

Trabeculectomy

(Glaucoma drainage surgery)

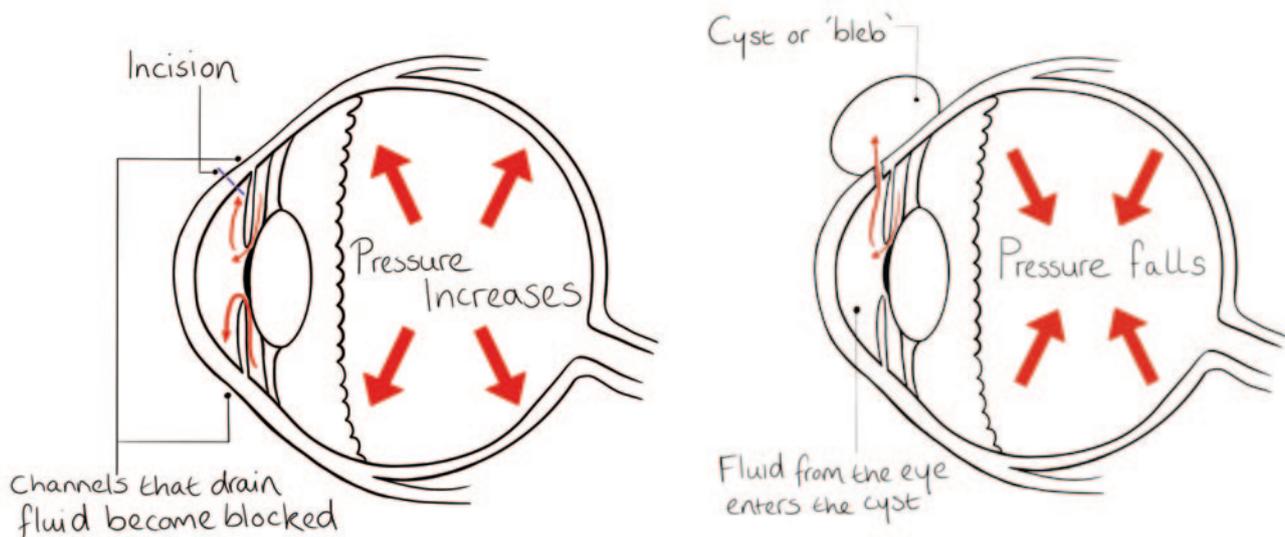
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This document aims to answer some of the questions you may have about having trabeculectomy surgery. It explains the benefits, risks and alternatives of the procedure as well as what you can expect when you come to hospital. If you have any questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you.

What is a trabeculectomy?

This is a surgical procedure which lowers the intraocular pressure (IOP) inside the eye in patients with high eye pressure or uncontrolled glaucoma.

The surgeon creates a new channel through the white of the eye (sclera), to allow excess aqueous humour (fluid inside the eye) to escape. When this happens, the amount of pressure within the eye is reduced.



The fluid does not leave the eye completely, but will form a small blister-like swelling on the white surface of the eye, usually underneath the eyelid where you usually cannot see it. The fluid can then be reabsorbed back into the blood stream, and does not come onto the surface of your eye. This small blister structure is also known as the drainage 'bleb', and remains on the eye's surface.

Why do I need it?

Glaucoma is often caused by high pressure inside the eye. Trabeculectomy reduces the eye pressure by draining aqueous humour from the eye. The treatment you have been having is not lowering the pressure enough and your ophthalmologist feels that a trabeculectomy is necessary.

Are there any alternatives?

A trabeculectomy has been recommended for you because other treatments and/or procedures have not controlled your eye pressures to a satisfactory level. A trabeculectomy gives the best chance for controlling your eye pressure. There are alternatives, for example more eye drops, tablets, laser and other surgical procedures which will have been discussed with you if appropriate. If you would like to know more about these please contact your consultant.

What are the benefits?

A trabeculectomy is carried out to reduce the pressure inside your eye, preserving the sight you have. It will not restore any sight you may have lost or improve your sight, but aims to reduce the risk of further loss of vision.

Are there any risks or complications?

