Understanding NICE guidance

Information for people who use NHS services

Treating asymptomatic narrowed carotid arteries in the neck using stents

This leaflet is about when and how stents can be used in the NHS to treat people with narrowed carotid arteries who have had no symptoms (asymptomatic). 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 the risks of narrowed carotid arteries or the procedure in detail – a member of your healthcare team should also give you full information and advice about these. The leaflet includes some questions you may want to ask your doctor to help you reach a decision. Some sources of further information and support are on the back page.
What has NICE said?

There is not much evidence about how well this procedure works. The evidence on its safety shows that it carries some risks, in particular of stroke. If a doctor wants to use this procedure, they should make sure that extra steps are taken to explain the uncertainty about how well it works and the risk of stroke and other complications. They should explain why you are being offered this procedure in your particular case, rather than endarterectomy (open surgery to widen the artery) or medical treatment. This should happen before you agree (or don’t agree) to the procedure. You should be given this leaflet and other written information as part of the discussion. There should be special arrangements for monitoring what happens to you after the procedure.

A healthcare team including an interventional radiologist or a neuroradiologist, a vascular surgeon and a doctor with a specialist interest in stroke should decide which patients should have this procedure. If the procedure is being considered because you are going to have heart surgery, then your heart specialist should liaise with that team. The procedure should only be performed by doctors with specialist training and expertise in this technique, and who regularly perform complicated endovascular surgery.

NICE has encouraged doctors to consider asking patients to take part in a research study (clinical trial) looking at using stents for narrowed carotid arteries or to send information about everyone who has the procedure and what happens to them afterwards to a database at the Endovascular Carotid Register so that the safety of the procedure and/or how well it works can be checked over time. NICE may look at this procedure again if more information becomes available.

Other comments from NICE

The Committee noted that the benefits of stenting before heart surgery were uncertain.

Treating asymptomatic narrowed carotid arteries in the neck using stents

The medical name for this procedure is ‘carotid artery stent placement for asymptomatic extracranial carotid stenosis’. The procedure is not described in detail here – please talk to your vascular specialist for a full description.

The main arteries in the neck (carotid arteries) can become narrowed by fatty deposits. Doctors may discover this condition (carotid stenosis) while taking medical images of the patient, for example before heart surgery. It can cause ‘mini strokes’ (also known as transient ischaemic attacks [TIAIs]), because fragments from the narrowed area pass to arteries in the brain, or loss of vision if fragments pass to the eye. Carotid stenosis increases the risk of stroke. This risk is small if carotid stenosis is asymptomatic. It is higher in patients having heart operations that require heart–lung bypass.

Medical control of heart and blood vessel disease is very important for people with narrowed carotid arteries. A few patients who have no history of symptoms may be advised to have carotid endarterectomy.
You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.

What does this mean for me?

If your doctor has offered you stents for asymptomatic narrowed arteries, he or she should tell you that NICE has decided that the benefits and risks are uncertain. This does not mean that the procedure should not be done, but that your doctor should fully explain what is involved in having the procedure and discuss the possible benefits and risks with you. You should only be asked if you want to agree to this procedure after this discussion has taken place. You should be given written information, including this leaflet, and have the opportunity to discuss it with your doctor before making your decision.

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 procedure?
- What happens if something goes wrong?
- What may happen if I don’t have the procedure?

In this stenting procedure a metal mesh (stent) is used to widen the carotid artery. With the patient under local anaesthetic a fine wire is inserted via an artery in the groin, up to the carotid artery in the neck. The wire usually has a device on it to stop fragments passing up the carotid artery to the brain during the procedure. The stent is inserted into the carotid artery with the help of the wire. Carotid stenting is a less invasive procedure than endarterectomy that aims to avoid wound complications.

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 12 studies on this procedure.

How well does the procedure work?

Two large studies reported there was no difference in the rate of stroke or death in patients when comparing stenting (5% [or 5 out of 100] and 2%) with endarterectomy (3% and 2%). A UK national register of 291 asymptomatic patients treated by stenting reported that the 5-year event rates were: stroke 4%, stroke or mini stroke 8%, death or disabling stroke 19% and death 18%.

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 key success factors were the blood vessel staying open in the long term, and freedom from stroke or death.
Risks and possible problems
The UK national register of asymptomatic patients treated by stenting reported that out of 181 patients 1 died, 1 had disabling stroke, 2 had non-disabling stroke, 1 had a heart attack and 4 had a mini stroke within 30 days.
The study of 140 patients reported that there was no difference in the rate of stroke or death when comparing the stenting group (4%, 3 out of 73) with the endarterectomy group (3%, 2 out of 63) at 30 days.
The study of 85 patients reported that there were no mini strokes or strokes during the time the patient was in hospital in the stenting group or the endarterectomy group. In the study of 2252 patients, there were significantly fewer heart attacks during the hospital stay after stenting (14 out of 1262 patients) compared with endarterectomy (28 out of 1240 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 problems could include damage to the femoral artery and kidney failure. In theory the blood vessel could become blocked again, or problems could be caused by the ‘dye’ used to show up the blood vessels.

More information about carotid stenosis
NHS Choices (www.nhs.uk) may be a good place to find out more. 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 carotid stenosis, 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 ‘carotid artery stent placement for asymptotic extracranial carotid stenosis’. This leaflet and the full guidance aimed at healthcare professionals are available at www.nice.org.uk/guidance/IPG388

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N2507). 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.