

## **Enucleation, Evisceration & Ball implantation**

### **What are enucleation and evisceration?**

*Enucleation* is the surgical removal of the entire eye

*Evisceration* is the surgical removal of the contents of the eye, leaving the white outer “shell” (the sclera) of the eye.

### **Why do I need an enucleation or an evisceration?**

I will discuss your individual circumstances with you. There are several reasons why an eye or its contents are removed, for example to treat a painful blind eye, to treat certain eye tumors or severe eye injuries, to alleviate a severe infection inside the eye, or for cosmetic improvement of a disfigured and blind eye.

### **Is there an alternative?**

I will only suggest removal of your eye after detailed discussion with you. The eye is only removed if all other suitable treatments have been tried and have failed. Sometimes this involves consulting other ophthalmologists.

### **Do I require an enucleation or an evisceration?**

In most situations, either enucleation or evisceration can be performed. Your ophthalmologist will help you decide which surgery is most appropriate for you.

An enucleation is almost always the preferred procedure to remove an eye tumour.

### **Sympathetic Ophthalmia**

If your eye was injured due to trauma, there is a very small risk of an inflammatory reaction to the other eye. The risk of this reaction is slightly less after enucleation and is therefore sometimes favoured in this situation. However the risk is still tiny with evisceration and therefore many surgeons conduct evisceration. I will discuss the risk of sympathetic and the choice of procedure with you before your operation.

## **What should I do in preparation for surgery?**

Blood thinning medications such as aspirin, clopidrogel (Plavix, CoPlavix, Iscover) and warfarin can make bleeding more likely during and after surgery. If you are taking these drugs we may need to ask your GP or cardiologist if and when to stop these medications prior to surgery. You should also stop anti-inflammatory drugs like ibuprofen (Nurofen), fish oil, ginger, ginseng and garlic containing supplements 2 weeks before surgery.

If you smoke I would strongly suggest you stop smoking for at least 3 days prior and 1 week after surgery. This is important as smoking impairs wound healing and increases the risk of infection.

Avoid alcohol for a day before and a day after surgery. You will need to fast (not eat or drink anything) for 6 hours prior to the surgery. On the day of surgery please dress casually. Do not wear any makeup, jewellery or contact lenses.

Before your operation date, you will be assessed by an anaesthetist and your surgical team will ask you to sign a consent form. On the day of surgery we mark your forehead with your consent to indicate which eye is to be removed.

## **What does the surgery involve?**

The surgery is performed in the operating theatre, almost always under general anaesthetic. Occasionally evisceration surgery is performed under local anaesthetic with sedation. This possibility can be discussed with your anaesthetist and me. The operation takes between 45 and 90 minutes.

After enucleation or evisceration, an implant ('ball implant') is usually placed in the eye socket to replace some of the volume lost. This implant is a sphere made of heat treated ocean coral, aluminum oxide, silicone or plastic. This implant will be covered by your own eye socket lining (conjunctiva), giving a pink appearance.

After enucleation, the eyeball is removed but the muscles that move the eye are left behind. These muscles can be reattached directly to the ball implant that is placed in the socket. Attaching the muscles to the ball implant can preserve some eye movement, however it is not always done.

After an evisceration, the contents of the eye are removed, leaving the white shell of the eye intact. The ball implant is placed inside the shell, with the muscles still attached to the shell as normal.

Sometimes a conformer (a clear, plastic shell) is put in place behind the lids while the socket heals. This conformer will be replaced with the prosthetic eye when you saw the artificial eye prosthetist.

## **What happens after my operation?**

You may be able to have the surgery as a day case and go home the same day or it may be desirable for you to stay in overnight especially if you live alone or if you have a long journey home. It is advisable to be driven home by a friend or relative and not to travel home on public transport. You must not drive yourself.

The eyelids are sometimes stitched closed to prevent too much swelling and the stitch is removed in the eye clinic a week or two after the surgery. The eye is usually covered with a pad for up to a week after your operation.

You can clean the lids with cool, boiled water to remove any mucus and dried blood. You may be asked to take medications after surgery such as antibiotics, pain-relievers or anti-inflammatories.

Continued follow-up is important to check the eye socket lining for any signs of thinning, shrinkage or exposure of the ball implant. There may be a gradual loss of volume in the eye socket that can affect the fit of the prosthesis. Careful monitoring of the socket and prosthesis by the ophthalmologist and the prosthetist will help keep the socket healthy, and will allow for early detection of any changes that might require further treatment.

## **Is there anything I should not do after the operation?**

After your operation, have a quiet evening and avoid strenuous exercise, running or heavy lifting (>5kg) for a week. You cannot drive, operate machinery, drink alcohol or take sedative drugs for 24 hours. You can wash and shower normally but avoid a very hot shower/bath in the first week. The eye socket can get wet or splashed or dabbed with water, but avoid submerging it. Do not swim for two weeks. Do not touch the eye socket itself.

## **What will my eye look like in the long term?**

Once the eye socket has healed, about 6-8 weeks after your surgery, an artificial eye (prosthesis) will be made by an ocular prosthetist. The front surface of the artificial eye is custom painted to match the other eye. The back surface is molded to fit the socket for comfort and movement.

## **What are the complications of enucleation and evisceration?**

Short-term risks for this surgery, as with any surgery, include bleeding, swelling and infection. Long-term complications include discharge and socket irritation. The upper eyelid can become droopy and the lower eyelid loose, both of which may require surgical correction. There may be exposure of the ball implant which may require further

surgery to treat or movement of the ball implant a bit further back into the socket which can give a sunken appearance.

### **When will I be back to normal after the surgery?**

The recovery time varies from person to person. In general we recommend that you take at least two to three weeks off work to recuperate and return to work only when ready. Assuming that you have normal vision in the other eye, you can drive when you feel ready, providing the vision in the remaining eye meets legal requirements for driving. I will discuss your specific situation with you.

### **How do I look after my prosthesis (artificial eye)?**

Most patients sleep with the prosthesis in place and remove occasionally as necessary for cleaning. It is easily removable, like a large contact lens. A prosthesis can last decades in many patients.

### **Who can I talk to for more information?**

Please tell me of any particular concerns that you have or if you need more time to consider your options. It is always best to try to write down any questions before your clinic appointment. If you require any further information or wish to contact any support groups, please ask me or your GP.

### **Contact Details**

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