

Questionnaire Survey on Patients with Ocular Prosthesis

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Abstract:

Aim: To conduct a questionnaire survey among the patients with ocular defects to find out the cause of eye defects and awareness about the plastic eye shells.

Methodology: Patients with ocular defects are included for the questionnaire survey and individuals who were wearing the old prosthesis and who are not wearing the prosthesis were included for the study. Old prosthesis was evaluated if it is satisfactory included in the survey. The patients who were provided with the orbital prosthesis were excluded from the study. Total of 21 patients were included in the study. Questions were framed with main objective to focus on the cause of eye loss and awareness about the ocular prosthesis was used for the evaluation.

Results: Total of 21 patients were included for the study out of which 12 were male and 9 were female. Out of 21 patients 12 had ocular prosthesis and 9 out of 21 patient were not interested in the prosthesis. The majority of patients 8, have lost the vision at the age of 1- 5 years. The eye shell were fabricated by Prosthodontist and Ophthalmic technician. Ophthalmic technician fabricate the major ocular prosthesis.

Conclusion: Ocular prosthesis play a major role in establishing the self-confidence and to face the people in society. Trauma while playing plays a major role, parents should take maximum care on their children while playing. The majority of the ocular shell were fabricate by the Ophthal technician and patients are not aware about the role of prosthodontist in the fabrication of eye shell.

Key words: Ocular prosthesis, Questionnaire survey, Loss of eye

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I. Introduction:

The defects of eye can result of congenital defects, tumours or trauma. Trauma is the main cause of enucleation in 41% of cases and neoplasia of eye in 24 % cases¹. The various other cause precipitating for eye loss are – glaucoma, a blind and painful eye, corneal diseases and infection and uveitis. The surgical treatment for the eye defects can be managed by Evisceration, Enucleation, and Exenteration.

Evisceration is removal of the contents of the eye leaving only the scleral shell (Fig 1). Enucleation is removal of the whole intact eye by cutting the six extraocular muscles and transecting the optic nerve (Fig 2). Exenteration is the removal of entire orbital contents down to the bone are removed. This is often covered with a skin graft. Exenteration is a mutilating operation and the only indication is in the treatment of some malignant tumours in the orbit. Ocular prosthesis have been used to provide cosmetic replacement for enucleated and eviscerated eyes.

A questionnaire survey was conducted among the patients with ocular defects with main aim to find out the cause of eye defects and awareness about the plastic eye shells.

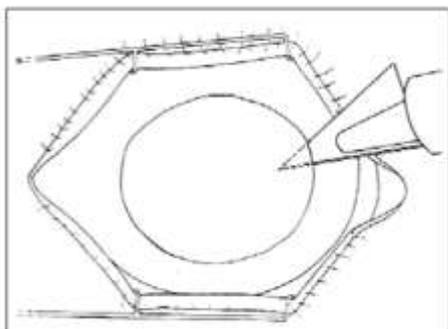


Fig 1 – Evisceration

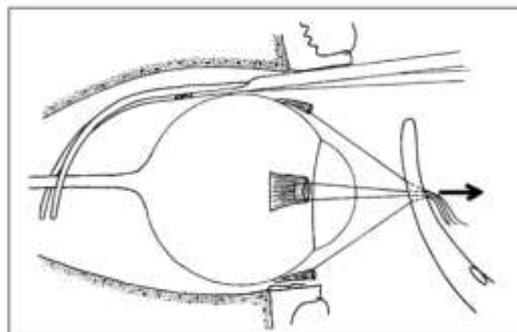


Fig 2 – Enucleation

II. Methodology:

Patients with ocular defects are included for the questionnaire survey and individuals who were wearing the old prosthesis and who are not wearing the prosthesis were included for the study. Old prosthesis was evaluated if it is satisfactory survey was conducted. The patients who were provided with the orbital prosthesis were excluded from the study. Total of 21 patients were included in the study. Questions were framed with main objective to focus on the cause of eye loss and awareness about the ocular prosthesis was used for the evaluation. The question has two part, first part consist of general details and the second part focus on the ocular prosthesis. The question used for the survey is shown in (Fig 3). Face to face interview type method was used to collect the details from the patient. The interview was done by health care profession and he was given training to use the questionnaire. The questions was asked to the patient and the details were collected. The entire methodology followed was shown in (Fig 4). Institutional ethical committee (IEC) clearance was obtained to collect the details from the patient.

III. Results:

The details recorded by using the questionnaire shown in Fig3 is tabulated in 1.

