World Journal of Medical Sciences 10 (1): 65-68, 2014
ISSN 1817-3055

DOI: 10.5829/idosi.wjms.2014.10.1.82171

Management of Occular Defect-A Prosthetic Option for Esthetic Appeal-A Clinical Report

[1]V. Sreedevi and [2]Sabarigirinathan

[1]Department of Prosthodontics, Sree Balaji Dental College & Hospital,
Bharath University, Chennai, India
[2]Department of Prosthodontics, Govt Dental College, Chennai, India

Abstract: Maxillofacial defects is quite complex and require a skillful hand to treat and camouflage the defect. The disfigurement associated with the loss of eye can cause physical and emotional problems. The present article describes a simplified technique for the fabrication of ocular prosthesis using a prefabricated iris button.

Key words: Iris Button

INTRODUCTION

The accidental loss of an eye can be as a result of severe trauma, congenital abnormality or disease such as infection and or tumour. An ocular prosthesis is created to restore a more normal anatomical structure and to camouflage the cosmetic defect to improve social acceptance of the individual. Multidisciplinary management and team approach are essential in providing effective rehabilitation. This article describes a simplified method for the fabrication of ocular prosthesis and retaining the same using a permanent soft tissue liner.

Case Report: A 56 year old – man admitted to the Department of Prosthodontics, Tamil Nadu Government Dental College, Chennai with a missing right eye. The patient gave a history of road traffic accident 1 year ago and enucleation of right eye was done. On examination, a well heeled, fibrous ocular socket was observed following enucleation, a ocular prosthesis using a prefabricated iris button was fabricated. (Fig. 1 & 2)

Fig. 1:

Fig. 2:

Technique:

- A facial impression was prepared from irreversible hydrocolloid along (Algimate, Dento one inc.) with reinforcement by dental plaster.
- A dental stone cast (Gold Stone Asian Chemicals India) was poured form the impression. (Fig. 3)
- A custom tray was fabricated to the defective eye position using chemical cure acrylic resin (DPI RR Cold Cure dental products of India). (Fig. 4)

Corresponding Author: Sreedevi V, MDS., Senior Lecturer, Department of Prosthodontics, Sree Balaji Dental College & Hospital, Bharath University, Chennai, India.

Fig. 3:

Fig. 4:

Fig. 5:

Fig. 6:

- The custom tray was checked for its fit and border moulding the ocular defect using green stick compound, a secondary wash impression was made with addition silicone (Aquasil LV Hydrophilic adition reaction silicione denstply) impression material. (Fig. 5).

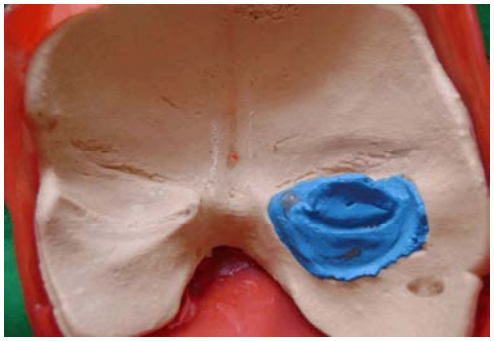

Fig. 7:

Fig. 8:

Fig. 9:

- With the secondary impression in position, a facial impression using irreversible hydrocolloid along with reinforcement by dental plaster is made and master facial cast is obtained. (Fig. 6,7&8).
- A prefabricated iris button is selected for the patient and shade was matched using contralateral eye as reference. (Fig. 9).
- The iris button was customized by trimming. (Fig. 10).
- A wax mould of the defect area was made from the master cast and was flasked. (Fig. 11)
- A permanent soft liner was used to retain the iris button in position. (Fig. 12).
- Flask mould was dewaxed and packed with a permanent soft liner. (Fig. 13).
- The iris button with a soft liner backing was positioned and ocular prostheis was fitted. (Fig. 14 15& 16).

Fig. 10:

Fig. 11:

Fig. 12:

Fig. 13:

Fig. 14:

Fig. 15:

Fig. 16:

DISCUSSION

The need for a ocular prosthesis can be satisfied by stock ocular prostheis alone but the advantages of custom – made ocular prostheis include improved adaptation to the underlying tissues, increased mobility of the prosthesis, improved facial contours and enhanced esthetics gained from the control over the size of the iris. Nevertheless, a custom-made prosthesis is more expensive than a stock prosthesis and several steps are required for its fabrication. Therefore, a modified stock ocular prosthesis is an excellent alternative, which is relatively inexpensive and easy to fabricate. An accurate alignment of the artificial eye is one of the major prerequisites for esthetic success of the orbital prosthesis. This article describes the rehabilitation of an ocular defect using stock iris button where in retention has been achieved by a combination of anatomic undercuts and a permanent soft liner.

REFERENCES

1. Taylor T., 2000. Clinical maxillofacial prosthetics. Quintessence publishing Co, Inc., pp: 233-76.
2. Chalian, V.A., J.B. Drane and S.M. Standish, 1971. Maxillofacial prosthetics: Multidisciplinary practice. Wilkins: Baltimore, pp: 294-304.

3. Beumer, J., T.A. Curtis and D.N. Firtill, 1979. .Maxillofacial rehabilitation: Prosthodontic and surgical considerations. CV Mosby: St Louis, pp: 364-71.
4. Cain, J.R., 1982. Custom ocular prostheis. J. Prosthet Dent., 48: 690-4.
5. McArthur, D.R., 1977. Aids for positioning prosthetic eyes in orbital prosthesis. J. Prosthet Dent., 37: 192-3.