

Supraorbital minicraniotomy for intracranial aneurysm

**Understanding NICE guidance –
information for people considering the
procedure, and for the public**

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About this information

This information describes the guidance that the National Institute for Clinical Excellence (NICE) has issued to the NHS on a procedure called supraorbital minicraniotomy. It is not a complete description of what is involved in the procedure – the patient's healthcare team should describe it in detail.

NICE has looked at whether supraorbital minicraniotomy is safe enough and works well enough for it to be used routinely for intracranial aneurysms.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of supraorbital minicraniotomy and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the patients and carers who will be affected by this guidance.

This guidance is part of NICE's work on 'interventional procedures' (see 'Further information' on page 10).

About supraorbital minicraniotomy for intracranial aneurysm

An aneurysm is the medical name for what happens when a section of a blood vessel starts to bulge out like a balloon. An intracranial aneurysm is one that's inside the skull. Occasionally, aneurysms burst and bleed into the surrounding area.

The standard operation for most intracranial aneurysms involves making a small opening in the side of the skull (just in front of the ear) so that the surgeon can get to the blood vessel with the aneurysm. A clip is put across the 'neck' of the bulging section of the blood vessel to close off the bulging bit. This means that blood can still flow through the blood vessel but it won't build up in the aneurysm. Sometimes, if it's not possible to clip the aneurysm, the surgeon may wrap it in man-made material to try to stop it from bursting.

In the newer procedure that NICE has looked at called supraorbital minicraniotomy, a smaller opening is made in the skull. This is done above the eyebrow, which means that the surgeon can work on the blood vessel straight on rather than from the side. The aneurysm is then either clipped or wrapped, as described for the standard operation.

How well it works

What the studies said

All the aneurysms were successfully clipped or wrapped in two studies that NICE looked at. But neither of the reports of these studies said how many months after the procedure patients were checked on, so it wasn't possible to see how long the effects of the procedure lasted.

In another study, 33 out of 37 patients seemed to recover well from the procedure. But it wasn't clear how many patients were checked on for the whole study period (which was 17 months). This study also reported that the scarring was minimal after the procedure.

What the experts said

One of the experts said that the smaller opening in the newer procedure wasn't likely to make much difference to how successful the procedure was likely to be.

Risks and possible problems

What the studies said

NICE found three studies that followed what happened in patients who had the newer procedure. One involved 139 patients, one involved 102 patients and the third one involved 37 patients. In each of these studies, the aneurysm burst during the procedure in up to 3% of patients (3% is the same as 3 out of 100 people).

Other results from the study involving 102 patients were:

- four people died within 8 days of having the procedure
- two people had an infection in their central nervous system (which is the brain, spinal cord and the nerves running from them)
- seven people had a problem with a build up of fluid in their central nervous system and needed more surgery for this.

In the study of 37 patients, a nerve above the eye was damaged during the procedure in four patients. And one person got an infection in the place where the skin was opened.

What the experts said

The experts thought that there were no major safety problems with the newer procedure.

What has NICE decided?

NICE has considered the evidence on supraorbital minicraniotomy. It has recommended that when doctors use it for people with intracranial aneurysm, they should be sure that:

- the patient understands what is involved and agrees (consents) to the treatment, and
- the results of the procedure are monitored.

Other comments from NICE

NICE has pointed out that, although it seems there might be more chance of the aneurysm bursting during the newer procedure, the surgeon is usually able to deal with this when it happens.

NICE has also commented that surgeons are using other types of procedure for aneurysms more often these days. These procedures are called endoluminal procedures and they involve using special surgical equipment that can fit inside the blood vessel.

What the decision means for you

Your doctor may have offered you supraorbital minicraniotomy. NICE has considered this procedure because it is relatively new. NICE has decided that the procedure is safe enough and works well enough for use in the NHS. Nonetheless, you should understand the benefits and risks of supraorbital minicraniotomy before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these may be described above.

Further information

You have the right to be fully informed and to share in decision-making about the treatment you receive. You may want to discuss this guidance with the doctors and nurses looking after you.

You can visit the NICE website (www.nice.org.uk) for further information about the National Institute for Clinical Excellence and the Interventional Procedures Programme. A copy of the full guidance on supraorbital minicraniotomy for intracranial aneurysm is on the NICE website (www.nice.org.uk/IPG084guidance), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0674. The evidence that NICE considered in developing this guidance is also available from the NICE website.

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