

## Patient information

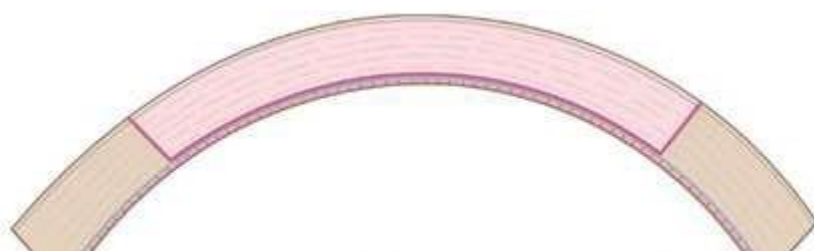
# Deep Anterior Lamellar Keratoplasty

## St Paul's Eye Department

### What is Deep Anterior Lamellar Keratoplasty?

Deep anterior lamellar keratoplasty (DALK) is a partial thickness corneal graft in which we replace the front 95% of the cornea. It is used as an alternative to a full-thickness corneal graft called a penetrating keratoplasty (PK)

The procedure is technically skilled and involves cutting the cornea to almost 95% thickness, and removing the top layer. After removing the unhealthy part of your cornea, a donated cornea is stitched into place and the sutures (stitches) remain for around 12 to 18 months.



**Cornea is cut to 95% thickness leaving the inner most layers**

### What are the benefits?

By preserving that part of the cornea that is healthy, the risks of graft surgery such as graft rejection, bleeding and infection inside the eye, are decreased.

If your inner most corneal layer is normal, then it is worth preserving.

Replacing the abnormal corneal tissue with healthy donor tissue should improve the visual potential of the eye and also where the cells of the cornea are damaged (dystrophies), this will improve the comfort by decreasing occurrence of ocular surface breakdowns.

### **What are the risks?**

- Infection (less than 5%)
- Bleeding (less than 5%)
- Loss of vision
- Graft rejection
- Increased pressure inside the eye
- The most frequent surgical complication is perforation of Descemet's membrane, thus requiring conversion to full thickness graft (Penetrating Keratoplasty)
- Cataract formation
- Recurrence of the original problem
- DALK carries the potential danger of decreased visual acuity due to possible clouding in the corneal layers.

### **Are there any alternatives available?**

In the case of keratoconus, possible alternatives are the continuation of contact lens use, or the implantation of semicircular plastic rings (INTACS) inside the cornea, a less invasive procedure, to change the shape of the cornea.

In corneal dystrophies, possible alternatives are laser surgery (PTK/PRK) to reshape the surface of the eye and remove some of the abnormal tissue, or conservative treatment with bandage contact lenses and eye drops.

If you have any specific concerns, you should discuss them with your surgeon before the operation.

### **What will happen if I decide not to have treatment?**

Your diseased cornea may or may not progress causing your vision to get worse. If you do decide to wait, there is nothing stopping you from having the procedure at a later date.

### **What sort of anaesthetic will be given to me?**

You will be given a local or general anaesthetic.

Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used.

Like all medicines, local anaesthetics may sometimes cause side effects, as well as the effects that are needed. You may experience dizziness, blurred vision, drowsiness and occasionally loss of consciousness.

Serious side effects are rare, and include fits, low blood pressure, slowed breathing and changes in heartbeat, which may be life-threatening. If you have any concerns about any of these effects, you should discuss them with your doctor

The risks of anaesthetic and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well.

You will be given an opportunity to discuss anaesthetic options and risks before your surgery. For more information, please ask for a copy of the Royal College of Anaesthetists Patient Information "You and Your Anaesthetic".

If you are worried about any of these risks, please speak to your Consultant or a member of their team.

## **Getting ready for your operation**

- You may need to be seen in the pre-operative clinic before you are admitted to hospital. Here you will have blood tests, and sometimes a heart trace or a chest X-ray. You will be assessed to see if you are fit for the anaesthetic.
- The staff will ask routine questions about your health, the medicine you take at the moment and any allergies you may have.
- You will be given instructions on eating and drinking before your operation.
- You will be able to discuss the operation with a doctor. You will be asked to sign a consent form to say that you understand the procedure, and what the operation involves.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping. General Office is open between 8.30am and 4.30pm Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.

You may be asked to have a repeat eye test with our Optometrist and corneal topography scan; this is a scan that measures the shape of the surface and depth of your cornea

## **The day of your operation**

- You will either come into hospital the day before or the day of your operation.
- You will be asked to remove jewellery - plain band rings can be worn but they will be taped.

