Treating benign prostate enlargement by restricting blood supply to the prostate

This document is about when and how restricting the blood supply to the prostate can be used in the NHS to treat men with benign prostate enlargement. It explains guidance (advice) from NICE (the National Institute for Health and Care 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.

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 document is written to help men who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe benign prostatic hyperplasia or the procedure in detail – a member of your healthcare team should give you full information and advice about these. The document includes some questions you may want to ask your specialist to help you reach a decision. Some sources of further information and support are on page 7.
What has NICE said?
Currently there is not enough evidence to be certain about how well this procedure works or how safe it is. For this reason, NICE has said that this procedure should only be carried out as part of a research study. The research should look at sexual and urinary function, symptoms and quality of life, and if possible, the need for further treatment.

A team of healthcare professionals should decide which men should be offered this procedure. The team should include a urologist and an interventional radiologist.

NICE may look at this procedure again if more information becomes available.

Other comments from NICE
The procedure’s benefits may include reduced health problems, and avoiding having a general anaesthetic.

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The medical name for this procedure is ‘prostate artery embolisation for benign prostatic hyperplasia’.

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 hyperplasia is when the prostate gland gets bigger, squeezing the tube (the urethra) that carries urine from the bladder through the penis. This can cause problems with passing urine. The symptoms of
benign prostatic hyperplasia can sometimes be managed by lifestyle changes or medication. If these do not work sufficiently, different surgical procedures including TURP (transurethral resection of the prostate), laser surgery, or complete removal of the prostate gland are sometimes options. These can have side effects including bleeding, infection, incontinence and sexual dysfunction.

Prostate artery embolisation is usually done under a local anaesthetic and sedation. Tiny particles of synthetic material are injected into the blood vessels that supply the prostate, through a tube that is inserted into an artery in the thigh, using X-ray imaging. This restricts the blood supply to the prostate, with the aim of shrinking it.
What does this mean for me?
Your specialist can only offer you this procedure as part of a research study.

NICE has recommended that some details should be collected about every man who has this procedure in the UK. Your specialist may ask you if details of your procedure can be used in this way. Your specialist 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 procedure?
- What happens if something goes wrong?
- What may happen if I don’t have the procedure?
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 3 studies on this procedure.

How well does the procedure work?

In 2 studies, urinary symptoms were scored on a scale from 0 to 35 (35 was for the worst symptoms). The average score in a study of 47 men improved from 24.2 before the procedure to 4.8 afterwards (varying between 7 days and 2 years after the procedure). The average score in a study of 15 men improved from 21 before the procedure to 14.5, 8 months after the procedure.

The average prostate size shrank by between 27% (in the study of 15 men) and 42% (in the study of 47 men) after the procedure.

In the study of 47 men, average urine flow increased from 10 to 19 millilitres (ml) per second after the procedure. In the study of 15 men, it increased from 7 to 11 ml per second after the procedure.

These 2 studies also looked at how much urine was left in the bladder after urination, on average, before and after the procedure. In the study of 47 men, this decreased from 184 to 3 ml. In the study of 15 men, it decreased from 131 to 51 ml.

As well as looking at these studies, NICE also asked expert advisers for their views. They said that the main success factors are improvement in the urinary symptom score, satisfactory erectile function, improved urination, reduced prostate size, and stopping urine being retained in the bladder.

You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.
Risks and possible problems

In the study of 15 men, 1 patient had damage to the blood supply of part of the bladder wall, and had to have an operation to remove the damaged area. Two men in this study had urinary tract infections after the procedure, which were treated with antibiotics. Also in this study, 1 patient had urinary retention (being unable to empty the bladder) which was treated by inserting a catheter.

As well as looking at these studies, NICE also asked expert advisers for their views. They said that possible complications were temporary bleeding in the rectum, pain in the pubic area or anus, blood in the urine or semen, and swelling of the foreskin and head of the penis. In theory, other problems could include accidental tissue death (gangrene) in nearby organs (such as the bladder or rectum), erectile dysfunction, incontinence, bruising or blood-filled swelling caused by leakage from an artery, formation of an abnormal channel between the urinary tract and other areas (fistula), infection in the prostate, painful urination, and worsening urinary symptoms. There is also a possible but low risk of cancer if the procedure is particularly long or difficult, meaning the patient is exposed to X-rays for a long time.
More information about benign prostatic hyperplasia
NHS Choices (www.nhs.uk) may be a good place to find out more.

For details of all NICE guidance on lower urinary tract symptoms in men, 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 document is about ‘Prostate artery embolisation for benign prostatic hyperplasia’. This document and the full guidance aimed at healthcare professionals are available at guidance.nice.org.uk/IPG453

The NICE website has a screen reader service called Browsealoud, which allows you to listen to our guidance. Click on Accessibility at the bottom of the NICE homepage to use this service.

We encourage voluntary organisations, NHS organisations and clinicians to use text from this document in their own information about this procedure.