As with all surgical procedures, there are some possible risks:

- **Low eye pressure:** The biggest risk is of too low an eye pressure in the early post-operative period. **It is very important that you avoid rubbing your operated eye as this can reduce the pressure.** Although often painless, low pressure may be associated with a dull aching feeling or a throbbing sensation within the operated eye. If you notice severe blurring of vision, distortion or a fluctuating curtain in your vision, contact the emergency eye clinic as soon as possible for advice. Very low pressure or a precipitous drop in pressure can result in bleeding at the back of the eye (choroidal haemorrhage). If this happens your surgeon may suggest further intervention, such as tightening the stitches or injecting a viscoelastic gel, additional medication or observation. The eye pressure can often stabilise but it is important that it is assessed. It is also important that you attend your follow-up appointments as scheduled to ensure your pressure is within an acceptable range.
- **Changes to vision:** Sometimes following surgery your vision may not be as sharp as before. Some people may feel that their sight seems worse afterwards even with new glasses. However, if your doctor feels you need this surgery, it is because he or she feels you are in danger of losing your sight altogether if the glaucoma is not controlled.
- **Infection:** This is a complication that can occur after any surgery and may require a change of eye drops or additional medication. Serious infections are rare.
- **Failure of the surgery to adequately control the eye pressure:** Sometimes the sutures used during the operation are too tight and need loosening or removing after the surgery to lower the eye pressure. This is a simple clinic procedure.

Scarring of the 'bleb' is a common reason for the surgery not to work as well as intended. It is the commonest complication after temporary blurring of vision in the peri-operative period. The likelihood of needing post-operative bleb needling to break scar tissue with anti-metabolite injection (anti-scarring drug) is approximately 20%-30% of patients. Alternatively, a patient may require an anti-metabolite drug injection without needling.

Despite this, unwanted scarring can reduce how well the surgery works. If this happens, you may need to use eye drops to help control the eye pressure. These procedures will be discussed with you if needed and some may require a further procedure in the operating theatre.

- **Loss of sight:** there is a very small risk, less than one in two hundred (0.5%), of complete loss of sight in the operated eye. This can be due to infection or bleeding inside the eye.
- **Change of eyelid position:** Your eyelid position might change after the surgery and you may require further surgery to correct this later on.
- **Infected 'bleb':** There is a small risk that the 'bleb' can become infected at any time after your surgery. If this occurs, you may need different antibiotic eye drops, or you may need to use your drops more frequently. You may also need further surgery – your doctor will decide whether this is necessary. There is a risk of your vision getting worse after an infection and your doctor will discuss this with you.
- **Worsening of cataract:** There is a chance that cataracts may worsen. If you have cataracts and you need surgery to treat your glaucoma, the surgeon may perform both operations at the same time. Your surgeon will discuss this with you and ask for your consent before the operation. If a cataract operation is needed after a trabeculectomy, there is a small risk that the trabeculectomy could stop working properly. Your doctor will speak to you about this if it applies to you.
- **Other symptoms to look out for:** Certain symptoms following your surgery may require prompt treatment, including:
 - excessive pain
 - sticky eye that continues to produce sticky discharge after gentle bathing with cooled boiled water
 - a sudden, or very obvious, worsening or darkening of your vision
 - shadows or a 'spider web' pattern across your vision
 - flashing lights
 - increasing redness of your eye.

If any of these occur it is important that you contact the Eye Unit Nurse for advice.

What are the longer term risks?

The longer-term risks of trabeculectomy are rare but include infection, discomfort, cataract and change in glasses prescription. Low pressure occasionally develops in the longer term, but generally the risk of low pressure is highest in the early post-operative period.

While the risk of infection following surgery is rare, there is a very small on-going life-time risk that the drainage bleb may become infected. If you have had a trabeculectomy and develop a red, sticky eye, it is important you have your eye examined by an optometrist or your GP to decide if you need an urgent referral to the clinic. If the eye is painful or you lose sight an urgent referral is needed, as it may be a sign of infection. Whilst rare, it can be very serious and may result in visual loss. The earlier any infection is treated, the better the outcome for the eye.

Asking for your consent

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form at the back of this leaflet. This confirms that you agree to have the procedure and understand the risks and benefits. If you would like more information about our consent process, please speak to a member of staff caring for you.

How do I prepare for it?

Trabeculectomy procedures can be carried out under a local or general anaesthetic. Prior to the surgery you will have a pre-operative assessment which will assess your general health and any specific tests or instructions required prior to surgery.

If a general anaesthetic is agreed with your consultant, you will be asleep during the entire procedure.

If you have local anaesthesia, you will be awake during the operation but may have the option of requesting light sedation. The eye is anaesthetised first with eye drops and then an injection of anaesthetic is administered around the eye. The anaesthetic injection itself may cause some mild discomfort with a slight sensation of pressure as the anaesthetic is delivered. The injection anaesthetises the eye, preventing not only pain but also excessive eye movement during surgery. During surgery you are covered by a sterile sheet, or drape, which keeps the operation site sterile and also prevents you from seeing any of the surgery.