- If you are on regular medication, you will be told to take this if necessary.
- You will be asked to take a shower and put on a gown and disposable underwear.
- If you are having a local anaesthetic, you may have a light meal before your operation, for example toast and cereal.
- If you are having a general anaesthetic, you will have been given instructions before you come into hospital.
- A bracelet with your personal details will be attached to your wrist.
- You may be prescribed some medication to take before your operation by the anaesthetist. A member of the nursing staff will give this to you.
- A nurse and porters will take you to the operating theatre.
- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.
- When you arrive in the waiting area, a theatre nurse will check your details with you. You will then be asked to put on a disposable hat.
- The ward nurse will then leave you and you will then be taken to the anaesthetic room.

## **Your operation**

The operation usually takes about an hour, but this will depend on your individual case or when more than one procedure on the eye is needed - for example if the transplant is combined with cataract surgery.

## **What should I expect after my operation?**

You will need to posture after surgery, which is lying on your back for after your operation for a few hours.

This helps the air bubble is inserted in the eye to keep your graft in the right position.

You will return to the day ward or be admitted to the inpatient ward. When you are discharged home, you will be asked to use some eye drops and should have a follow-up appointment for an outpatient clinic before you leave.

- After your operation you will be kept in the theatre recovery room before being taken back to the ward.
- A nurse will check your pulse, blood pressure, breathing rate and eye wound regularly.
- A protective shield will cover your eye.
- The pain is usually slight. However, painkillers will be prescribed for you if it becomes unpleasant.
- You will experience some feeling of grittiness from the sutures. This will gradually settle.
- Your vision will remain blurred and hazy. This will continue to change over the next few weeks and months after your operation.
- The first time you get out of bed, please make sure you ask a nurse for assistance. This is in case you feel dizzy.

### **The first day after your operation**

The nursing staff will examine your eye after they remove the covering shield. If your eye is satisfactory and you have recovered from the effects of the anaesthetic, the ophthalmologist will then examine your eyes. Drops and other medications will then be prescribed, and will be given by the nursing staff.

## **Going Home**

If all is well and depending on your home situation, you may be able to go home after your operation or stay in overnight to posture.

## **Discharge Information**

### **Pain relief and medication**

The nursing staff will advise you about painkillers before you leave the hospital.

You will need frequent drops for the first few weeks, including a steroid drop to help prevent rejection of the transplant. The nursing staff will show you how to put in the drops.

If you think you will have a problem putting in your drops, please discuss this with the nursing staff before you are discharged so that district nurse visits can be arranged. The steroid drops will need to be used for a long time after your operation.

### **Important**

It is important that you use your medication to reduce the chances of infection or rejection of your transplant. Although very uncommon, it will show as increased pain, redness and a reduction in vision.

In the weeks or months following surgery, if these symptoms should happen or if there is a sticky discharge from your eye, you should ring the contact number given at the end of this leaflet or attend St.Paul's Primary Care Department.

It is important that you contact the department so that arrangements can be made for you to be seen in the clinic.

## **Getting back to normal**

- Have a quiet and restful lifestyle for the first few weeks after your operation. You must avoid activities, which involve heavy lifting (i.e. shopping bags) or bending for long periods.
- Until advised otherwise by your ophthalmologist, you must avoid contact sports or other activity which can directly damage the eye,
- A plastic shield must be worn when asleep for the first week to protect the corneal transplant from accidental damage. During the day you can wear your usual glasses and these will provide more protection to your eye
- Please do not rub your eye. If your eyelids become matted, they can be cleaned with cooled boiled water using a piece of cotton wool.

You may notice an immediate improvement in your sight. However, improvement in your sight usually takes several months. Vision following corneal transplantation usually improves to a fairly good level. If however, you also have other problems with your eye or the transplant was performed for an inflammatory eye condition, your vision may not reach such a high level.

## **Driving**

You can drive as soon as your eyesight allows.

## **Returning to work**

You can self-certify for the first seven days of sickness. Before you are discharged, a medical certificate (fit note) may be issued by your hospital doctor to cover the expected time off you will need.



## **Further Appointments**

You will need sight testing by the St. Paul's optometrists. It is likely that you will still need some kind of spectacle lens to achieve your best sight, though it is also hoped that your unaided sight (without glasses or contact lenses) will be improved.

## **Feedback**

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

## **Further information**

### **Contact Numbers**

**Claire Britten Corneal Nurse**

**Tel 0151 706 2000 Bleep 4732**

**Textphone Number: 18001 0151 706 2000**

**Bleep 4732**

**Monday Wednesday Friday**

**St Paul's Primary Care**

**Tel: 0151 706 3949**

**Textphone Number: 18001 0151 706 3949**

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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