

Treating epidural adhesions in the spinal canal using keyhole surgery

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

This leaflet is about when and how keyhole surgery can be used in the NHS to treat people with low back and leg pain caused by epidural adhesions (a type of scar tissue in the spine). It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

This HealthTech 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 low back or leg pain 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 page 7.

What has NICE said?

There is not much good evidence about how well this procedure works, although there is some evidence that it works in the short term. However, there are safety concerns. 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, as well as the potential risks of the procedure. In particular, they should explain the risks of nerve damage, puncture to the lining of the spinal cord (dural puncture) and vision problems. This should happen before the patient agrees (or doesn't agree) to the procedure. The patient should be given this leaflet and other written information as part of the discussion. There should also be special arrangements for monitoring what happens to the patient after the procedure. NICE has encouraged further research about the procedure.

This procedure may not be the only possible treatment for back or leg pain caused by epidural adhesions. Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.

Treating epidural adhesions using keyhole surgery

The medical name for this procedure is 'therapeutic endoscopic division of epidural adhesions'. It is not described in detail here – please talk to your doctor for a full description.

Long-term low back or leg pain can sometimes be caused by a type of scar tissue, called 'epidural adhesions', around the roots of the spinal nerves. This procedure involves separating epidural adhesions from the nerves or spinal cord through a small cut near the lower spine ('keyhole surgery') using special instruments with the aim of reducing pain.

The patient is given a local anaesthetic and sedation. A guidewire and endoscope (a telescope for looking inside the body) are inserted into the 'epidural space' within the spinal canal. Fluoroscopy (a special type



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of X-ray) is used to help guide the instruments. The epidural space is expanded by injecting a sterile liquid (called saline solution). The surgeon then uses the endoscope to examine the epidural space, asking the patient to indicate when pain is felt so that affected nerve roots can be identified. Special instruments that can be passed down the endoscope are then used to separate the epidural adhesions from the nerves or spinal cord.



What does this mean for me?

If your doctor has offered you keyhole surgery for low back or leg pain caused by epidural adhesions, he or she should tell you that NICE has decided that the benefits are uncertain and there are some serious risks. 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 operation?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

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

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 10 studies on this procedure.

How well does the procedure work?

A study of 83 patients that compared this keyhole treatment with a similar keyhole procedure used to diagnose epidural adhesions reported more improvement in pain for patients who had keyhole treatment compared to those who had keyhole diagnosis at 12 month assessment. In the same study, patients who had keyhole treatment had more improvement in their ability to function normally (measured by a questionnaire) after 12 months than those who had keyhole diagnosis.

In a study of 183 patients who had keyhole treatment, those who had already undergone surgery to the nerves (with nerve decompression) had less leg and low back pain after 3 months than those who had not. In a study of 38 patients, there was no significant improvement in pain or patient satisfaction when progress was checked 2 and 12 months after the procedure.

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 factors are to relieve pain, improve scores for the ability to function normally, improve quality of life and psychological condition, allow patients to return to work and avoid spinal cord stimulation treatment for pain.

Risks and possible problems

Puncture to the lining of the spinal cord (dural puncture) was reported in 6 out of a total of 183 patients in 3 studies. One of these patients also had further serious problems caused by leakage of a liquid dye (called contrast material) used in the procedure. However, the patient made a full recovery. A study of 120 patients reported damage to the spinal coverings causing neurological problems in 11 out of 60 patients who had keyhole endoscopic treatment compared with 6 out of 60 patients who had non-endoscopic treatment. These complications can sometimes cause serious nerve damage and paralysis. A study of 83 patients reported nerve damage in 1 patient who recovered with steroid treatment.

Vision problems were described in 12 patients in a study on the safety of the keyhole procedure. A further study reported blurred vision in 1 patient immediately after the keyhole procedure that got better within 2 months. Short-term changes in sensation, for example, tingling or numbness, were reported in 2 patients in a study of 38 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 in theory, possible problems include tearing of the nerve roots from the spinal cord, nerve damage or paralysis, inflammation of the membranes around the spinal cord (meningitis), or specifically the 'arachnoid' membrane (arachnoiditis), paralysis, epidural infection or abscess and increased pressure in the epidural space related to saline injection. Further possible problems could include leg numbness and blindness.

More information about low back and leg pain

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 low back pain, 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. This 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 'therapeutic endoscopic division of epidural adhesions'. This leaflet and the full guidance aimed at healthcare professionals are available at www.nice.org.uk/guidance/HTG210

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N2101). 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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