Ocularist Society of India

SURGICAL PROCEDURES

1. Is surgery always required before fitting ocular prosthesis?

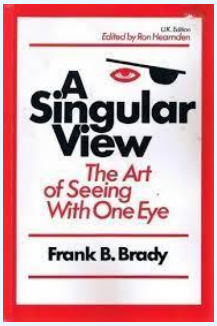
Contrary to the popular belief, most of the ocular prosthesis may be fitted without surgical procedures. It is very much possible to make an artificial eye / ocular prosthesis over a disfigured eye directly with very good cosmetic outcome.

Surgical procedures are required for fitting prosthesis only when it's not possible to fit the ocular prosthesis over the affected eye. The reasons for this could be a painful eyeball, too large an eyeball, an eye with suspected cancer inside the eye, contraction of the socket tissue making it difficult/impossible to fit artificial eye or inability to retain prosthesis due to the laxity of lids.

Ocular Prosthesis fitted directly over the disfigured eye

2. Will I be able to carry out all routine activities with ocular prosthesis?

Yes. You can lead a perfectly normal life after getting your prosthetic eye fitted. There is some restriction of the visual filed mostly on the affected side; however with some experience and adaptation most of the people are able to carry out most of the activities comfortably. A book by Fank Brady called 'A Singular View' may be of great help to learn the adaptations after losing vision in one eye.



3. What are the surgical procedures required for fitting ocular prosthesis?

Common Surgical procedure required for fitting ocular prosthesis would vary depending on the affected eye. They are:

Enucleation with orbital implant is preferred for patients with confirmed/ suspected cancer in the eye. In this procedure the entire eyeball is removed after cutting the muscles and optic nerve. The muscles are resutred back to help improve the motility of ocular prosthesis, the covering tissue of Tenon and conjunctiva is sutured back to cover the orbital implant.

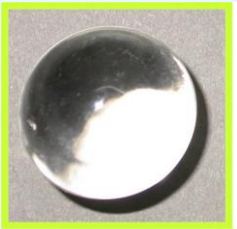
Evisceration with Orbital implant is used when the eye is so disfigured (following trauma or infection) that the ocular prosthesis cannot be fitted directly over the affected eye. In this surgery the outer whitish coat (Sclera) is retained and muscles are not disturbed; only the inner damaged layers of choroid and retina along with cornea are removed. Orbital implant is placed within the outer coat (Sclera). This is relatively simpler and faster procedure and does not disturb orbital anatomy as much as Enucleation

4. What is better surgical procedure for final cosmetic outcome with prosthesis, Enucleation or evisceration?

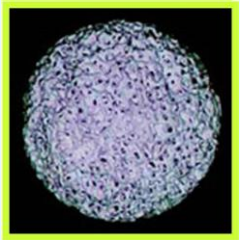
Both procedure give similar final cosmetic outcome. Your surgeon will decide which procedure is preferable depending on the clinical situation of your eye

5. What are the different types of orbital implants? Which is the best implant?

Orbital implants are mainly of two types: integrated and non integrated implants. Integrated implants have rough surface and porous channels inside to allow growth of blood vessels in the implant. Thus the implant is 'integrated' with orbital tissues. This integrated orbital implant can be pegged with a titanium metallic peg that is projecting outside the implant and can help in better prosthetic movement. However there are some associated complications with pegging and rough outer surface of the implant. Non integrated implants have smooth outer surface and are solid, they do not allow vascular in growth and cannot be pegged. With optimal surgical techniques the results are comparable in terms of appearance. However pegging the implant can give better prosthesis motility. Choice of the best implant should be made after discussing with the operating surgeon and the ocularist.



Non Integrated PMMA orbital



Integrated porous orbital implant

6. What are the complications associated with orbital implants?

Orbital implants may get exposed and/or infected. They may also migrate from their optimal position affecting retention and movement of the prosthesis. Surgical intervention may be required to manage exposed/migrated orbital implant

7. What if the disease process has spread beyond the eye?

Exenteration is the surgical procedure used when the eye cancer spreads outside the eyeball in the surrounding tissue. Eyeball along with muscles, covering tissues and eyelids are also removed in this surgery and an orbital prosthesis is required after this procedure.

Orbital Prosthesis fitted post Exenteration

8. I am not able to wear artificial eye, what could be the reason?

This happens most commonly because of long use of poorly fitting artificial eye that causes discharge collection and contraction of the surface tissue leading to contracted socket. Socket reconstruction is required when ocular prosthesis cannot be fitted because of contracted socket. Socket reconstruction may require use of grafts (dermis Fat Graft or Mucus membrane Graft), fornix formation and/ or lid tightening procedures to help retain the ocular prosthesis.

Contracted socket due to ill fitting prosthesis (Top) managed by socket reconstruction with Dermis Fat Graft and new Prosthesis (Bottom)

9. My eye opening is small in the affected eye. Will I need separate surgery to lift the eyelids?

Eyelid position is affected by size of the eyeball and the muscles responsible for lifting the eyelids. Some of the situation may be managed by prosthesis, while others may need a separate eyelid surgery to lift the eyelids. This surgery is done after the prosthesis fitting has been done.

10. I am not able to close my eyes over the prosthesis, what could be the reason and what is the solution?

This could be either because of ill fitting prosthesis or socket contraction. If prosthesis modification does not correct this, you may need surgical reconstruction of the socket.

IMPORTANT FACT :

Successful outcome with fitting of Ocular Prosthesis is a team work.

The patient, their family, the ocularist and the ophthalmologist, all have their roles to play. Best results can be obtained when all the players work in co ordination in terms of realistic expectations, maintaining good hygiene, moral support, fabrication of optimal prosthesis and surgical intervention when warranted will give best possible result.