Table 1.Total of 21 patients were included for the study out of which 12 were male and 9 were female. The distribution of male and female is shown in Fig 5. The majority of patients 8, have lost the vision at the age of 1- 5 years. Age wise distribution of the eye loss is shown in Fig 6. The various cause of eye loss are by small pox, Trauma while playing, sleeping, working and feeding, infection, surgical complication and acid spill. The various cause of eye loss is shown in Fig 7. Trauma is the main cause compared to the others. Most of the patients who had eye problem during the loss of vision have obtained medical advise from the nearest Hospital and details is shown in Table 1. The eye shell were fabricated by Prosthodontist and Ophthalmic technician and the details are shown in Fig8. Ophthalmic technician fabricate the major ocular prosthesis. Out of 21 patients 12 had ocular prosthesis. Ten patient remembered who made the prosthesis and the 2 were able to recollect who made the prosthesis. Some of the patient with ocular defect are not interested in the fabrication of the prosthesis, 9 out of 21 patient were not interested were not interested and the details is shown in Fig9.

IV. Discussion:

The decision to perform Evisceration or Enucleation is decided by the nature of the tumour. In the case of a malignant tumour or suspected malignant tumour the eye should be removed by enucleation and not evisceration. There are two important intraocular tumours, retinoblastoma and melanoma and for both of them the basic treatment is Enucleation. Enucleation must be performed for a suspected intraocular tumour and also when removing a traumatised eye to prevent sympathetic ophthalmitis. Evisceration and not enucleation is generally recommended for endophthalmitis. The reason is that enucleation may risk spreading the infection along the ophthalmic veins into the cavernous sinus or along the cerebrospinal fluid into the meninges. The loss of eye has high impact on the psychology of the patients².

Shame, embarrassment, preoccupation to hide, insecurity, and fear are reported as significant feelings after surgery³. Ahm, Lee and Yoon, (2010) affirm that eye removal causes such devastating effect in the patient that some of them develop anthropobia, which is the fear of meeting new people or new environments⁴. The loss of the eye result in patients' negative feeling regarding interpersonal relationships causes physical and mental stress that result in emotional instability⁴. It is important to mention that anxiety represents a risk to the health and consequently to the quality of life, since anxious individuals seem to be more subject to report worse health conditions, pain, limitation for daily activities, limitation for physical and mental health, problems with vitality and sleep, as well as higher tendency to consume tobacco, alcoholism, sedentarism, and obesity⁵.

Goiato et al. (2013) found in their study that ocular prosthesis cause positive influence in the patients' personal relations and that this fact can be associated to the psychological improvement along with prosthesis use⁷. Therefore, it is possible to affirm that prosthetic restoration had a fundamental role in the patients' personal identity recovery and their reintegration in the society⁶. These literature focus the important ocular prosthesis.

A questionnaire survey was conducted among the patients with ocular defects with main aim to find out the cause of eye defects and awareness about the plastic eye shells. Patient who had under gone surgery and using the ocular prosthesis and not interested for the prosthesis were included in the study. Patient under the orbital prosthesis were excluded. Total of 21 patient were recruited for the study out of which 9 were not interested.

A questionnaire is the main means of collecting quantitative primary data. A questionnaire enables quantitative data to be collected in a standardized way so that the data are internally Consistent and coherent for analysis. Questionnaires should always have a definite purpose that is related to the objectives of the research, and it needs to be clear from the outset how the findings will be used⁹. There are about four different types of questionnaire designing for a survey⁹. They are applied according to the purpose of the survey. -

1. Contingency questions/Cascade format
2. Matrix questions
3. Closed-ended questions
4. Open-ended questions.

The questionnaire used in the study comes under the category of Contingency questions and Closed-ended questions and Open ended questions. The first part of the question has the personal details while the second part has the question targeting on the ocular prosthesis.

Males are mainly affected compared to the female which is observed in the study, Out of 21 patients 12 were male and 9 were female. Loss of vision occurs mainly at the younger age of 1 to 5 years because all will be playful at the age and more over the cause is by trauma while playing which is observed in the study.

Trauma is the main cause observed in the study. Under the category of trauma various causes like while playing, sleeping, working and feeding were observed. Seven patients have lost the vision during playing during the childhood times. Trauma while sleeping is one peculiar cause where the patient have made the baby to sleep in the field where goats were grazing. One individual has lost the vision during breast feeding, hook present in the blouse have injured the eye and lost the vision.

