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Patient Information Leaflet – Glaucoma Procedures

iStent W Implant

What is the iStent W Implant?

The iStent is a small (1mm long) titanium tube that is implanted into the eye to lower intraocular pressure and reduce the need for eye drops in patients with glaucoma. It is one of the smallest surgical devices used anywhere in the human body and one of a range of procedures referred to as “Minimally Invasive Glaucoma Surgery (MIGS)”.



Why do I need it?

The iStent is suitable for those patient with ocular hypertension or mild to moderate primary open angle glaucoma undergoing cataract surgery. The aim of the iStent procedure is to reduce intraocular pressure and reduce the need for glaucoma eye drops. iStent will not cure your glaucoma or reverse any damage to your vision that has already occurred but it may help prevent glaucoma getting worse.

How does it work?

Glaucoma is usually due to raised pressure within the eye, which occurs due to reduced drainage of fluid (aqueous humour) through the eye's natural drainage channels. The iStent is inserted into the eye's natural drainage channel – the trabecular meshwork. The aqueous humour is then able to drain through the

iStent. Insertion of the iStent involves a short surgical procedure that is often done at the same time as cataract surgery, usually as a day case procedure.

What is the success rate of the iStent?

The success rate for this treatment is very promising. A large randomised study in the USA, involving almost 500 patients, randomly assigned patients to have cataract surgery alone or cataract surgery with iStent.

76% of patients treated with the Stent had at least a 20% reduction in IOP compared to 60% of those having cataract surgery alone at 2 years.

Most patients were able to reduce the number of glaucoma medications they were taking. At 2 years 84% of the cataract surgery with iStent group were medication free compared 7% in the cataract surgery alone group.

Are there alternatives to surgery?

There are three ways to lower the pressure inside the eye on a long-term basis: eye drops, lasers and operations.

You may already be using eye drops, but they did not lower the eye pressure enough, you are getting side-effects, or you find it difficult to use the drops.

Generally, an operation is reserved for patients in whom eye drops and lasers have not worked or are not suitable.

What if I don't want surgery?

Then your eye surgeon will recommend either more eye drops to lower the pressure in your eye, or a laser procedure.

Preparing for the operation

Please continue to use any eye drops and tablets for your glaucoma as prescribed, unless directed otherwise by your ophthalmologist Mr Agrawal. If you take any blood thinning medication (e.g. Warfarin) or have had bleeding problems in the past please discuss this with Mr Agrawal prior to surgery.

Prior to the operation you will be asked to attend a pre-operative assessment appointment to check you are fit for the procedure and anaesthetic.

What happens at time of surgery?

Implantation of an iStent takes only 5 – 10 minutes. It is often performed at the end of cataract surgery but can also be done on its own. The operation is usually performed under local anaesthetic using eye drops to numb the eye (topical anaesthesia).

What happens after the operation?

After the operation your eye will be covered by a protective plastic shield. Please keep the shield over the eye until the morning after surgery. Do not worry about using any eye drops in the operated eye until after removing the shield the morning after surgery. Any eye drops that you use in your other eye must be continued as normal. The morning after your operation you can remove the protective eye shield and gently bathe your eye with cooled boiled water. You can then start the post-operative drops to the operated eye. You will have two types of drop – an antibiotic and a steroid, which will need to be used for approximately 4 weeks after your operation. Please stop your normal glaucoma drops in the operated eye so we will be able to assess the effect of the iStent. You may need to restart these at a later date. Each time you attend the clinic any changes to your eye drops will be discussed with you. You will usually be reviewed in the eye clinic one day, one week after the operation and then again at around a month later.

What about my medication?

If you are using drops in the other eye you should continue to do so unless directed otherwise

Please stop your normal glaucoma drops in the operated eye so we can assess the effect of the PreserFlo Microshunt (some drops may need to be restarted according to the pressure response to the implant).

There will be two different drops to go in the operated eye-an antibiotic and a steroid which need to be continued for approximately 3 months post-surgery.

What are the risks and possible complications of surgery?

Serious complications are rare. You could have a small amount of bleeding inside your eye. If this happens, your vision could be blurred for one to two weeks or occasionally longer.

The iStent is made from non-magnetic titanium, the same material used for replacing heart valves so it will not cause an allergic reaction or be rejected by the body. As it is non-magnetic it is safe for you to have an MRI scan in the future if needed. The iStent will not set off airport scanners.

Post-operative Instructions:

It is important not to rub or press on your eye after surgery. As this may happen accidentally when you are sleeping please continue to wear the plastic shield over your eye at night for the first week after surgery. Most people need one to two weeks off work after surgery but you may need longer if your work involves heavy lifting or labour. Other activities will depend on whether you have also had cataract surgery. You should avoid the gym for 2 to 3 weeks and swimming for 4 weeks. Depending on vision in your other eye you may be able to drive within a day or two. There are no long-term restrictions after iStent surgery.