NHS
National Institute for Health and Clinical Excellence

Understanding NICE guidance

Information for people who use NHS services

Treating branch retinal vein occlusion by cutting the sheath to separate the artery and vein

NICE 'interventional procedures guidance' advises the NHS on when and how new procedures can be used in clinical practice.

This leaflet is about when and how cutting the sheath to separate the artery and vein can be used in the NHS to treat people with branch retinal vein occlusion (or BRVO for short). It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

Interventional procedures guidance makes recommendations on the safety of a procedure and how well it works. An interventional procedure is a test, treatment or surgery that involves a cut or puncture of the skin, or an endoscope to look inside the body, or energy sources such as X-rays, heat or ultrasound. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering how well the procedure works and whether it represents value for money for the NHS.

This leaflet is written to help people who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe BRVO or the procedure in detail – a member of your healthcare team should also give you full information and advice about these.

Information about NICE interventional procedure guidance 334
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What has NICE said?

Currently there is not enough evidence to be certain about how well this procedure works or how safe it is.

For this reason, NICE has said that this procedure should only be carried out as part of a research study (also called a clinical trial). The research should look at which patients are most suitable for the procedure, the timing of treatment in relation to the development of symptoms and what other types of treatment are used.

NICE may look at this procedure again if more information becomes available.

Treating branch retinal vein occlusion by cutting the sheath to separate the artery and vein

This procedure may not be the only possible treatment for branch retinal vein occlusion. Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.

The medical name for this procedure is 'arteriovenous crossing sheathotomy for branch retinal vein occlusion'.

The procedure is not described in detail here – please talk to your ophthalmologist for a full description.

Branch retinal vein occlusion is the medical term for a blockage in one of the veins at the back of the eye that drains blood away from the retina (the light-sensitive area of the eye). Usually, this happens at a place where the artery and vein cross over, where they share the same outer membrane covering (or sheath). People who have BRVO may notice that they have problems seeing properly.

Usually the condition is simply observed by an ophthalmologist and treatment will depend on factors such as how it develops and how severely the sight is affected. Current treatments include laser treatment, injection of medicines into the eye or surgery.

The procedure can be carried out with the patient under a general or local anaesthetic. Surgery to remove fluid from inside the eye (also known as vitrectomy) is usually done before the artery and vein are separated. The artery and vein are separated from each other using a small blade to cut the sheath (known as sheathotomy), so the artery can be lifted off the vein. The aim of the procedure is to improve blood flow in the eye.

Summary of possible benefits and risks

Some of the benefits and risks seen in the studies considered by NICE are briefly described below. NICE looked at 7 studies on this procedure.

How well does the procedure work?

In a study of 40 patients, eyesight improved more in those who were treated with an injection into the eye than in the patients who had the sheathotomy procedure, when assessed 1 month later. However, there was no difference in improvement between the groups at later assessments carried out over

What does this mean for me?

Your doctor can only offer you this procedure as part of a research study (also called a clinical trial).

NICE has recommended that some details should be collected about every patient who has this procedure in the UK. Your doctor may ask you if details of your procedure can be used to help collect more information about this procedure. Your doctor will give you more information about this.

You may want to ask the questions below

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the operation?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

6 months. A study of 36 patients who had either sheathotomy or vitrectomy reported that both groups had improved eyesight after the procedures, but there was no difference in the amount of improvement between them after 31 months. In a study of 68 patients, there was no significant change in eyesight both in patients who had sheathotomy and those who chose not to have surgery, after 6 weeks. Another study of 36 patients reported there was no significant difference in the average change in eyesight between patients who had sheathotomy and those who had vitrectomy, 1 year later. A study of 40 patients reported that eyesight improved more in patients who had sheathotomy than in those who had no surgery (some of whom had laser treatment). Patients were assessed after 14 months and 19 months respectively.

You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.

One study used sheathotomy to treat 60 patients who had BRVO and macular oedema (swelling of the most important area of the retina for vision). By 12 to 16 months later, the macular oedema had returned in 2 patients.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that the main success outcomes are improved blood flow in the eye, resolution of macular oedema and/or reduced macular thickness, and improvement in best corrected visual acuity (BCVA) score.

Risks and possible problems

In a study of 36 patients, 1 patient out of the 18 who had the sheathotomy procedure had bleeding during the procedure because of damage to the blood vessels leading to the retina. In another study 2 out of 20 patients had bleeding into the fluid in the eyeball which resolved on its own.

A small number of patients developed cataracts (clouding of the lens in the eye). The numbers of patients affected and the average increase in the severity of the cataracts were similar in those who had sheathotomy and those who had vitrectomy.

A study of patients who had either sheathotomy or no surgery reported that in some patients, vision deteriorated after 6 weeks (1 out of 43 patients and 9 out of 25 patients respectively).

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that problems can include bleeding or the retina becoming detached. In theory, other problems could include the BRVO returning, inflammation of the eye or glaucoma. In addition, sheathotomy used in combination with vitrectomy may cause added risks without added benefit.

More information about BRVO

Your local patient advice and liaison service (usually known as PALS) may also be able to give you further information and support. For details of all NICE guidance on eye problems, visit our website at www.nice.org.uk

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider how well an interventional procedure works and how safe it is, and ask the opinions of expert advisers. Interventional procedures guidance applies to the whole of the NHS in England, Wales, Scotland and Northern Ireland. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This leaflet is about 'arteriovenous crossing sheathotomy for branch retinal vein occlusion'. This leaflet and the full guidance aimed at healthcare professionals are available at www.nice.org.uk/IPG334

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N2119 for the standard print version and N2126 for the large print version). The NICE website has a screen reader service called Browsealoud, which allows you to listen to our guidance. Click on the Browsealoud logo on the NICE website to use this service.

We encourage voluntary organisations, NHS organisations and clinicians to use text from this booklet in their own information about this procedure.

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