

The Importance of Ocular Prosthetic in Sudan

Mashaer Osman Ahmed Aldow^{*} and Mohammed Elhassan Ali El-Awad

College of Optometry and Visual Science, Al-Neelain University, Khartoum, Sudan

^{*}**Corresponding author:** Mashaer Osman Ahmed Aldow, College of Optometry and Visual Science, Al-Neelain University, Khartoum, Sudan, Tel: 00249912911875; E-mail: bit.aldow@gmail.com

Received date: October 27, 2018; **Accepted date:** November 26, 2018; **Published date:** December 03, 2018

Copyright: ©2018 Ahmed Aldow MO, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Introduction: The eye removal surgery is undertaken only when all other eye treatments are ineffective, inappropriate or undesirable. An ocular prosthesis or artificial eye (a type of craniofacial prosthesis) replaces an absent natural eye following an enucleation, evisceration, or orbital exenteration. The prosthesis fits over an orbital implant and under the eyelids.

Objectives: This study aimed to improve the patient aesthetics, point out the need for prosthesis department and to highlight the need for a trained ocularist.

Methods: A descriptive hospital based study was carried out on 12 subjects who underwent enucleation, evisceration and ocular prosthesis fitting recruited from Makkah Eye Complex (MEC), part of Al Basar International Foundation, Al Rayad, Khartoum Sudan. Data was collected, cleaned and analyzed using SPSS version 25.0.

Results: This study includes 12 participants. All of the study participants had an eye removed because of injury. Only one third (33.3%) had orbital evisceration and the remaining (66.7%) had eye enucleation. According to this study; 58.3% of the participants stated that there was no matching of the artificial eye color with the natural eye color, 16.7% of them noticed buildup of deposits on the prosthetic eye, 41.7% had problems in depth perception, so they faced difficulty in pouring water in a jug or tea in the cup, while 16.7% of them had stopped using the artificial eye within less than one year.

Conclusion and recommendations: Health authority in Sudan should take into account the need for establishment of a prosthetic eye department in Sudan that will provide artificial eye services, a manufacturing and fitting service for the supply of ocular prostheses to all patients throughout the country, in addition to the need for trained ocularists.

Materials and Methods

Study design

A descriptive hospital based study was carried out on subjects who have normal vision in their surviving eye and had undergone enucleation, evisceration and readymade UH] VJU eye HhX in their other eye. A survey to evaluate their needs and problems that they faced was completed. Y subjects were recruited from Makkah Eye Complex (MEC) as part of Al Basar International Foundation, Al Rayad, Khartoum, Sudan [6].

Study population

A descriptive hospital based study was carried out on 12 subjects who underwent enucleation, evisceration and had ocular prosthesis Hh] " A 35 question survey was completed to evaluate their needs and the problems that they faced. Only participants with normal vision in the remaining eye were included.

Materials used

Plastic stock eyes from ZABBYS, India; Snellen Vision Testing Chart; Trial set and Trail frame; Pen-light-lamp, type: lens end lamp 22V; Data form; Hand held plastic ruler; Sony digital camera (12.1 mega pixels).

Sampling

Y appropriate 12 sample were selected from Makkah Eye Complex. For ethical consideration, written approval for conducting this research was obtained from Al-Neelain University. Verbal consent was obtained from all participants enrolled in the study. Study data/

Patient depend on him/herself in movement	Yes	12	100.0
	No	0	0.0
	Small	3	25.0
	Large	5	41.7
Size of artificial eye used	Suitable	2	16.7
	Do not use	1	8.3
	Stopped to use	1	8.3
Matching of the artificial eye color with the original eye color	Suitable	5	41.7
	Not suitable	7	58.3
Noticed deposits build up on prosthetic eye	Present	4	33.3
	Absent	8	66.7
Noticed change in artificial eye color	Present	2	16.7
	Absent	10	83.3
Wearing protective glasses	Yes	5	41.7
	No	7	58.3
Received training to adapt with eye loss	Yes	2	16.7
	No	10	83.3

Table 2 Y distribution of the study participants according to their general bX]b[gn= 12).

Another study from Japan went further in the impact of eye removal on the patient. Ymstated that the removal of an eye can result in depression, X] W]h]Yg in driving perceived problems with physical appearance and coping X] W]h]Yg[9].

