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## **Selective Laser Trabeculoplasty**

### **What is Selective Laser Trabeculoplasty (SLT)?**

There are different ways in which laser therapy can be used to treat patients with glaucoma. SLT is a safe, quick, simple and non-invasive procedure to treat glaucoma by reducing the pressure inside the eye (intra-ocular pressure). The procedure does not require admission to hospital and is carried out in the out patients department.

### **How does it work?**

SLT uses an advanced laser to target specific cells in the Trabecular meshwork (natural drainage channel) of the eye. Short pulses of low energy light are used to target only those cells containing melanin, a natural pigment. In response, although the cells are not damaged, they appear boosted to improve the drainage of the fluid in the eye and so lower intraocular pressure. Some patients can have an early response to the SLT but in most cases it can take up to 6 or 8 weeks for the effects of the laser to be apparent and for intra-ocular pressure to drop.

It is important to continue to use your eye-drops or medications or glaucoma as normal, including on the day of treatment, unless instructed otherwise.

### **What happens on the day of treatment?**

Expect your visit to take 2-3 hours overall. You will be asked to attend the clinic (Private Patient Unit, Manchester Royal Eye Hospital) in advance of the treatment time to have some drops instilled in the eye to prevent a pressure rise in the eye from the treatment and make the pupil smaller to help the laser be more successful. Alternatively these may be prescribed in advance for

you to put in an hour prior to the treatment time. The drop takes approximately an hour to be effective.

I will then check your vision and intra-ocular pressure, take written consent, if not done previously, and you will also have anaesthetic drops put in to numb the front of the eye.

The laser is delivered through a specially designed microscope that you sit in front of. It is very similar to the slit-lamp microscope you sit at in clinic to have your eye examined. A special lens will be placed against the front surface of your eye for better viewing. During the laser treatment, you may see some flashes of light and hear clicking sounds as the laser pulses are delivered. The laser treatment is generally painless, although some patients experience mild discomfort.

## **What happens after the procedure?**

Once the treatment is complete I will want to see you again approximately an hour later to check the pressure in your eye.

For a few hours after your treatment it is normal to experience some slight discomfort in your eyes. The eye may also be a little red from the lens used at the time. You may also feel that your vision may be slightly blurred however this should clear up by the following day.

If it has not resolved and is sore and very red then some anti-inflammatory drops may be used for 2 days. I will have given you a prescription to take home. If you do not need them please do not do so as the great majority of people do not need them. If the discomfort persists then you may wish to take a mild painkiller, for example Paracetamol, to relieve this discomfort. **If you are already taking painkillers for a different condition continue with these, but do not take both.**

If any of these symptoms worsen or your vision does not then I suggest you call for advice.

You will be given a follow up appointment to assess how your eye has responded to the treatment and this usually takes place within two weeks following the treatment.

I will also clarify any changes to your current medication plan. If I do not ask you to stop a medication please continue until I review you in clinic. It is important to stress that any medication you are taking for the untreated eye is continued as usual unless you are told otherwise.

There are no activity or work restrictions after laser, though I suggest you do not drive that day.

### **Are there any additional risks or side effects of this treatment?**

It is possible for the pressure in your eye to increase immediately after the treatment. In order to prevent this we put in some special drops beforehand. A pressure rise would normally be detectable within an hour of the SLT so I can give you any additional treatment at the time.

There is a very tiny risk that your pressure may not respond and require further intervention or that it will cause a change or reduction in your vision.

### **How successful is it in lowering the pressure?**

SLT is not recommended for all types of glaucoma and does not work in all patients. Its success can vary on an individual basis and will be discussed with you; overall studies show about 70% success. It is usually necessary to continue with some eye drops to lower the pressure after laser trabeculoplasty. It may take days or weeks after the laser treatment for the pressure to be reduced. The effects of the laser may wear off in time, about 50% stop working after 5 years. As the laser does not damage the tissues of the drainage meshwork it may be repeatable.

### **Contact information**

The information in this leaflet is intended as a guide only, as each patients experience will be different. If you require any further information or are concerned about your eye following laser treatment, please contact my secretary at the Alexandra hospital, the telephone number is 0161 496 6815.

If you are unable to speak to my secretary, please ring my secretary at the Eye Hospital who can contact me. The telephone number is 0161 276 6949. If you are unable to contact my secretaries or me at the Eye Hospital and are concerned then the Emergency Eye centre on 0161 276 5597 is open everyday between 8.00 am and 9.00 pm.

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