

Orbital Prosthesis: Case Report

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Abstract

The disfigurement associated with loss of eye can cause significant physical and emotional disturbance. Rehabilitation of facial defects is a complex task, requiring an individualized design of the technique for each patient and also a technique sensitive procedure, visual assessment alone may not be accurate. We report a case of 23-year-old male patient with trauma of the eye, which was treated with chemotherapy and surgical enucleation, and was rehabilitated with silicon orbital prosthesis by constructing a custom ocular prosthesis to achieve ideal fit and esthetics.

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I. Introduction

Orbital rehabilitation is a patient-specific process aimed at restoring both function and appearance after the loss of an eye due to trauma, tumors, infections, or congenital conditions. When surgical reconstruction is not effective, an orbital prosthesis made from materials like medical-grade silicone offers a lifelike and economical solution. Surgical procedures such as enucleation, evisceration, and exenteration are used to remove the eye, depending on the severity of the condition. Prostheses are retained using anatomical undercuts, spectacles, or implants, helping patients regain confidence and improve their quality of life.

II. Case Report

A 23-year-old male was referred to the Department of Prosthodontics for evaluation and treatment of a patient who was suffering from facial disfigurement with loss of his left eye. History of the patient revealed, exenteration of orbit, which had been carried out 1 year before due to trauma. Extraoral examination of the patient showed a large orbital defect on right side. Extraorally, no definite bony or soft tissue undercut was found to help in the retention of the prosthesis. A spectacle retained silicone orbital prosthesis was planned for the patient to make him socially presentable for his remaining days.

III. Procedure

After evaluation and inspection of the defect, the diameter of the iris and pupil on the intact side was measured using callipers. Area of impression was lubricated and impression was done with irreversible hydrocolloid (alginate). Wet gauze was spread over the hydrocolloid before it was set and the entire impression was reinforced with quick setting dental plaster (Figs 2 to 4).

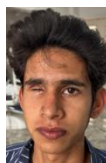


figure 1 : extraoral photograph



Figure 2: preparation for impression



Figure 3: plaster poured over impression



Figure 4:



Figure 5:



Figure 6:



Figure 7:



Figure 8:



Figure 9:

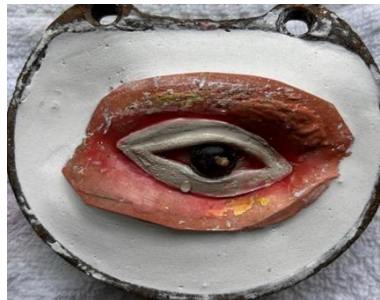


Figure 10:



Figure 11:



Figure 12:

IV. Discussion

A custom-made silicone orbital prosthesis is a practical and cost-effective option for patients who cannot undergo advanced surgical reconstruction. Silicone is preferred for its lifelike appearance, flexibility, and biocompatibility. In cases without anatomical undercuts, eyeglass frames can be used for retention, supported by an acrylic shim for stability. Sculpting is typically done with modelling wax, and natural hair can be added to enhance realism. This approach offers a simple yet effective solution for cosmetic and psychological rehabilitation after orbital exenteration.

V. Conclusion

Custom-made orbital prostheses play a vital role in restoring both cosmetic appearance and functional harmony, significantly improving a patient's quality of life after orbital loss. This case highlights the successful rehabilitation of a patient following exenteration due to rhabdomyosarcoma using a silicone prosthesis. Every individual deserves to feel socially accepted, and as prosthodontists, it is our responsibility to apply our skills to create prostheses that fulfil the anatomical, functional, and aesthetic needs of patients. Through such efforts, we not only restore appearance but also support the patient's emotional and psychological healing.

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