

# Laparoscopic pyeloplasty

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

March 2004



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## **Laparoscopic pyeloplasty**

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#### **To order copies**

Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0482.

A version in Welsh and English is also available, reference number N0483. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0483. The NICE interventional procedures guidance on which this information is based is available from the NICE website ([www.nice.org.uk](http://www.nice.org.uk)). Copies can also be obtained from the NHS Response Line, reference number N0481.

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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 laparoscopic pyeloplasty. 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 laparoscopic pyeloplasty is safe enough and works well enough for it to be used routinely for the treatment of pelvi-ureteric junction obstruction.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of laparoscopic pyeloplasty 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 laparoscopic pyeloplasty

The kidneys make urine, which passes down into the bladder through a tube called the ureter. If the connection between the kidney and the ureter is narrow or tight, the urine cannot drain away properly. It builds up in the kidney, making it bulge with extra fluid. The medical name for this is hydronephrosis, and the kidney can become damaged if it isn't treated. The medical term for the narrow connection is pelvi-ureteric junction obstruction (which is sometimes shortened to PUJ obstruction).

The standard operation for pelvi-ureteric junction obstruction is what's known as open pyeloplasty. An operation is done through an incision in the patient's lower back, front or side. Working through this opening, the surgeon refashions the narrowed connecting section and attaches the kidney and ureter so that the urine can flow more easily. Sometimes a fine plastic tube called a stent is inserted to keep the new connection open while it's healing. The stent is removed some time after the procedure. The surgeon uses a fine telescope passed into the bladder to view the stent and remove it.

A laparoscopic pyeloplasty uses keyhole surgery to do the same thing as the open pyeloplasty. The surgeon works through several small incisions, and operates with the help of a tiny camera put into the area of the pelvi-ureteric junction. A stent may be used in this procedure too.

## How well it works

### What the studies said

One of the studies NICE looked at compared the laparoscopic pyeloplasty with the open pyeloplasty. The laparoscopic pyeloplasty worked in 41 out of the 42 patients who had it, and the open pyeloplasty worked in 33 of the 35 patients who had it. 'Worked' here means that there was no obstruction when the patient was checked some time after the procedure.

Having pelvi-ureteric junction obstruction is painful, so another way of seeing how well the pyeloplasty works is to check the patient's pain level after the procedure. The results were similar in the group having the laparoscopic pyeloplasty and in those having the open procedure. In both groups, around 60% (6 out of 10) of patients had no pain afterwards. And around 30% (3 out of 10) had significantly less pain in their side after the procedure.

### What the experts said

The experts did not have any concerns about how well the procedure worked. But one expert pointed out that there hadn't been any studies where patients were randomly treated by either the laparoscopic or the open procedure. 'Randomised' studies like this are generally fairer comparisons as

they avoid situations where, for example, the patients with mild illness have one treatment while patients with more serious illness have another treatment. This expert also said that there wasn't much information on what happened to patients in the years after a laparoscopic pyeloplasty.

## **Risks and possible problems**

### **What the studies said**

There didn't seem to be many problems following laparoscopic pyeloplasty in the studies NICE looked at. A small number of patients had an obstruction again when the stent was removed. The stent moved in a few patients. And there were also some reports of kidney infection. These problems also affected patients who had the open pyeloplasty.

### **What the experts said**

One expert said that the problems that affected patients who'd had laparoscopic pyeloplasty were similar to those that could happen after an open pyeloplasty. These were infection, continued obstruction and bleeding. This expert also said that there could be problems with any type of keyhole surgery and with any type of long operation. There was also a chance that the laparoscopic pyeloplasty might have to be changed to an open operation part way through if there were problems, or if it looked as if an open procedure might work better.

## What has NICE decided?

NICE has considered the evidence on laparoscopic pyeloplasty. It has recommended that when doctors use it for people with pelvi-ureteric junction obstruction, 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.

NICE has also said that before doctors carry out laparoscopic pyeloplasty they need to have special training. NICE has asked the British Association of Urological Surgeons to produce standards for training.



## What the decision means for you

Your doctor may have offered you laparoscopic pyeloplasty. 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 laparoscopic pyeloplasty before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these benefits and risks 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](http://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 laparoscopic pyeloplasty is on the NICE website ([www.nice.org.uk/IPG046guidance](http://www.nice.org.uk/IPG046guidance)), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0481. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on hydronephrosis, a good starting point is NHS Direct (telephone 0845 4647) or NHS Direct Online ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)).

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