

Oxford Eye Hospital

Glaucoma filtration surgery (Tube surgery)

Information for patients



This leaflet gives you information that will help you decide whether to have glaucoma tube surgery. You might want to discuss it with a relative or carer. Before you have the operation, you will be asked to sign a consent form and so it is important that you understand the leaflet before you decide to have surgery. If you have any questions, you may wish to write them down so that you can ask one of the hospital staff.

Treatment

Glaucoma is usually treated successfully with medication to lower the pressure in the eye. If medication is not effective, laser and other surgical procedures may be of value in controlling the pressure and preventing further vision loss. Your eye surgeon has recommended glaucoma tube surgery because the eye pressure in your eye is uncontrolled. If left untreated it is very likely you will gradually lose vision in that eye.

Glaucoma tube surgery

Your doctor has informed you that placement of a microsurgical drainage device called a tube or “aqueous shunt” is necessary to help control the pressure in your eye. This procedure allows your eye surgeon to place this device to create a new drainage channel for the eye, which results in a filtering area called a “bleb”.

There are many implants that can be used but the most common ones are the Baerveldt implant, the Molteno implant and the Ahmed glaucoma valve. They all consist of a small tube that takes the fluid from inside the eye (aqueous humor) to a plate underneath the outer coat of the eye (conjunctiva).

The tube and bleb are mostly hidden under the eyelid. When successful, this procedure will lower the pressure in your eye, minimizing the risk of further visual loss from glaucoma.

The operation

The purpose of the operation is to control the pressure and preserve vision; any vision already lost to glaucoma cannot be restored. An experienced eye surgeon will carry out the operation or may supervise a doctor in training.

This operation is usually carried out under general anaesthetic – you will be unconscious and not be aware during the operation.

Some patients may have a local anaesthetic – in this case you will be awake during the operation. You will not be able to see what is happening, but you will be aware of a bright light. Just before the operation, you will be given an anaesthetic to numb the eye. This may consist of injecting local anaesthetic around the eye. You may be given intravenous sedation to help you relax.

During the operation, if you are awake, you will be asked to keep your head still, and lie as flat as possible. The operation normally takes 40 minutes. A member of the nursing staff is usually available to hold your hand during the operation, if you want them to.

At the end of the operation, a pad or shield may be put over your eye to protect it.

To protect against very low eye pressure in the early stages, a suture (stitch) is used to close the tube at the time of surgery. So in the early stages, before this suture dissolves (normally 5-6 weeks), the eye pressure may be high. This can be treated with drops or tablets.

Benefits of glaucoma tube surgery

The most obvious benefit of the surgery is to lower pressure inside your eye, help control pain and ultimately to prolong any useful vision. Your vision will not improve. Often vision is temporarily worse as the level of pressure inside the eye stabilizes. The benefit is long term (years), rather than immediate.

Risks of tube surgery

You should be aware that there is a small risk of complications, either during or after the operation. In most cases the complications can be treated and in a small proportion of cases, further surgery may be needed. Very rarely some complications can result in loss of sight.

- **Vision**

Sight may take several weeks to return to normal. Some patients will find their vision is not quite as sharp after surgery. The benefit is slowing (or stopping) the rate of deterioration caused by glaucoma. However, the operation cannot be totally guaranteed to stop the loss of vision in your eye. Eye surgery for any condition always carries a small risk that vision may be worse or that the eye may become blind after the operation.

- **Cornea changes**

There is a small chance that the tube may rub on the inside of the cornea. This could cause the cornea to become cloudy (corneal oedema). This may require

further surgery to reposition the tube end. Rarely in extreme cases, if significant corneal damage has occurred, a corneal transplant may be required.

- **Bleeding**

There is a small chance of bleeding inside the eye immediately after surgery (called “suprachoroidal” haemorrhage). This may require further treatment, and may ultimately result in loss of sight.

- **Cataract**

There is a reasonable chance that a cataract (cloudy lens) may develop some years after surgery. This may require an operation.

- **Double vision (diplopia)**

There is a small chance that double vision can occur after surgery. This may require a further operation.

- **Infection**

There is a very small chance of infection inside the eye after surgery. This may require further treatment, and may ultimately result in loss of sight. If your eye becomes painful or red or the vision becomes blurred, you should seek immediate medical help.

- **Irritation**

Irritation (grittiness) or discomfort in the eye that may persist.

- **Eyelid**

The eyelid may become droopy on the side of operation.

- **Tube blockage**

There is a small chance that the tube will become blocked. This would require further surgery to unblock the tube.

- **Tube erosion**

There is a small chance that the tube can become exposed or erode (wear away) through the conjunctiva. If this happens further surgery is required to close the defect.

After the operation

If you have discomfort, we suggest that you take a pain reliever such as paracetamol every 4-6 hours (but not aspirin – this can cause bleeding).

It is normal to feel itching, sticky eyelids and mild discomfort for a while after tube surgery. You will be given eye drops to reduce pressure, inflammation, and to protect against infection. The hospital staff will explain how and when to use them. Please don't rub your eye.

You will be seen very frequently by the eye team for a number of weeks after the operation.

Signs to look out for

Certain symptoms could mean that you need prompt treatment, including:

- **excessive pain**
- **loss of vision**
- **increasing redness of the eye.**

You will be given an emergency telephone number to ring in case you develop any of the above, or if you need urgent advice about your eye. This number is:

Tel: **01865 234800.**

What to expect after tube surgery

After surgery the eye will be red and swollen to a variable degree at first. When the eye and the eyelid are in the normal position, the tube cannot be seen. You may be able to feel the device if you touch your upper lid.

Postoperative clinic visits

As the eye pressure naturally fluctuates (goes up and down) in the first 6 weeks after the surgery, patients are seen frequently in clinic. This is so that treatment can be tailored to you and your eye.

We hope this information is sufficient to help you decide whether to go ahead with surgery.

Please use the space on the back to write down any further questions to ask the doctor or nurse when you come to the hospital for your appointment. Don't worry about asking questions. Our staff will be happy to answer them.

Otherwise, if you have any non-urgent questions or concerns about your eye, please telephone and ask to speak to one of the nurses:

Tel: **01865 231117**.

Further information

Further information about treatment for glaucoma may be found on the NHS conditions website:

www.nhs.uk/conditions

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473** or email **PALSJR@orh.nhs.uk**

Version 1, June 2011
Review, June 2014
Oxford Radcliffe Hospitals NHS Trust
Oxford OX3 9DU
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