Venkatasubbu, Lokapavani V, VIjaya L &George R,)
2) Angelica Girona, MD, **2020**
3) ("A Guide to Conjunctival Tumors"By Carol L. Shields, MD, Sara E. Lally, MD and Jerry A. Shields, MD)
4) (Cogent medicine , Volume 7, 2020-issue 1 research "Pterygium in Uganda a hospital based study" by Erima denis, Ayebare Pauline, Zalwango Charity, Mwanja pius, Ntende Jacob and C.Ateenyi Agaba)
5) MJ Labuschagne (2013) " When to be concerned about a conjunctival growth",
South African Family Practice, 55:5, 421-425, DOI: 10.1080/20786204.2013.10874389

6) PLOSONE " Prevalence of Pterygium and its associated factors among adults aged 18years and above in Gambella town south west Ethiopia May 2019" by Sofonias Addis Fekadu, Abel Sinshaw Assem, Nebiyat Foleke Adimassu)

7) Gichuhi S, Sagoo MS, Weiss HA, Burton MJ. Epidemiology of ocular surface squamous neoplasia in Africa. Trop Med Int Health. 2013 Dec;18(12):1424-43. doi: 10.1111/tmi.12203. Epub 2013 Oct 30. PMID: 24237784; PMCID: PMC4440345.

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