Ocular prosthesis fabrication was mostly done by the Opthal technician present in the hospital and in the optical shop. The prosthesis fabricated by them were not fitting properly as it was done from the stock eye shell. In the present study 12 patients had ocular prosthesis out of which 2 did not remember who made the prosthesis. Out of the 10 patient who received the prosthesis six were fabricated by the opthal technician and the patient were satisfied with the prosthesis in spite of the misfit of the prosthesis and difference in the shade matching with the adjacent eye. Only two ocular shells were fabricated by the prosthodontist. The patient were mostly happy with eye shells even with the misfit and improper colour matching. The patients were not aware about the prosthodontic profession involvement in the fabrication of ocular shells.

V. Conclusion:

Ocular prosthesis play a major role in establishing the self-confidence and to face the people in society. Trauma while playing plays a major role, parents should take maximum care on their children while playing. The majority of the ocular shell were fabricate by the Opthal technician and patients are not aware about the role of prosthodontist in the fabrication of eye shell.

Questionnaire survey on patients wearing ocular prosthesis

Name:

Age: Sex (M/F) Date:

Address:

Occupation:

Medical History:

When was the vision lost?

How was the vision lost?

What type of effort was taken for the loss of vision?

Patients who are already wearing the prosthesis

i) *Who made the prosthesis?*

a) Dental surgeon (Prosthodontist)