If you are having your operation under local anaesthetic you may eat and drink normally on the day of your operation. If you are having a general anaesthetic you must follow the fasting instructions given to you at your pre-assessment.

You should continue all drops and tablets as normal up until your surgery. Blood thinning medications such as aspirin, Warfarin and Clopidogrel are usually stopped before the surgery and you will be given instructions about this.

Do not drive yourself to your operation. If you are having sedation or general anaesthetic you should have someone to care for you overnight following after your surgery. This is for your safety.

What does a trabeculectomy involve?

Trabeculectomy surgery typically lasts up to 45 to 60 minutes under local or general anaesthetic. A small cut is made through the conjunctiva and sclera (white of the eye) and a tiny part of the iris is removed and this will be covered by the surface tissues of the eye. Stitches are placed, allowing the fluid inside your eye, the aqueous fluid, to drain away, lowering the pressure. These stitches can remain in the eye long term, or be removed in the Eye clinic at a later date using eye drops to numb the eye.

A small swelling known as a bleb will form under your upper lid where the fluid is draining. The bleb will remain, but you should not be aware of it. The surgeon will give you some medication to prevent the bleb scarring shut following your operation.

During the surgery, the drug Mitomycin C may be applied to the surface of the eye for a brief period of time (usually two to three minutes). Mitomycin C is a drug that was originally used to treat cancer, but it is also used in glaucoma surgery to reduce scarring.

Scarring prevents the trabeculectomy from functioning in the long term, as it prevents the aqueous humour from being absorbed back into the circulation. The Mitomycin C is then washed away from the eye with sterile water so that no residual drug remains.

The use of Mitomycin for this condition is unlicensed. This means although the manufacturer of the medicine has not specified it can be used in this way, there is good evidence it will be beneficial to help with healing and it has been used routinely worldwide in trabeculectomy operations for many years. If you require more information about this please speak to your surgeon.

What happens afterwards?

After the operation a pad and clear plastic shell is taped over the eye. You will be taken back to the ward area and undergo a final health check, before going home shortly afterwards. In some cases, if you had sedation or a general anaesthetic you may be required to stay longer.

You will usually have the operation as a day case procedure, requiring about half a day in hospital. You will need to return to hospital the day after the procedure to have your eye checked. If you have had a general anaesthetic or sedation, you should have someone staying with you for the first night.

You will stop the glaucoma drops to the operated eye and start antibiotic and steroid eye drops. Following your operation, you will need to use the steroid eye drops for at least three months as instructed by the hospital. It is important that you do not run out of drops – please make sure you get repeat prescriptions from your GP.

Following your operation, you should wear the clear plastic shell over you operated eye at night for the first two weeks. It is wise not to drive for at least the first week – your surgeon can advise you on this. You will usually need 2-4 weeks off work depending on the physical nature of your employment. You may read or watch television if it is comfortable to do so.

What should I avoid during recovery?

Avoid the following:

- getting soap and water in the eye when hair washing and showering for two weeks
- using make up for two weeks
- heavy strenuous activities, eg gardening for four weeks
- golf, bowls, dancing and keeping fit for four weeks
- swimming for six weeks.

Can I use contact lenses following trabeculectomy?

Not everyone can continue to wear contact lenses, so this is something to consider before having a trabeculectomy operation. If contact lens wear is essential, then other alternatives should be considered.

Whether or not contact lenses can be worn after surgery depends on the appearance and shape of the drainage bleb. The surgeon will usually be able to advise on this after six to eight weeks.

Can I fly following surgery?

Although it is safe to fly following surgery, bear in mind that your surgeon will wish to see you for a number of post-operative visits to ensure that your eye pressure is at the correct level.

What is the success rate?

Following trabeculectomy surgery, long-term studies suggest that most people will achieve a low eye pressure without the need for additional glaucoma medication. In clinical trials, trabeculectomy has proven consistently more successful at lowering intraocular pressure than either medication or laser. The success rate of trabeculectomy at controlling the pressure varies according to a number of risk factors including the type of glaucoma, previous surgery, ethnicity, age and other conditions.

Uncommonly, you may develop a pressure that is too low, requiring further surgery to elevate the pressure. In most cases, it takes two to three months for the eye to feel completely normal and sometimes longer in more complicated cases. At this point refraction (spectacle test) is usually required as your spectacle prescription may have changed slightly from the pre-surgery prescription.

What should I look out for?

Phone the Emergency Eye Clinic if you experience any of the following immediately after your surgery:

- pain in your eye that is not relieved by pain killers
- a large amount of sticky discharge
- increasing redness of your eye
- progressive deterioration of your vision
- showers of floaters and or flashing lights, or
- feel very sick.

Will I need any follow up?

