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Laser Iridotomy

Why might I need Laser Iridotomy?

There are many different types of glaucoma and the treatments are varied. Laser iridotomy is a treatment that is used for patients who have, or who are at risk of, developing acute angle closure glaucoma, or who have chronic closed or narrow angle glaucoma.

In acute angle closure glaucoma the watery fluid called Aqueous Humour is unable to pass into the front chamber of the eye and then drain satisfactorily. This fluid is trapped behind the iris pushing it forward on to the delicate drainage system, called the Trabecular meshwork, which restricts the flow of aqueous further so that the pressure within the eye goes up. The pressure can rise to very high levels quite quickly in an acute attack and this can damage the nerve at the back of the eye and lead to loss of vision. Prompt treatment may reverse this but can leave the person with reduced vision in that eye.

This situation can occur as the pupil partially dilates up and comes into contact with the lens behind so that the aqueous humour can no longer pass into the front chamber of the eye. This is most likely to happen in eyes that are smaller where the iris is very close to the Trabecular meshwork anatomically initially and then the space between them, or angle of the eye, narrows further as the lens in the eye gets thicker with increasing age. So long-sighted people, with smaller eyes, are at risk and so are some racial groups or eye with more unusual iris configurations such as a plateau iris.

Some people are aware of prodromal symptoms or sub-acute attacks in dim light when the pupil is partially dilated they may get headaches and blurring of vision or see haloes around lights as the pressure starts to rise in the eye. Closing their eyes for sleep or going into a

brightly lit room may break the attack as the pupil size becomes smaller so it is no longer in contact with the lens.

Laser iridotomy is the preferred treatment in these cases and is used to prevent this happening in eyes at risk with narrow angles.

How does it work?

The laser delivers a highly concentrated beam of energy, which is used to make a small hole in the iris (coloured part of your eye). This small hole allows the aqueous humour to flow freely in to the front chamber of the eye so that the pressure does not go up abruptly. It also helps to prevent the iris from being pushed forward on to the delicate drainage system and restricting the flow of aqueous in eyes with chronic glaucoma where the angle is narrowed.

If the iris is darkly pigmented it may be necessary to pre-treat the iris with another type of laser to make it easier and safer for the laser to make the small hole in the iris. If this is the case it will be discussed with you.

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. One of the drops also makes the pupil smaller and makes the iris taut so it is easier for the laser to penetrate. Alternatively these may be prescribed in advance for you to put in an hour prior to the treatment time. The drops take 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, which 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. Most patients experience only mild discomfort and describe feeling a “ping” like sensation.

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. You may also feel that your vision may be slightly blurred however this should clear up by the following day. 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.**

The eye may also be a little red from the lens used at the time. The eye may still be a little red or sore the following day as it may sometimes become inflamed but you will be given some eye drops to take home that will control any inflammation and help to relieve discomfort. 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 risks or side effects of this treatment?

Your vision may be slightly blurred for a few hours following your laser treatment. This will settle. If you are concerned that your vision is not returning to normal please contact the hospital on the numbers below. It is advisable that you do not drive yourself to the hospital, as you will be unable to drive home.

There may be a little bleeding from the iris inside the eye, which can initially blur your vision but will clear in a few days time. Occasionally this means the laser treatment is not completed on the day but at a second visit.

It is possible for the pressure in the eye to increase immediately after the treatment. In order to prevent this we put in some special drops before and immediately after the treatment. A pressure rise would normally be detectable within an hour of the laser 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.

The small hole in the iris is usually hidden under the upper eyelid and cannot be seen with the naked eye. However, very occasionally, it can cause glare or very rarely double vision. Cataract formation has been described following the laser but is very rarely a problem.

How successful is laser iridotomy?

Laser iridotomy is very successful. However, occasionally the small hole can partly or completely heal up in the first few days after the laser treatment. On a few occasions it is hard to penetrate the iris completely on one treatment or a little bleeding occurs so that treatment is suspended and completed on another day. Sometimes the hole appears adequate but without the drop that stretches the iris it appears too small. Further laser treatment may therefore be necessary after clinic review. This is usually very successful. Laser iridotomy is very good at protecting against acute angle closure glaucoma.

Contact information

The information in this leaflet is intended as a guide only, as each patient's 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 495 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 8.30 pm.

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