b) Ophthalmic surgeon

c) Ophthalmic technician

ii) *Are you aware dental doctor can make artificial eye?*

iii) *Are you satisfied with the prosthesis? (Yes/No)*

iv) *If No why you are not satisfied?*

Patients who need new prosthesis

i) *Are you willing for the fabrication of the eye shell?*

ii) *Are you aware dental doctor can make artificial eye?*

iii) *Are you satisfied with the prosthesis? (Yes/No)*

iv) *If No why you are not satisfied?*

Fig 3 – Question used to collect the data

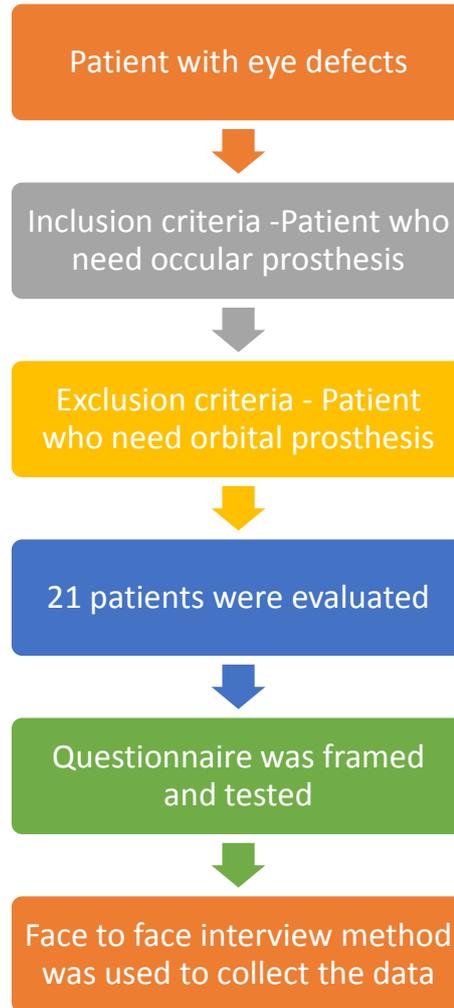


Fig 4 – Methodology for the study



Fig 5 - Male and female distribution

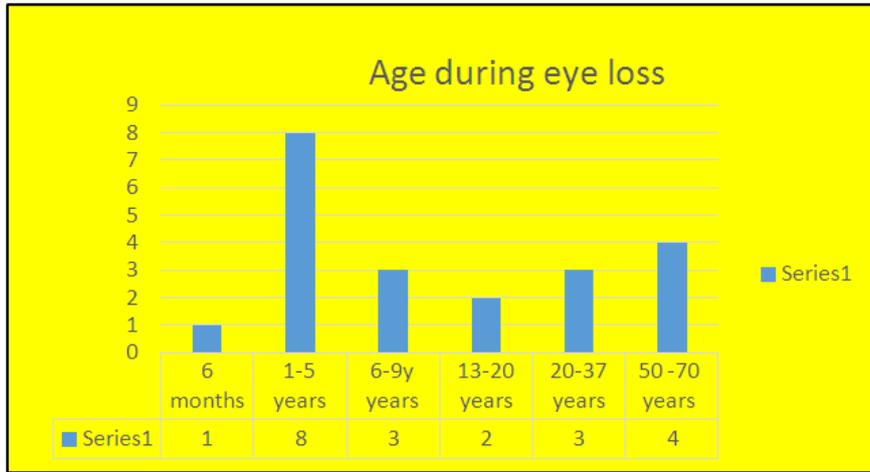


Fig 6 – Age wise distribution for loss of vision

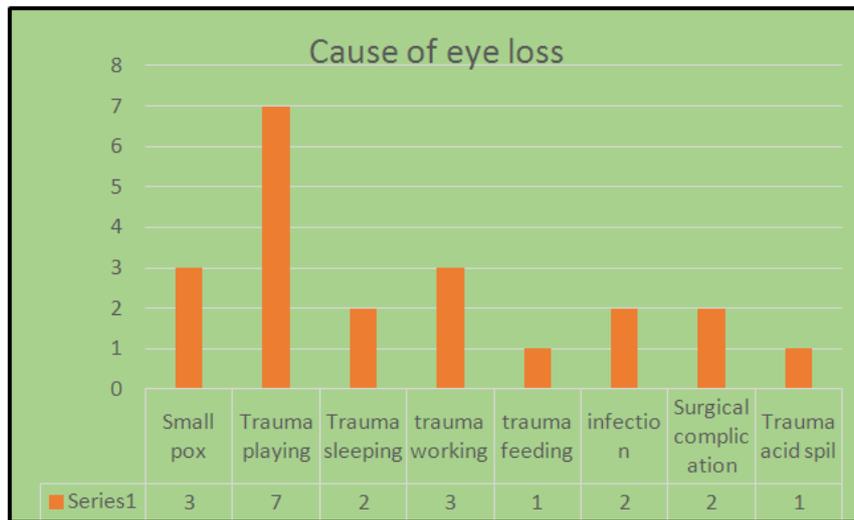


Fig 7 – Cause of eye loss

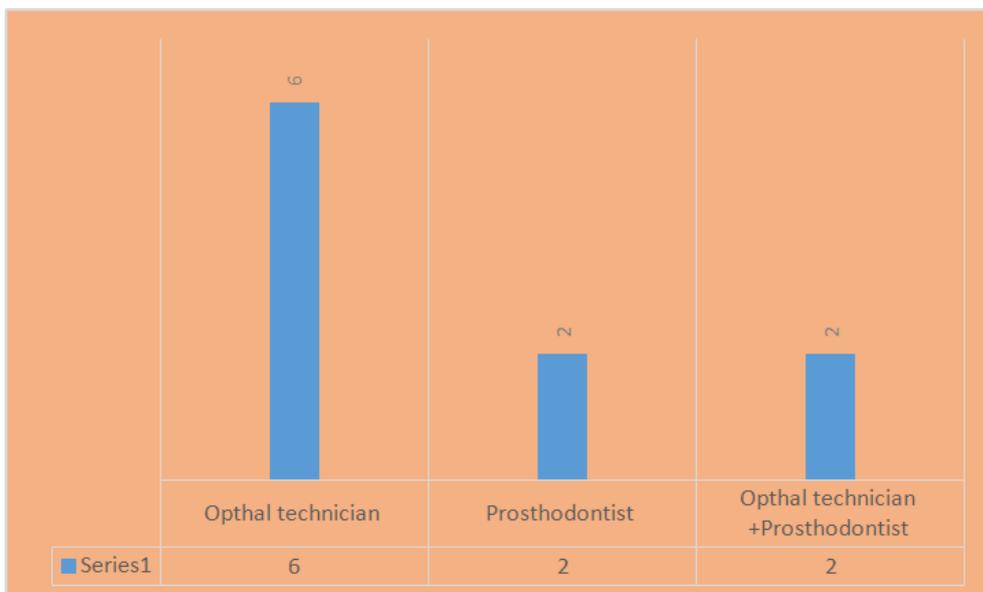


Fig 8 – Distribution on fabrication of prosthesis

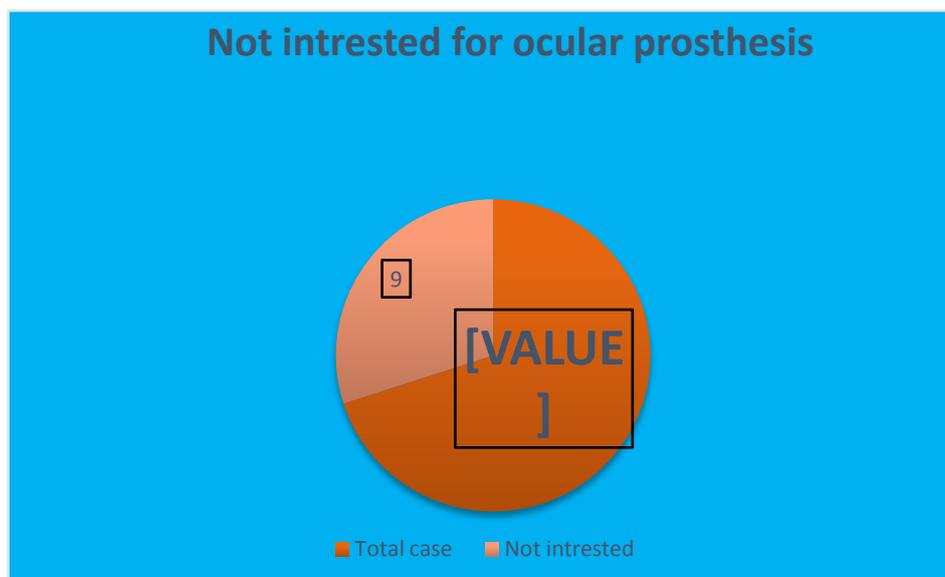


Fig 9- Not interested for prosthesis

Table I – Details recorded from the questionnaire

S. No	Sex /Age /Occupation	when was vision lost	How was the vision lost	First aid for vision lost	who made the eye shell	How long wearing the prosthesis	Are you aware dental surgeon make eye prosthesis	Are you satisfied with the prosthesis
1	Male/42y/Tailor	5years of age	Small pox	Egmore eye hospital	Ophthal technician in hospital	20 years	No	Yes
2	Female/49/homemaker	2 years of age	trauma while playing	Ophthalmic specialist	Not interested		No	Yes
3	Male/70	8 years of age	Small pox	No	Ophthal technician in hospital	25 years	No	Yes
4	Male /67 /cashier	3 years of age	trauma while playing	Egmore eye hospital	Ophthal thenician Ist one Prosthodontist IInd one	I st one for -40 yrs IInd one 2 years	No	Yes
5	Male/70	6 years of age	Small pox	No	Not interested		No	Yes
6	Female/55	6 years of age	trauma while sleeping	Stanley medical college	Ophthal technician in optical shop	20 years	No	Yes
7	Male /70	69 years of age	trauma during working	Egmore eye hospital	Prosthodontist	3 years	No	Yes
