

## Ophthalmology

# iStent

### Trabecular stent bypass microsurgery for open angle glaucoma

#### What is the iStent?

The iStent is a very small medical device which is implanted into the natural drainage channel of the eye with minimally invasive surgery. It aims to improve the drainage of fluid from the eye and reduce the eye pressure in patients with raised eye pressure and/or glaucoma. It can be inserted either alone or more commonly during cataract surgery.

#### What are the benefits of the iStent?

- The iStent may prevent your glaucoma from getting worse by lowering your eye pressure.
- The iStent can, in some cases, also reduce your use of eye drops for glaucoma.

The iStent is made from non-magnetic titanium; the same material used for replacing heart valves, so it should not be rejected by the body or cause an allergic reaction. It will not set off airport scanners and will not cause any problems if you need to have an MRI scan. In a typical case, 2 very tiny stents are placed in one eye but this number could be lower or higher depending on individual situation including eye pressure and accessibility and anatomy of the drainage channels where the stents are placed.

#### Is the iStent suitable for everyone?

iStent is suitable for patients who have an open drainage angle so that the surgeon can implant the device. This can be also achieved in some cases of narrow/closed angle glaucoma, after removal of cataract. Your doctor will discuss and explain the suitability of the iStent in your case. .



### **Will the iStent cure my glaucoma?**

iStent aims to prevent your glaucoma from getting worse by lowering your eye pressure. It will not cure your glaucoma, or reverse any damage already caused by glaucoma or bring back any lost vision.

### **What are the risks and complications of iStent?**

iStent has been approved for use by the National Institute for Clinical Excellence (NICE). Usually this procedure is combined with cataract surgery and the usual risks and benefits of cataract surgery are explained in the cataract surgery information leaflet. If iStent implantation is being offered to you as a stand-alone procedure then the surgeon will discuss with you the specific benefits and risks.

Significant complications are uncommon. A very small amount of bleeding inside the eye occurs in most cases during the operation but this, usually, resolves within a few days. The stents can very uncommonly become dislodged or blocked. Very uncommonly a further procedure may be required to deal with unexpected events like persistent bleeding and dislodged / blocked stents.

You will be given anti-inflammatory and antibiotic eye drops to use after your operation to prevent inflammation and infection.

In some cases the iStent may not lower the eye pressure. However if this happens other options to reduce the eye pressure can still be explored and it will not prevent you from having further operations for your eye.

NICE has decided that although there are no major safety concerns about the procedure there are uncertainties about how well it works.

NICE has produced a guidance to help people who have been offered this procedure to decide whether to agree (consent) to it or not:

**Understanding NICE guidance: Information for people who use NHS services. Treating open angle glaucoma by inserting a micro-stent to reduce pressure within the eye**

[www.nice.org.uk/guidance/IPG396/publicinfo](http://www.nice.org.uk/guidance/IPG396/publicinfo)

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### **What are the risks of not having the procedure (or glaucoma treatment)?**

If the eye pressure remains elevated despite medical therapy then there is a risk that your vision will deteriorate.

### **Are there other options?**

Alternative surgical treatments for uncontrolled glaucoma include medications, Trabectome (ab interno trabeculotomy), glaucoma filtration surgery (Trabeculectomy), and glaucoma tube implantation. Laser trabeculoplasty may be an option in some cases. These are offered based on each individual case basis.

iStent may be able to provide adequate control of eye pressure with less potential risks than the other surgical options. Your doctor will be able to discuss this further.

### **What happens before your operation?**

You should continue using any eye drops and tablets for your glaucoma as prescribed until your operation, unless directed otherwise by your ophthalmologist. If you take any blood-thinning medicines (such as warfarin, clopidogrel, dipyridamole, dabigatran, apixaban, rivoraxaban or aspirin) then please discuss this with the doctor or nurse some time before your operation.

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

Please bring an up-to-date list of your medications and a brief summary of your medical history with you to this appointment; if you are unsure of anything please check with your GP. During this visit your general health and suitability for anaesthetic will be assessed. Any investigations such as blood tests will also be carried out as appropriate.

### **What happens during the operation?**

The operation is usually performed with a local anaesthetic, which means that you will be awake, but your eye is numb so you will not feel anything. Sometimes patients want a general anaesthetic or it may be that local

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anaesthetic is not suitable for them, in which case general anaesthetic may be considered.

The procedure itself only takes about 10 minutes in addition to the cataract surgery. It is often performed at the end of cataract surgery but can also be done separately. The stents are implanted through a tiny incision made in the eye and is inserted into the eye's natural drainage channel with an injector.

### After the operation

After the operation, your eye will be covered by a protective plastic shield. An appointment will be arranged to review you on the following day. Your eye pressure is expected to drop after surgery but you will not feel any different.

After the operation you will be **given additional eye drops**. You will be advised about them at the end of the operation. Unless advised otherwise you will need to restart these on the evening of the day of surgery itself.

Any drops you use in your other eye **must** also be continued as normal.

Each time you attend the outpatient clinic any changes to your eye drops will be discussed with you. If you are running out of the drops you will need to get a repeat prescription from your GP.

### Going home

The iStent is performed as a day case procedure which means that you will go home on the same day.

- It is very important that you do not bump, rub or press on your eye after surgery.
- You should also avoid swimming for at least four weeks until your wound has healed.
- The length of time you will need off work depends upon the nature of your job. Most people need two weeks off after surgery. If your job involves heavy manual work or you work in a particularly dusty or dirty environment you may need longer; discuss this with your doctor or nurse.

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A self-certifying sick note is required for the first seven days of absence and is available from your employer or GP, not from the hospital. After this a medical sick note is required; this is available from your GP or hospital doctor.

There are no long-term restrictions after the iStent surgery, so once your wound has healed and you feel able, you may carry on your activities as normal.

### **Will I still need to use my glaucoma eye drops?**

Each patient is different and the exact eye pressure result varies. In majority of cases the iStent is being used to complement the pressure lowering effect of your eye drops and you will need to continue using these. The change in glaucoma drops if any will depend on the pre-treatment pressure, number of drops used before surgery and the response of your eye to the surgery. Some patients may stop or have a reduction in the amount of glaucoma drops they use.

### **Follow up**

You will be reviewed in the eye clinic one day after and again one week after your operation and then again one month later. In individual cases it may be necessary to see you more often. It is very important that you **attend all** your clinic appointments and use your eye drops as prescribed.

### **Contact us urgently if:**

After the treatment you suddenly develop any of the following:

- Pain and / or redness in the eye;
- Swelling around the eye;
- Significant discharge from the eye;
- Decreased vision;
- Loss of vision.

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### Emergency Contact information

For emergency/ very urgent concerns please contact 024 7696 4800 or the hospital switchboard on 024 7696 4000

Open Monday to Thursday 8.30am to 4.30pm;

Friday 8.30am to 4.00pm; Saturday 8.30am to 12.00pm

Outside these opening times please attend the General Accident and Emergency Department at University Hospital Coventry which offers a 24hr service.

### Further Information

Any queries about information in this leaflet please contact:

**Mr Atul Bansal** (Consultant with special interest in Glaucoma and Cataract surgery) through glaucoma secretaries: Michelle Donnelly / Jayne Owen: Tel: 02476 966502

### Sources used for the information in this leaflet

National Institute for Health and Clinical Excellence, IP396: 'Trabecular stent bypass microsurgery for open angle glaucoma', May 2011

The Trust has access to interpreting and translation services. If you need this information in another language or format please contact 024 7696 6606 and we will do our best to meet your needs.

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