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An Eye for an Eye- An Ocular Prosthetic Rehabilitation

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Abstract: A 20 year old child reported to the Department of Prosthodontics with the chief complaint of loss of vision and poor/unsightly appearance on the left side of the face since birth.History of Present Illness revealed that the patient suffered from Retinoblastoma since birth and therefore underwent globe enucleation of the left eye at 2 months of age. In this clinical report an Ocular Prosthesis was fabricated using Tooth Colored Heat Cure Acrylic and its follow up is shown with a long term successful outcome. The Ocular Prosthesis fabricated was handy to the patient, economical, esthetically pleasing and most importantly was easily accepted by the patient in the routine lifestyle.

Keywords: Rehabilitation, Ocular defect, Ocular Prosthesis, Tooth colored heat cure acrylic.

Introduction: Ocular defects can cause psychological, functional and emotional distress to the victim. As Prosthodontists it is our utmost responsibility to fabricate an esthetically pleasing prosthesis which is easily accepted by the patients so that it boosts the patient's self-confidence and helps keep their morale high. Various literatures have used different materials for the fabrication of orbital and ocular prosthesis such as acrylic resins, acrylic copolymers, polyvinyl chloride, silicon elastomers, polyphosphazenes, etc.[1,2] In this clinical report an Ocular Prosthesis was fabricated using Tooth Colored Heat Cure Acrylic. The Ocular Prosthesis fabricated was

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handy to the patient, economical, esthetically pleasing and most importantly was easily accepted by the patient in the routine lifestyle.

Case Report: A 20 year old child reported to the Department of Prosthodontics with the chief complaint of loss of vision and poor/unsightly appearance on the left side of the face since birth. History of Present Illness revealed that the patient suffered from Retinoblastoma since birth and therefore underwent globe enucleation of the left eye at 2 months of age.

The extraoral view of the patient revealed that the profile was straight, facial asymmetry was seen and lips were competent. The left eyeball had been enucleated and the eyelid movements were restricted. **(Figure 1)**

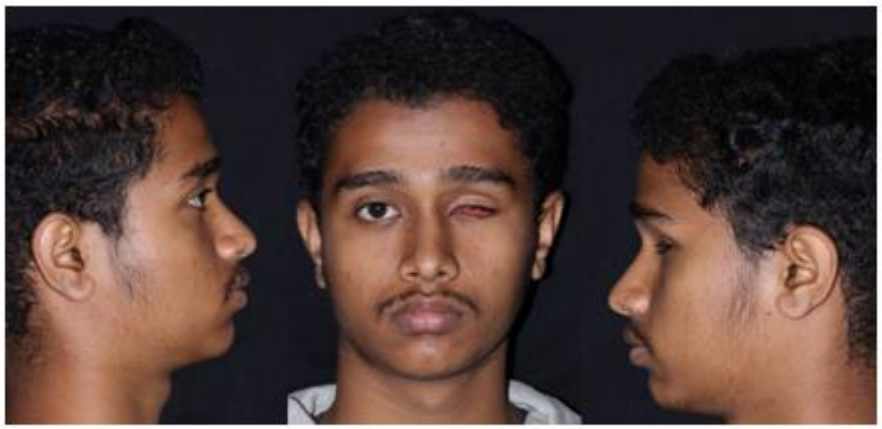

Figure 1

A custom tray made of impression compound was fabricated over the ocular defect. Irreversible Hydrocolloid impression material i.e. alginate was injected in the ocular defect and the customized impression compound tray was placed over it. Multiple holes were made in the custom tray which aided as a mechanical retentive feature during retrieval of the impression from the ocular defect. **(Figure 2)**

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Figure 2

The impression was boxed and poured to obtain two piece split cast of the ocular defect. **(Figure 3)**

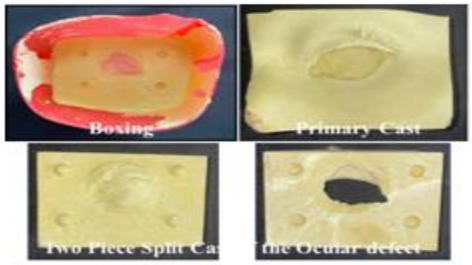

Figure 3

On the intaglio surface of the cast a cold cure clear acrylic custom tray was fabricated with 1 mm spacer thickness and a cut needle cover was attached to the center of the custom tray. **(Figure 4)**

Figure 4

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The custom tray was kept 1mm short of the margins. The custom tray was tried in situ and the final impression was taken using light body material which was injected into and over the defect through the needle cap which was attached to the custom tray. **(Figure 5)**

Figure 5

The patient was asked to do various functional movements and another custom tray made up of impression compound was placed over the ocular region to pick up the final impression. **(Figure 6)**

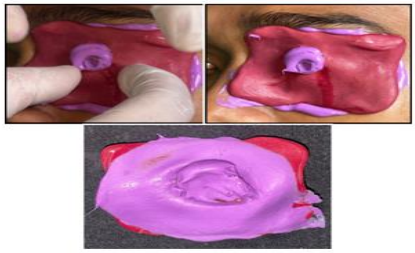

Figure 6

The final impression was then boxed and poured to obtain a two piece split cast of the ocular defect. **(Figure 7)**

Figure 7

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Eye shell selection was carried out in natural day light. Wax pattern was fabricated on master cast and was then tried in situ. Iris positioning was done using digital vernier caliper instrument. **(Figure 8)**

Figure 8

Flasking and dewaxing were done. **(Figure 9)**

Figure 9

The ocular prosthesis was then retrieved, finished, polished and tried in situ which was followed by intrinsic staining. **(Figure 10)**

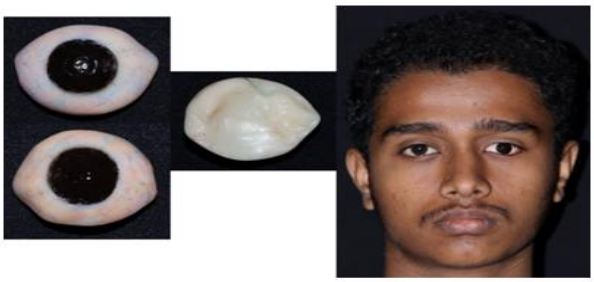

Figure 10

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The ocular prosthesis was then delivered to the patient and post op instructions were given. **(Figure 11 &12)**

Figure 11

Figure 12

Discussion: An ocular prosthesis comes to the rescue when only the globe has to be replaced. Certain advantages of these prosthesis are that it is economical, easily accepted by the patient, light weight and gives esthetically pleasing results. There are no specific disadvantages of the prosthesis, however proper maintenance of the prosthesis should be done like any other prosthesis such as gentle soap and water should be used to clean the prosthesis. There should not be extreme rough handling of the prosthesis as it may cause wear and tear.

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Conclusion: Various techniques have been developed to fabricate ocular prosthesis. This technique used has given overwhelming esthetic outcome and has indeed boosted patient's self-confidence. Such ocular prosthesis is not only economical but is also easily accepted by the patient and is low maintenance. Hence the described technique allows for predictable and easy fabrication of esthetically pleasing and handy ocular prosthesis.

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