8	Female /40	21 years of age	infection	Pondichery Govt hospital	Ophthal technician in optical shop	10 years	No	yes
9	Female	6 months of age	Trauma , Goat	No	Not interested		NO	Yes

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	/21		crushed eye with foot					
10	Male /74	3 years of age	infection	No	Both Ophthal technician and prosthodontist	From 1955 to till date he change new one for every three years	yes	Yes
S. No	Sex /Age /Occupation	when was vision lost	How was the vision lost	First aid for vision lost	who made the eye shell	How long wearing the prosthesis	Are you aware dental surgeon make eye prosthesis	Are you satisfied with the prosthesis
11	Male /58	58 years of age	Neuro surgery complication		Prosthodontist	3 years	No	No
12	Female /76	18 years of age	While playing	No	Not interested			
13	Female /71	60 years of age	While cutting wood	No	Not interested			
14	Male /40	28 years of age	Trauma while firing crackers	Egmore eye hospital	Ophthal technician in hospital	10 years	No	Yes
15	Male /41	4 years of age	trauma while playing	No	Not interested		No	Yes
16	Female /35	1 years of age	trauma while playing	No	Ophthal technician in optical shop	5 years	No	yes
17	Female /30	1 years of age	Trauma ,Hook from the blouse injured the eye while feeding	No	No idea	6 years	No	yes
18	Male /46	1 years of age	trauma during working	Stanley medical college	No idea	15 years	No	yes
19	Male /27	3 years	trauma while playing	No	Not interested			

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S. No	Sex /Age /Occupation	when was vision lost	How was the vision lost	First aid for vision lost	who made the eye shell	How long wearing the prosthesis	Are you aware dental surgeon make eye prosthesis	Are you satisfied with the prosthesis
20.	Male / 62	60 years of age	surgical complication ,post cataract	Stanley medical college	Not interested			
21.	Female/ 49	37 years of age	Trauma ,acid spill	No	Not interested			

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