Abstract
The loss of the facial structures can have a physical, social and psychological impact on those affected. Eye being a vital organ of face, the loss of an eye causes disfigurement of the face due to which person become emotionally weak and conscious and avoid taking part in social events, which in turn causes anxiety, stress and depression in their life. The rehabilitation of patients with congenital or acquired defects of eye is a challenging job. Rehabilitation of such patients can be done by treatment modalities like ocular prosthesis that can be made more retentive by implant placement. Presence of systemic condition and economic issues it the implant placement may be contraindicated. For such patients custom made ocular prosthesis is an alternative option for restoration of defect also encourage to build up their self confidence to return back to their social life.

Key words: Custom-made ocular prosthesis; Enucleation; Eye socket; Maxillofacial prosthesis; Stock ocular shell

Introduction
Eye is a vital organ not only in terms of vision but also being an important component of facial expression. The disfigurement resulting from loss of an eye can cause significant psychological as well as social consequences. Surgical procedures adopted for the removal of an eye are classified by Peyman, Saunders and Goldberg (1987) into three general categories: enucleation, evisceration and exenteration [1]. According to Scoll (1982) enucleation is a surgical procedure in which the globe and the attached portion of the optic nerve are excised from the orbit [2]. Evisceration is removal of the contents of globe while leaving the sclera and extra ocular muscles intact. Exenteration is the most radical of the three procedures and involves removal of the eye, adnexa, and the part of the bony orbit.

Loss of eye has a psychological effect on patient and their families. Replacement of the lost
eye is necessary to promote physical and psychological healing for the patient and to improve social acceptance. An ocular prosthesis does not provide vision; but give psycho-logical support and cosmesis [3-4].

Case report
A 21 year-old female visited to the Department of Maxillofacial Prosthodontics and Implantology, Sharad Pawar Dental College, Wardha with Enucleated right eye, 1 year back due to recurrent infection with same eye. (Figure 1). On examination, the floor of the eye socket was well healed. Stock ocular shell was matching with opposing eye and patient was not ready for any surgical intervention, so implant supported ocular prosthesis was excluded and custom-made ocular prosthesis was planned to meet the needs of the patient which enhance the esthetics and functional results rather than routine ocular prosthesis. The treatment planned and technique involved was explained to the patients with limitation of the technique.

Methodology
Preliminary impression was made with irreversible hydrocollide material (Figure 2) and preliminary mould was fabricated (Figure 3). Using this preliminary mould stock tray was fabricated by auto polymerizing acrylic resin (Figure 4). At centre of stock tray hole was prepared and syringe was attached for making final impression. While making impression patient was asked to look front and to perform all possible movement such as medial and lateral movements and rotational movement. Movement helped in recording of cavity in functional form. And final impression was completed with low viscosity polyvinyl siloxane material (Figure 5) and final mould was poured in die stone (Figure 6) to get 2 piece split cast mold. Molten wax was flown in to mold cavity to obtain wax blank. During try in, wax blank was inserted in lubricated eye cavity to avoid irritation and evaluated for proper size, contour, retention, eyelid support and comfort of patient (Figure 7). Wax blank try-in was done. Iris positioning was done by two methods first by marking on face method and second by grid method (Figure 8). Iris was positioned on wax blank and centre of iris was marked. From stock eye shell resembling eye shell was selected. Selected eye shell was trimmed and adapted over superficial and anterior surface of wax blank. This wax conformer was also tried and evaluated same way. Small extension of clear acrylic was attached to one end of iris which secured the position of iris in mold during flasking and dewaxing procedures. After that spit mold was packed with tooth colored heat cure acrylic resin. After curing, clear acrylic extension was cut and the prosthesis was finished and polished. Modifications were done by characterization. Characterization was done by adding veins and extrinsic stains. Finished prosthesis was placed in socket to evaluate (Figure 9). Final polishing was done and then finally cleaned in the disinfectant before placing in the eye socket. Post insertion instructions were given to patient about care and maintenance of the prosthesis, insertion and removal and cleaning of the prosthesis.

Discussion
Eye might be missing due to congenital abnormality or surgical removal of an eye. It may be due to trauma, infection or tumours involving eye. Ocular prostheses can be option for rehabilitation of these patients. Main concern for the success of ocular prostheses is the retention. Favourable retention is gained by capturing eye cavity accurately and for that accurate impression procedure and technique must be followed. Various author described various impression technique along with different materials. Allen and Webster (1969) recommended a perforated stock ocular tray made up of metal for alginate impression [5]. They recommended using ophthalmic alginate. Cain (1982) suggested Allen and Webster's technique and he described it as the modified impression technique [6]. He suggested using an impression tray with a hollow stem in the shape of the ocular prosthesis. He did not mention fabrication of the impression tray. According to Doshi and Aruna (2005) impression material was directly injected into the socket [7]. No custom tray was fabricated; there was no proper support for the impression obtained by them. In this case report, custom made ocular prosthesis was fabricated. Final impression was made with custom self cure acrylic tray and low viscosity polyvinyl siloxane material.

Low viscosity polyvinyl siloxane material records greater detail of the socket surface and can be easily removed from undercuts without distortion. Thus recorded undercuts will help for better retention of the prosthesis. The custom made ocular prosthesis has close adaptation to the tissue in the socket, simulate the eye muscles to move, thus exercising them and preventing disuse atrophy. Stock shells lack a close fit and therefore cannot stimulate eyelid movement and due to their irregular borders it might...
cause irritation and hyper plastic reaction of underlined delicate and fragile soft tissue. For iris positioning numerous methods are available. In this case two methods are used in combination for precise results. Characterization of the prosthesis with extrinsic stains and vein like fibbers helped in fabrication more lifelike prosthesis.

Conclusion

The technique discussed in this paper has its own advantage.
1. Custom tray is fabricated, so there is a proper extension and fit of the tray and a syringe is attached to the tray through which light body impression material flows easily. This tray record the details of the socket which aid in the proper adaptation of the ocular prostheses with tissue bed. Improved retention of prosthesis was observed and also ocular prosthesis moves along movement.
2. Two methods of iris positioning were used in combination produced satisfactory results
3. Characterization prosthesis enhances the life like results of ocular prosthesis
4. Prosthesis psychologically benefitted patient. Definitely restored her self-esteem, boost her confidence and gave her courage to face the society.

References

Figure 3: preliminary mould

Figure 4: acrylic resin custom tray

Figure 5: final impression

Figure 6: final mould

Figure 7: wax blank trial

Figure 8: iris positioning with grid
Figure 9: Post treatment

Conflict of Interest
The authors declare that there are no conflict of interest

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