You will be seen by your consultant or doctor the day after your surgery. A further outpatient appointment will be arranged for you another week later.

Following your operation, you will have several appointments over the next three months, sometimes being seen weekly for the first month. It is very important you attend these appointments so the surgeon can check your eye is healing well and there is not excessive scarring that requires further procedures. You will be on topical steroids for at least three months as instructed by the hospital.

Contact us

Outpatients Booking Team (for outpatient enquires only):

01872 252272

Inpatient admissions booking team:

01872 25 2774/3904

Eye Emergency Clinic (If you experience any post-operative issues immediately following your surgery, as outlined in the section 'What should I look out for')

01872 25 2324

If you would like this leaflet in large print, Braille, audio version or in another language, please contact the General Office on 01872 252690

CONSENT FORM 1
PROCEDURE SPECIFIC PATIENT AGREEMENT

NHS number:

Name of patient:

Address: *AFFIX PATIENT LABEL*

Date of birth:

CR number:

Trabeculectomy with Mitomycin C

+/-

Right / Left (delete as applicable)

STATEMENT OF HEALTH PROFESSIONAL (to be filled in by health professional with appropriate knowledge of proposed procedure, as specified in consent policy)

I have explained the procedure to the patient. In particular, I have explained the intended benefits:

- *To reduce the eye pressure by draining aqueous humour from the eye.*

Significant, unavoidable or frequently occurring risks:

- *Low pressure in the eye, development of or worsening of cataracts, failure of the surgery to control your eye pressure, ongoing discomfort, the need for further surgical procedures in clinic and theatre as necessary, eg removal of sutures, bleb procedures to reduce scar tissue.*

Uncommon but more serious risks:

- *Infection*
- *Altered eye lid position.*

Rare but serious risks:

- *Loss of sight*
- *A bleed (haemorrhage) inside the eye.*

Any extra procedures which may become necessary during the procedure:

- *Other procedure (please specify):*

Very rarely extra surgical procedures might be necessary during the operation to make the surgery safe in complicated cases, eg scleral graft if tissues are very thin and tear. In this event these procedures will be discussed with you after the operation.

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

I have given and discussed the Trust's approved patient information leaflet for this procedure: Trabeculectomy (CHA4226) which forms part of this document.

I am satisfied that this patient has the capacity to consent to the procedure.

This procedure will involve: General and/or regional anaesthesia Local anaesthesia Sedation

Health Professional signature: Date:

Name (PRINT): Job title:

STATEMENT OF INTERPRETER (where appropriate)

I have interpreted the information above to the patient to the best of my ability and in a way in which I believe he/she can understand.

Interpreter signature: Name (PRINT): Date:

affix patient label

STATEMENT OF PATIENT

Please read this form carefully. If your treatment has been planned in advance, you should already have a copy of the patient information leaflet which describes the benefits and risks of the proposed treatment. If not, you will be given a copy now. If you have any further questions, do ask - we are here to help you. You have the right to change your mind at any time, including after you have signed this form.

I agree to the procedure or course of treatment described on this form.

I understand that you cannot give me a guarantee that a particular person will perform the procedure. The person will, however, have appropriate experience.

I understand that I will have the opportunity to discuss the details of anaesthesia with an anaesthetist before the procedure, unless the urgency of my situation prevents this. (This only applies to patients having general or regional anaesthesia).

I understand that any procedure in addition to those described on this form will only be carried out if it is necessary to save my life or to prevent serious harm to my health.

I understand that tissue samples will only be taken in relation to the procedure explained to me. No samples will be taken for quality control, clinical education or research purposes.

I have been told about additional procedures which may become necessary during my treatment. I have listed below any procedures **which I do not wish to be carried out** without further discussion.

I have received a copy of the Consent Form and Patient Information leaflet: Trabeculectomy (CHA4226) which forms part of this document.

Patient signature: _____ Name (PRINT): _____ Date: _____

A **witness** should sign below if this patient is unable to sign but has indicated his or her consent. Young people / children may also like a parent to sign here (see guidance notes).

Witness signature: _____ Name (PRINT): _____ Date: _____

CONFIRMATION OF CONSENT (to be completed by health professional when the patient is admitted for the procedure, if the patient has signed the form in advance).

On behalf of the team treating the patient, I have confirmed with the patient that they have no further questions and wish the procedure to go ahead.

Health Professional signature: _____ Date: _____

Name (PRINT): _____ Job title: _____

Important notes (tick if applicable):

See advance decision to refuse treatment Patient has withdrawn consent (ask patient to sign/date here)

Patient signature: _____ Name (PRINT): _____ Date: _____

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