CASE REPORT

OCULAR PROSTHESIS : THE MAGIC OF PROSTHODONTIST- A CASE REPORT
Pooja Yadav, Manoj Agarwal, Subhash Chander, Nitin Sharma, Vasim Raja Panwar

ABSTRACT

This article reports the rehabilitation of a sixty-five year old male patient with right eye loss following trauma by fabrication of custom made ocular prosthesis.

Keywords: Eye; Ocular; Prosthesis.

Introduction

Eyes are generally the first features of the face to be noted. The unfortunate loss or absence of an eye may be caused by a congenital defect, irreparable trauma, tumor. The disfigurement associated with the loss of an eye can cause significant physical, social and emotional problems. The need for an artificial eye can sometimes be satisfied by stock prosthesis that comes in standard sizes, shapes, and colors. These prostheses can be used for interim or postoperative purposes. No special skills or materials are required for fabrication. Stock prosthesis is relatively inexpensive and can be delivered quickly. Often, however, a custom ocular prosthesis is indicated. This article reports the rehabilitation of a sixty-five year old male patient with right eye loss following trauma by fabrication of custom made ocular prosthesis.

Case Report

A sixty-five year old male reported to the Department of Prosthodontics, Government Dental College and Hospital, Jaipur. He presented with right eye defect due to trauma (Figure 1). Keeping his paying capacity and other aesthetic requirement in mind he was elected for fabrication of custom ocular prosthesis.

Materials used for fabrication of custom made eye are easily available (Figure 2).

Case Report

A sixty-five year old male reported to the Department of Prosthodontics, Government Dental College and Hospital, Jaipur. He presented with right eye defect due to trauma (Figure 1). Keeping his paying capacity and other aesthetic requirement in mind he was elected for fabrication of a custom ocular prosthesis by using stock eye which are easily available in the optical shops in different shades of sclera and iris which can be easily modified according to the patient. Evaluation of patient ocular defect Evaluation of the muscular control of the palpebrae and the internal anatomy of the socket in resting position and full excursive movement was performed. Mobility of the posterior wall of the defect was assessed.

Seating the patient in the dental chair, adjust the headrest for comfort, and recline the chair slightly. Have the patient fix his gaze straight ahead on some object, such as the handle of the operating light, so that the pupil is well centered. When indicated, apply a topical ophthalmic anesthetic to make the prosthesis fit comfortably. Primary impression is taken in impression compound (Figure 3). This impression is then loaded with addition silicone (light body) and used as an impression tray to take the final impression of the socket (Figure 4). Keeping the impression in the socket, impression of the paraocular area is taken in irreversible hydrocolloid (Figure 5).

After the impression material was set, the impression was removed and invested in dental gypsum in a two piece brass flask, the anterior portion of the mold was invested, a separating medium was applied and the posterior portion of the mold was then invested. The flask was then placed in a dewaxing bath for 20 min. The anterior and posterior portions of the flask were separated. The iris disc was shade matched with the adjacent eye and cut out from a stock eye. The flask was kept for curing with a period of two hours and thirty minutes to avoid any residual monomer (Figure 10). The patient was instructed on the aspects of insertion and easy removal of the prosthesis (Figure 11).

Instructions to the Patient: Insertion is done by lifting the upper lid with the thumb and forefinger, sliding the prosthesis with other hand as much as possible under the upper lid and pulling the lower lid down to allow the prosthesis to slip into the socket. If Prosthesis should be removed and washed with a mild soap once a day. Never clean or soak your artificial eye in rubbing alcohol because it will crack the plastic and destroy the ocular prosthesis. Clean prosthesis with Ivory liquid, or an antibacterial soap product like Dial. The patient was asked to return on day 1, 2 and 7 for follow-ups after the prosthesis was inserted. To prolong the life of the artificial eye and make it look better and feel more comfortable visit to Prosthodontist at least once in a year.

Discussion

The rehabilitation of the orbital defect is a complex task. A custom ocular prosthesis is a good option when reconstruction by plastic surgery or the use of osseointegrated implants is
not possible or not desired. Systemic conditions and financial constraints may limit their use. Advantages of a custom ocular prosthesis are: it retains the shape of the socket, prevents collapse of the lids, provides proper muscular activity of the lids, prevents accumulation of fluid in the cavity, maintains palpebral opening similar to natural eye and has a gaze similar to natural eye. It mimics coloration and proportions of natural eye and conversational gaze can be achieved by maintaining precise interpupillary distance. The use of custom made ocular prosthesis has been a boon to the average patient who cannot afford the expensive treatment options available.

Conclusion
The procedure used here is cheaper, affordable and can be carried out in a small clinical set-up. This method has provided good results from patient esthetics, acceptance, and satisfaction point of view.

Authors Affiliations
1. Pooja Yadav MDS, Senior Lecturer, Department of Prosthodontics, Mahatma Gandhi University of Medical Sciences and Technology, Jaipur, Rajasthan, India, 2. Manoj Agarwal MDS, Senior Demonstrator, Department of Conservative Dentistry and Endodontics, Government Dental College and Hospital, Jaipur, Rajasthan, India, 3. Subhash Chander MDS, Senior Lecturer, Department of Conservative Dentistry and Endodontics, Vyas Dental College and Hospital, Jodhpur, Rajasthan, India, 4. Nitin Sharma MDS, Senior Lecturer, Department of Pedodontics and Preventive Dentistry, Vyas Dental College and Hospital, Jodhpur, Rajasthan, India, 5. Vasim Raja Panwar, Research Assistant, Jaipur, Rajasthan, India.

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Address for Correspondence
Dr. Pooja Yadav MDS, 6- KH, Bhawani Nagar, Sikar Road, Jaipur, Rajasthan, India.
E-mail: dr.poojayadav@yahoo.com

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