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Argon Laser Peripheral Iridoplasty

What is Argon Laser Peripheral Iridoplasty?

Argon laser peripheral iridoplasty can be performed to treat angle closure glaucoma when laser iridotomy cannot be performed or fails to effectively treat the condition. It is also commonly used to treat plateau iris syndrome.

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. Symptoms may include headaches, severe eye pain, blurred vision, tearing as well as nausea and vomiting.

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.

How does it work?

The aim of argon laser peripheral iridoplasty is to open up the drainage angle of the eye so that aqueous humour can flow through as normal. This should prevent or treat angle closure glaucoma and help to lower intraocular pressure. This is achieved by applying a laser beam to the iris, which then pulls it out of the angle and thins it a little.

What should I do before the procedure?

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 to make the pupil smaller as this makes the iris taut and the procedure more successful. Alternatively these may be prescribed in advance for you to put in an hour prior to the treatment time. The procedure will be carried out in one of our laser treatment rooms. It is essential that you continue to use your eye medication as prescribed before the procedure and also on the morning of the treatment, unless you have been instructed otherwise. There are also no special preparations so you can eat and drink as normal before your treatment.

What to expect on the day of treatment

I will first ask for your consent regarding the treatment and then proceed to check the pressure in your eye. You will also have an anaesthetic drop to numb your eye. The machine that is used to carry out the procedure looks very similar to the slit lamp microscope used to examine your eyes in clinic and the treatment usually takes around 10 minutes to complete. Before getting underway, a special lens will be held to the surface of your eye that will allow me to get a better view of the structures and drainage channels inside. Some patients find the laser being applied to the iris causes mild discomfort or stinging. It is rare to be more painful.

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 drops to use 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.

Are there any risks or side effects of this treatment?

It is possible for the pressure in the eye to increase immediately after the treatment. In order to prevent this I 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.

It is very rare for there to be excessive inflammation with pain and redness that doesn't settle with the drops.

The treatment may not be enough to open the drainage angle or control the intraocular pressure and further intervention may be required.

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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