Considering the patients' vision for near distances, the study points out that half of the study participants had reading X] W]h]Yg' 58.3% had tiredness in the eye during reading and 25% of them had at least one line missing during reading as in Figure 2

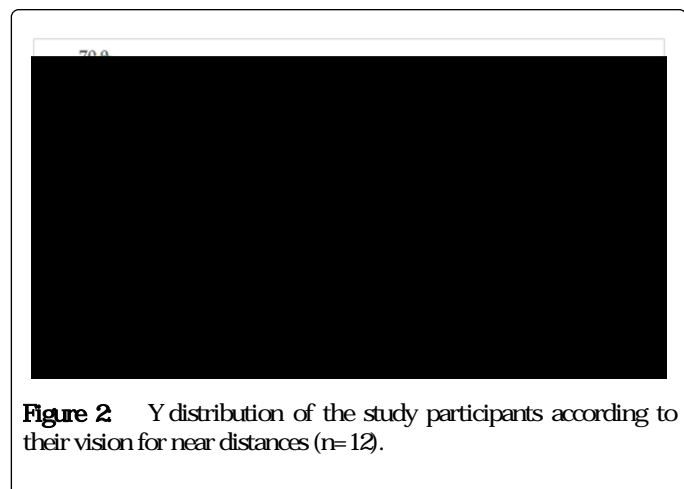


Figure 2 Y distribution of the study participants according to their vision for near distances (n= 12).

Other study agreed with this study that the patients may had eye fatigue during reading as an associated complications which are

mandatory for a durable functional, esthetic and psychosomatic rehabilitation U Yf ocular extirpation [7].

lg study also found out that 41.7% had problems in depth perception, so they face X] W]h]m in pouring the water in jug or the tea in the cup

Similarly, another study reveals that loss of depth perception and reduced visual range was equally concerning [8]. Ystudy found out that one third of the study participants (33.3%) do not remove the Ufh] V]U eye and wash it before sleep, 41.7% don't clean the eye cavity, 58.3% visit the doctor regularly.

Furthermore, the study found that 41.7% do not keep the Ufh] V]U eye in special box, 83.3% do not use a special solution for Ufh] V]U eye wash and 8.3% do not wash their hand before touching and wearing the Ufh] V]U eye. Studies claimed that eyes are very sensitive to irritation. Any irregularity in eye prosthesis would lead to discomfort and can U W]ithe patient compliance for cleaning and reservation and care [9].

Ystudy found that most of the study participants (91.7%) noticed presence of dirt in the Ufh] V]U eye Ystudy realized that one quarter of the study participants had stopped using the Ufh] V]U eye. 16.7% of them stopped using the Ufh] V]U eye within less than one year as shown in Figure 3

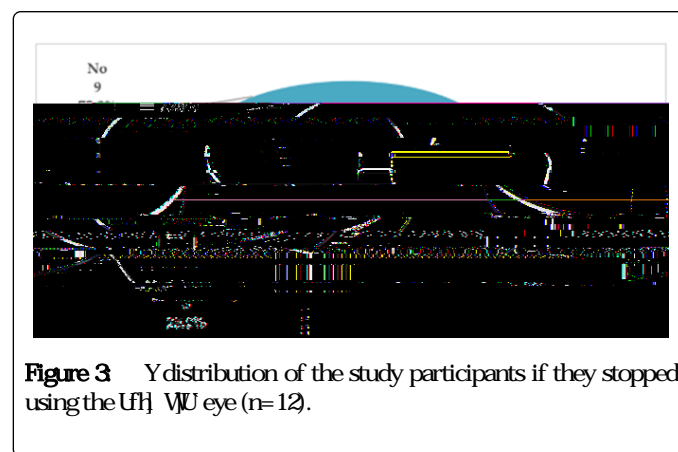


Figure 3 Y distribution of the study participants if they stopped using the Ufh] V]U eye (n= 12).

Y causes to stop using Ufh] V]U eye were pain (33.3%), change of the Ufh] V]U eye (33.3%) and inappropriate size of the Ufh] V]U eye (big in size). All these X] W]h]Yg highlights the need for training ocularists, in addition to detailed medical history that includes the condition that led to the excision and enucleation in order to alert the possibility of recurrence [7].

Conclusion

lg

Health authority in Sudan should take into account the need for establishment of an eye department in Sudan that provides updated eye services including manufacturing and services for the supply of ocular prostheses to all patients throughout the country in addition to the need of trained ocularists.

It is required to verify all the details of the private clinic in order to gain the XbW of the patient and a detailed medical history that includes the condition that led to the excision and enucleation in order to alert the possibility of recurrence.

Conflict of Interest

Authors declare that there is no conflict of interest.

Authors' Contributions

All authors have contributed in reviewing the manuscript. The corresponding author has the right on behalf of all authors.