

Laser peripheral iridotomy

This leaflet is for patients with angle-closure glaucoma or at risk of angle-closure glaucoma, who have been recommended laser peripheral iridotomy as a treatment.

What is laser peripheral iridotomy?

Laser peripheral iridotomy is a procedure used to treat patients with angle-closure glaucoma, or as a preventative measure in people who are at risk of angle-closure glaucoma. "Angle-closure" is narrowing of the drains in the eye that allow the eye pressure to flow out. This can cause high pressure inside the eye. This high eye pressure can cause damage to the nerves used for sight, resulting in vision loss; also known as glaucoma.

Laser peripheral iridotomy uses laser energy to create a small hole in the iris (the coloured part at the front of the eye) to help open the drains and treat or prevent angle-closure glaucoma. This hole is not visible to the naked eye.

Benefits of treatment

The laser treatment aims to prevent raised eye pressure and reduce the risk of vision loss from glaucoma. In advanced cases, medication and/or surgery may be necessary in addition to laser treatment

Side effects and complications

Generally, laser peripheral iridotomy is a low-risk procedure. The most common adverse event is a temporary rise in eye pressure. This will be detected by measurements taken before and after the procedure. The likelihood of pressure rising is related to the severity of the disease. Approximately one in 10 people in the early stages of the disease experience

some pressure rise. In pressure may last from hours to weeks. If it occurs, it is treated with medication. Inflammation can also occur following the laser procedure and it is important to use your aftercare eye drops.

A small amount of bleeding from the laser hole (inside the eye) is fairly common, and can cause misty vision which usually settles within 24 hours. If you are taking warfarin to reduce blood clotting, you should have a recent blood test (within one week) confirming an INR of less than 3.0. Please tell us if you are taking warfarin and bring your yellow book with you.

Around a quarter of all patients undergoing laser iridotomy notice a small change in their vision. In the majority of cases, the vision returns to normal within a month. Some patients notice a permanent change in their vision. Research has shown that "ghosting" around objects (11%), shadows (3%) and lines (1%) were the most frequently-noticed visual change. Some patients also report experiencing glare.

The risk of vision loss or the need for urgent surgery following the procedure is extremely rare (around 1 in 5,000).

If you develop persistent misty vision, or pain in the eye, please contact our Emergency Eye Clinic.

Are there any alternatives to laser treatment?

Surgical lens extraction (a procedure which is technically the same as cataract surgery) is another treatment for angle-closure. Lens extraction surgery has a higher risk of irreversible vision loss compared to laser peripheral iridotomy, although the risk is still low (less than 1 in 1000). For this reason, lens extraction is usually only recommended for patients who are already developing visual problems from cataract, or for patients who are unlikely to benefit from laser treatment.

Patients who choose not to have laser peripheral iridotomy or lens extraction treatment have a small risk of worsening of angle-closure, which can result in high intraocular pressure and loss of vision from glaucoma.

Observation, is a reasonable option. Patients who do not have high eye pressure or other signs of damage from angle-closure can have regular reviews by a local optometrist.

What will happen on the day?

Please allow half a day for your procedure. You will be asked to sign a consent form outlining the risk and benefits of the procedure (as detailed in this information leaflet). You will be given two rounds of drops (apraclonidine and pilocarpine) before the laser is carried out. Please note, you will not be given apraclonidine if you have heart problems. The pilocarpine drop can cause a headache, and may affect your vision, for example by altering the focus of the eye, and making things appear darker and more blurred than usual. These effects are normal and temporary.

The procedure takes place in a room in the outpatient department and you can bring a friend or carer with you (they will wear protective glasses, which are provided). The laser treatment is given through a standard eye examination microscope (slit lamp) connected to the laser machine. You will have some anaesthetic drops put in the eyes just before the procedure. These can sting for a few seconds.

A contact lens is used to improve the doctor's view and prevent the eye from closing. It is important not to move but the majority of patients manage to keep still without any problems.

You will see a bright white light to allow the doctor to see where the treatment is being applied. This can cause the vision to be dim for up to 30 minutes afterwards. In most cases, a pulsed laser is used, which makes a soft clicking noise and gives a very short flicking sensation when activated. While most people do not experience any sensation apart from the flicking, the treatment is occasionally uncomfortable for a small number of patients.

Eye pressure is measured about one hour after the laser treatment. If the pressure is high, you will be given tablets and/or drops to use for a few days.

Aftercare

Routinely, you will need to use an anti-inflammatory eye drop prednisolone 1% (Pred Forte) hourly for the first day (taking a break through the night), and then four times a day for 1 week. You will be seen in clinic for a check-up two weeks later. You should continue to use your normal glaucoma medication for both eyes unless specifically told not to.

Symptoms of acute angle-closure

Even after having laser peripheral iridotomies, there is still an extremely small risk of the drains closing which causes the eye pressure to rise quickly. This is called acute angle-closure. If you experience blurred vision, haloes around lights, eye pain and nausea or vomiting, please attend the emergency eye clinic.

Emergency Eye Clinic: 02920 743 191

Monday to Friday, 9am–5pm, for information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.