

Keyhole surgery to remove parathyroid tumours in the chest

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 parathyroid tumours in the chest. 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.

NICE has produced this guidance because the procedure is quite new. This means that there is not a lot of information yet about how well it works, how safe it is and which patients will benefit most from it.

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 parathyroid tumours 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 6.

What has NICE said?

There is only a small amount of evidence to show that keyhole surgery for parathyroid tumours in the chest works. In addition, there is not very much evidence on how safe it is. For these reasons, NICE has said that if a doctor wants to use keyhole surgery for parathyroid tumours in the chest, he or she should make sure that extra steps are taken to explain the uncertainty and the likely benefits and potential risks of the procedure. 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 when a person has this procedure. NICE is asking doctors to collect information about every patient who has the operation and what happens to them afterwards.

A team of experts in a special hospital unit, including a thoracic surgeon experienced in keyhole surgery, should be involved in deciding whether the procedure is suitable for a particular patient. Before the procedure is carried out, the location of the tumour should be confirmed using a scan.

Other comments from NICE

If a doctor suspects that a parathyroid tumour in the chest is cancerous it may affect the technique used.

This procedure may not be the only possible treatment for parathyroid tumours in the chest. Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.

Keyhole surgery for parathyroid tumours in the chest

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

Parathyroid glands produce a hormone called parathyroid hormone, which is used to control and regulate calcium levels in the body. Most people have four parathyroid glands in their necks, but some people may have one or more of these glands in their chests. Tumours can sometimes develop in parathyroid glands. They are not usually cancerous but may cause problems by producing too much parathyroid hormone ('hyperparathyroidism'). This increases the level of calcium in the blood. Symptoms of hyperparathyroidism include tiredness, depression, confusion, constipation, stomach pains, thirst and a need to pass urine more frequently. Some people have bone pain or fractures and some develop kidney stones.

Parathyroid tumours found in the chest are usually removed by major surgery which involves opening the chest. However, a type of keyhole surgery called thoracoscopy can also be used to remove these tumours.

Before thoracoscopy is performed, a scan is carried out to find exactly where the tumour is. The patient is given a general anaesthetic, and a number of small cuts are made in the chest. A flexible camera is then passed into the chest, which allows the surgeon to see inside, and instruments are inserted to remove the gland that has the tumour.

What does this mean for me?

If your doctor has offered you keyhole surgery for a parathyroid tumour in the chest, 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.

NICE has also decided that more information is needed about keyhole surgery for parathyroid tumours in the chest, so it has recommended that some details should be collected about every patient who has this procedure in the UK. These details will be held confidentially and will not include patients' names. The information will be used only to see how safe the procedure is and how well it works. If you decide to have keyhole surgery for a parathyroid tumour in the chest, you will be asked to agree to your details being entered into an electronic database for this purpose. A doctor looking after you will fully explain the purpose of collecting the data and what details will be held (all information will be held according to the Data Protection Act). You will be asked to sign a consent form. If you do not agree to the details being entered into an electronic database, you can still have the procedure.

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 eight studies on this procedure.

How well does the procedure work?

In eight studies, involving a total of 23 patients, removal of parathyroid glands in the chest by keyhole surgery was carried out successfully in all patients, and none had to undergo further open chest surgery. The levels of calcium in the blood of these patients were found to be normal in the days and weeks after surgery. A study of one patient reported that calcium levels were still normal after 3 years.

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 to help to decide how well keyhole surgery works, it can be assessed by changes in the levels of calcium and parathyroid hormone in the blood after the operation, by looking at the removed tissue under a microscope (histology), and by whether or not patients have to undergo further open chest surgery following keyhole surgery.

Risks and possible problems

In one study, a patient developed a small collection of air in the chest (called a pneumothorax) after surgery, but this had gone after 2 weeks. In a study of three patients, one experienced hoarseness after the procedure, which may have been caused by damage to one of the nerves to the voicebox.

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 possible complications are bleeding, infection, chest pain, changes to the rhythm of the heartbeat and damage to the inside of the chest, which may include damage to important blood vessels (veins and arteries).

More information about parathyroid tumours

[NHS Direct online](#) may be a good starting point for finding out more.

Your local Patient Advice and Liaison Service (PALS) may also be able to give you further advice and support.

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 [NICE's about our guidance page](#).

This leaflet is about 'Thoracoscopic excision of mediastinal parathyroid tumours'. This leaflet and the full guidance aimed at healthcare professionals are also available at www.nice.org.uk/guidance/HTG159

You can order printed copies of this leaflet from the NHS Response Line (phone 0870 1555 455 and quote reference N1439).

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Information about NICE HealthTech guidance 159