INTRODUCTION: Eyes are the first feature of the face to be noticed. Its loss, either due to trauma, tumor or any other condition not only leads to loss of sensory functions but also there is unaesthetic look and has a psychological effect on the patient. Thus, prosthesis should be provided as soon as possible to raise the spirits and ease the mind of the afflicted. The indication for the surgical removal of an eye are irreparable trauma like bomb explosion, fights, infections, tumor, blindness, pain in the eye, the need for histological confirmation of a suspected diagnosis, possible prevention of sympathetic ophthalma and cosmetic reasons. Surgical procedures adapted for the removal of an eye are classified into three categories: evisceration, enucleation and exenteration. Evisceration is a surgical procedure wherein the intraocular contents of the globe is partially removed, leaving the sclera, Tenon’s capsule, conjunctiva, extraocular muscles and optic nerve intact. Enucleation is the surgical removal of the globe and a portion of the optic nerve from the orbit. Exenteration is the en bloc removal of the entire orbit, usually involving partial or total removal of the eyelids, and is performed primarily for eradication of malignant orbital tumors. Ocular prosthesis is advocated to rehabilitate the defects caused by evisceration or enucleation. Custom made ocular prosthesis could be of either glass or methyl methacrylate resin. Glass is not the material of choice as it subject to breakage and surface deterioration from contact with orbital fluids. Methyl methacrylate resin is superior to other ocular prosthetic materials in tissue compatibility, esthetic capabilities, durability, color permanence, adaptability of form, cost and availability. This clinical report demonstrates the use of stock ocular prosthesis to fabricate the custom ocular prosthesis for rehabilitation of post evisceration patient.

Ocular prosthesis
- readymade
- Custom made
Custom made are advantageous:
1. Improved adaptation to underlying tissues
2. Increased mobility of prosthesis
3. Better esthetics

This case report describes a simplified technique to fabricate an acrylic custom-made ocular prosthesis for an enucleated ocular socket.

CASE REPORT
A 20 year old female patient came to the Department of Prosthodontics, Dasmesh Institute of Research and Dental Sciences, Faridkot. Patient had lost her right eye because of the trauma she suffered when she was 12 years old. On examination there were no signs of any adhesion or dehiscence of conjunctiva and tissue bed was free of inflammation to start with the impression procedure for fabrication of ocular prosthesis. (Figure 1, 2)

![Preoperative Photograph](image1)

**Figure 1:** Preoperative Photograph

![Healthy Tissue Bed](image2)

**Figure 2:** Healthy Tissue Bed

Treatment Plan
Ocular prosthesis can be either readymade (stock) or custom made. Custom made eye have some advantages including better mobility, even distribution of pressure, thereby reducing incidence of ulceration, improved fit, comfort and adaptation, improved facial contours and esthetics. Also, custom eye enhance tissue health by reducing potential stagnation space at the prosthetic tissue interface. So, considering all these benefits it was decided that a custom made ocular prosthesis would be the best prosthetic option to meet the needs of the patient. Also it gives better esthetics and color matching which is rather very difficult with conventional, cumbersome and technique sensitive method of iris button painting.

Procedure
1. Patient was explained about the procedure and petroleum jelly was applied to the eyebrows for the easy removal of the impression material after it sets.
2. An impression was made of the ocular defect using a disposable syringe and nonirritating impression material i.e. regular body elastomer impression material(Reprosil,Dentsply).After injecting the impression material in the socket, upper eyelid was released , draped and patient was asked to do various lateral, up and down movements of the contralateral eye to record the extrinsic muscles and tissue bed accurately.
3. During the procedure, the patient was seated in semi-supine position.
4. After the material had set, the impression was removed and the impression was examined for defects and voids.
5. Impression was poured in type III gypsum to make a split-mould .Perforation was made in split mould for molten wax to enter. Modelling Wax was poured in the obtained mould to obtain the scleral wax pattern.
6. This wax pattern was placed in the defect and evaluated for fit, contour, esthetics and comfort of the subject. (Figure 3)

![Wax Pattern trial](image3)

**Figure 3:** Wax Pattern trial

7. Once this done, a prefabricated eye shell whose iris button color was matching with the contralateral eye was selected. Iris button was obtained by trimming all the scleral part of prefabricated shell.
8. Now objective was to fix this lens button to the scleral pattern in a manner such that the apparent gaze of both natural and artificial eyes should be on the same object, or parallel to one another and in the same plane.

9. For this, patient was seated comfortably in an upright position without the back or head supported. The operator was standing directly in front of and at eye level with the patient. The patient was instructed to fix the gaze of the natural eye on an object in front of and at eye level with the natural eye.

10. The position of the iris-pupil area of the natural eye in relation to the inner canthus and the upper and the lower lids was then transferred to the wax pattern. Pattern was then removed and space was created by removing wax for iris button attachment.

11. Pattern with iris button was then replaced in ocular defect and the position was checked. Once final position of iris button was achieved, assembly was carefully removed from the socket.

12. The finished pattern was then flanked. (figure 4). Dewaxing was done after 1 hr (fig 5)

13. After dewaxing, packing was done with the selected heat cure tooth color acrylic resin. The sclera of the prosthesis was tinted. Veining was added by attaching red-dacron fibers to the prosthesis.

14. The polymerized ocular prosthesis was finished and carefully polished.

15. Final prosthesis was inserted in ocular defect and patient was asked to relax for at least 10 min to allow orbicular muscles to relax, to permit critical evaluation. (fig 6)

16. Patient was instructed on how to remove and place the prosthesis and was put on follow up every 1 month.

**SUMMARY**

So many techniques have been described in literature but taking the impression by direct techniques is the most simplified approach. The fabrication of a custom acrylic eye provides more esthetic and precise results because an impression establishes the defect contours and the iris and the sclera are custom fabricated. Prosthetic rehabilitation of post evisceration patient has been explained in this case report. This article explains some of the basics principles associated with the fabrication of the custom ocular prosthesis. A properly fitted and acceptable custom ocular prosthesis has the following characteristics:

- Retains the shape of the defect socket.
- Prevents collapse or loss of shape of the lids.
- Provide proper muscular action of the lids.
- Maintains palpebral opening similar to the natural eye.
- Has a gaze similar to the natural eye.

**CONCLUSION**

Fabrication of the custom ocular prosthesis is described using prefabricated stock eye shell. Using prefabricated iris button makes procedure less technique sensitive and faster with more predictable results. The main advantage of this technique compare to traditional iris button painting technique...
is that, there are more chances of getting better esthetics in final prosthesis.

REFERENCES

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