

Laparoscopic pyeloplasty

1 Guidance

- 1.1 Current evidence on the safety and efficacy of laparoscopic pyeloplasty appears adequate to support the use of this procedure, provided that the normal arrangements are in place for consent, audit and clinical governance.
- 1.2 Clinicians undertaking this procedure should have adequate training before performing the technique. The British Association of Urological Surgeons has agreed to produce standards for training.

2 The procedure

2.1 Indications

- 2.1.1 Pelviureteric junction (PUJ) obstruction occurs when the connection between the renal pelvis and the ureter is narrow or tight. When this occurs, urine passing from the kidney to the ureter can not drain easily and accumulates, causing enlargement of the renal pelvis (hydronephrosis).
- 2.1.2 The standard intervention for PUJ obstruction is open pyeloplasty. There are several different ways to approach the kidney to perform this operation. These include a flank incision, a subcostal incision, a transabdominal approach, or an incision in the back.

2.2 Outline of the procedure

- 2.2.1 The purpose of the procedure is to refashion the narrowed portion of the PUJ and attach it to the ureter in a way that allows easy drainage of urine through the ureter. This procedure has the same goal as open pyeloplasty but uses the laparoscopic approach. Laparoscopy involves making three or four small incisions through which the operation is carried out. A stent may be inserted after the operation, which is later removed.

2.3 Efficacy

- 2.3.1 No randomised studies were identified. One of the non-randomised, comparative studies looking at laparoscopic pyeloplasty versus open pyeloplasty found that 41 out of 42 patients (98%) who had the laparoscopic procedure had no obstruction at follow-up, compared with 33 out of 35 patients (94%) who had the open procedure. Of the 42 patients treated laparoscopically, 26 (62%) were pain-free and 12 (29%) had a significant reduction in flank pain postoperatively. Of the 35 patients who had the open procedure, 21 (60%) were pain-free and 11 (31%) had a significant reduction in flank pain postoperatively. For more details, refer to the Sources of evidence (see below).
- 2.3.2 The Specialist Advisors expressed no concerns about the efficacy of this procedure. One Advisor, however, commented on the lack of randomised comparisons of open versus laparoscopic procedures, and a scarcity of long-term follow-up data.

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This guidance is written in the following context:

This guidance represents the view of the Institute which was arrived at after careful consideration of the available evidence. Health professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of health professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

2.4 Safety

- 2.4.1 Few complications were reported in the studies identified. In some comparative studies obstruction after stent removal, stent migration and pyelonephritis were reported as occasional complications, however these complications were reported at similar levels in patients having open surgery. For more details, refer to the Sources of evidence (see below).
- 2.4.2 One Specialist Advisor considered the risks of this procedure to be similar to those expected with conventional open surgery: infection, failure to correct obstruction and bleeding. This Advisor also noted that the usual safety issues associated with laparoscopic surgery applied, as well as the effects of a prolonged procedure, and the need to convert to open surgery.

2.5 Other comments

- 2.5.1 It was noted that the procedure can be lengthy.

Andrew Dillon
Chief Executive
March 2004

Information for the Public

The Institute has produced information describing its guidance on this procedure for patients, carers and those with a wider interest in healthcare. It explains the nature of the procedure and the decision made, and has been written with patient consent in mind. This information is available, in English and Welsh, from www.nice.org.uk/IPG046publicinfo.

Sources of evidence

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document.

Interventional procedure overview of laparoscopic pyeloplasty, November 2002

Available from: www.nice.org.uk/IP050overview

Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0481. *Information for the Public* can be obtained by quoting reference number N0482 for the English version and N0483 for a version in English and Welsh.

The distribution list for this guidance is available on the NICE website at URL www.nice.org.uk/IPG046distributionlist

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