

Keyhole removal of the prostate gland to treat benign prostatic obstruction

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 removal of the prostate gland (prostatectomy) using keyhole surgery can be used in the NHS to treat people with benign prostatic obstruction. 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 men 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 benign prostatic obstruction 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.

What has NICE said?

There is not much good evidence about how well this procedure works or how safe it is. 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 uncertainty surrounding potential risks of the procedure. They should also make sure that men are aware of alternative treatment options. This should happen before the man agrees (or doesn't agree) to the procedure. The man 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 man after the procedure.

The procedure should only be done by surgeons with special training and experience in removing the prostate gland using keyhole surgery.

Men should only be offered this procedure if they are not suitable for an operation called transurethral resection for benign prostatic obstruction (where parts of the prostate gland are removed through the urethra), and would otherwise be considered for open surgery to remove the prostate gland for benign prostatic obstruction.

NICE is asking doctors to send information about everyone who has the procedure and what happens to them afterwards to a central store of information at the British Association of Urological Surgeons Cancer Registry & Sections Audit 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.

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

Treating benign prostatic obstruction by removing the prostate gland using keyhole surgery

The medical name for this procedure is 'laparoscopic prostatectomy for benign prostatic obstruction'.

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

The prostate gland surrounds the outlet of a man's bladder. Benign prostatic obstruction occurs when the prostate gland gets bigger, squeezing the tube (the urethra) that carries urine from the bladder to the tip of the penis. This can cause problems with passing urine.

This procedure is done with the patient under a general anaesthetic. The prostate gland is removed using special instruments that are inserted through small cuts in the abdomen, using a fine telescope to see inside the body. A catheter is put into the bladder via the urethra during the operation and normally left in for a few days. The surgeon may also use a computer (robot) during the procedure.

What does this mean for me?

If your doctor has offered you this procedure, 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 the alternative treatments, 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 this procedure. 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?

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 here. NICE looked at seven studies on this procedure.

How well does the procedure work?

In a study in which 20 men had keyhole surgery and 20 men had open surgery, urinary symptoms were scored on a scale from 0 to 35 (35 was for the worst symptoms). The average score in the keyhole surgery group improved from 21 before the procedure to 10 after it, and the average score in the open surgery group improved from 18 before the procedure to 7 after it. Four other studies (184 men) also reported an improvement in symptoms after keyhole surgery, with the decrease in average scores ranging from 14 points to 23 points.

In the study of 40 men, urine flow improved by a similar amount (18 millilitres [ml] of urine per second) after both types of procedure.

There was no significant difference in prostate symptom scores or urine flow between the keyhole and open procedures.

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. They said that the main success factors are reduced blood loss, a shorter stay in hospital, better urine flow and relief of symptoms.

Risks and possible problems

The two studies of 60 and 40 men reported that men who had the keyhole procedure lost less blood (almost 300 ml less) than those who had open surgery.

Three studies reported that a total of 7 out of 54 men needed blood transfusions. In a study of 17 men, one had bleeding. In the study of 40 men, 1 man had bleeding which needed another operation.

Two out of 100 men and 3 out of 60 men developed urinary infections and 1 man had septicaemia (an infection in the blood). In another study, 1 out of 30 men had an infection at the site where a cut was made in the abdomen. One man in each of three studies (60, 18 and 17 men) had a retained blood clot in the bladder. Two studies involving 38 men reported that 2 had narrowing of the urethra, and in another study 1 man out of 30 had narrowing of the bladder neck. Six months after surgery, another study showed that 41 out of 60 men reported retrograde ejaculation (where the semen goes backwards into the bladder).

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 problems include bleeding, rectal injury, narrowing of the bladder neck, urinary incontinence, urine leakage from the bladder and damage to the openings in the ureter (the tube that connects the kidney to the bladder).

More information about benign prostatic obstruction

Your local patient advice and liaison service (usually known as PALS) may also be able to give you further information 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 www.nice.org.uk/aboutguidance

This leaflet is about 'laparoscopic prostatectomy for benign prostatic obstruction'.

This leaflet and the full guidance aimed at healthcare professionals are available at www.nice.org.uk/HTG176

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1728).

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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