

Laparoscopic retroperitoneal lymph node dissection for testicular cancer

1 Guidance

- 1.1 Current evidence on the efficacy of laparoscopic retroperitoneal lymph node dissection is limited and there are safety concerns about the procedure. It should therefore not be used without special arrangements for consent and for audit or research.
- 1.2 Clinicians wishing to undertake laparoscopic retroperitoneal lymph node dissection for testicular cancer should take the following actions.
- Inform the clinical governance leads in their Trusts.
 - Ensure that patients understand the potential serious complications associated with this procedure and provide them with clear written information. In addition, use of the Institute's *Information for the public* is recommended (available from www.nice.org.uk/IPG158publicinfo).
 - Audit and review clinical outcomes of all patients having laparoscopic retroperitoneal lymph node dissection for testicular cancer.
- 1.3 This procedure is technically demanding and should only be performed in units with experience in open and laparoscopic techniques, and in the context of a multidisciplinary team.
- 1.4 Publication of safety and efficacy outcomes will be useful. The Institute may review the procedure upon publication of further evidence.

2 The procedure

2.1 Indications

- 2.1.1 Patients with testicular cancer who have had the cancerous testicle removed may require resection of lymph nodes, depending on the type and extent of disease as defined by imaging and blood markers.

- 2.1.2 The standard method for retroperitoneal lymph node dissection is an open procedure through an additional incision. A modification to the standard approach is nerve-sparing retroperitoneal lymph node dissection, in which the lumbar postganglionic nerves are identified and preserved in order to preserve antegrade ejaculation. A laparoscopic approach has the theoretical advantages of reduced morbidity and shorter recovery time.

2.2 Outline of the procedure

- 2.2.1 The lymph nodes and lymph tissue that drains the testicle are removed laparoscopically, through small incisions in the abdomen. The number of nodes removed can vary from fewer than ten to over 50, and the limits of excision are defined by a predetermined template.

2.3 Efficacy

- 2.3.1 No local cancer recurrence was reported in a case series of 20 patients followed up for 10 months. In another case series, contralateral retroperitoneal recurrence was reported in 2% (1/65) of patients with stage I cancer at 45 months, but no relapse was recorded among 47 patients with stage II disease at 35 months. In another case series, 97% (179/185) of patients were relapse-free at 54–58 months' follow-up.
- 2.3.2 In a comparative trial, the mean postoperative hospital stay was 4 days for patients who had had the laparoscopic procedure. Patients who had had open surgery stayed in hospital for mean 10.6 days.
- 2.3.3 In an historically controlled study, the mean operative times for the first 14 patients undergoing laparoscopic retroperitoneal lymph

Interventional Procedure Guidance 158

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. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Interventional procedures guidance is for healthcare professionals and people using the NHS in England, Wales and Scotland.

This guidance is endorsed by NHS QIS for implementation by NHSScotland.

node dissection were 9.3 hours for right-sided tumours and 5.8 hours for left-sided tumours. For the next 15 patients, the operating times were 5.9 and 4.0 hours, respectively, which were similar to the 4.3 and 4.1 hours taken for the open procedure (30 patients). In other case series, the mean operative times for the laparoscopic procedure were 3.7–6.0 hours; they varied according to operator experience and stage of the cancers.

- 2.3.4 The rate of conversion to open surgery in case series ranged from 3% (5/185) to 10% (2/20). For more details, refer to the Sources of evidence.
- 2.3.5 The Specialist Advisors noted that there is some controversy about whether the procedure should be used for diagnosis in early stage cancer.

2.4 Safety

- 2.4.1 In an historically controlled study, major bleeding occurred during the procedure in 3% (1/29) of patients, and during 13% (4/30) of open retroperitoneal lymph node dissections. In case series, intraoperative haemorrhage occurred in 5% (1/20) to 18% (9/49) of patients with stage I and stage II disease, respectively.
- 2.4.2 Retrograde ejaculation was reported in 0% (0/29 and 0/20) to 2% (3/185) of patients following laparoscopic retroperitoneal lymph node dissection. In the controlled study and case series, the incidence of lymphocoele was 4% (3/76) to 9% (16/185): in most cases this was minor and asymptomatic.
- 2.4.3 Other complications reported across the studies included: pressure sores in 14% (2/14) of patients; gonadal vessel injury in 10% (2/20); subcutaneous lymphoedema in 7% (1/15); chylous ascites in 5% (9/185) (no cases were reported following the introduction of a new dietary regimen); injury to the inferior mesenteric artery in 5% (1/20); renal artery or colon injury in 1% (2/185); and transient irritation of the genitofemoral nerve in 1% (1/76). For more details, refer to the Sources of evidence.

- 2.4.4 The Specialist Advisors noted that the theoretical adverse events included vascular injury, bowel perforation, incomplete resection, haemorrhage, and local or port-site recurrence. They also noted that there may be increased risks when dissecting large nodal masses that encircle the aorta or vena cava.

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Information for the public

NICE 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 from www.nice.org.uk/IPG158publicinfo

Sources of evidence

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document. 'Interventional procedure overview of laparoscopic retroperitoneal lymph node dissection for testicular cancer', May 2005.

Available from: www.nice.org.uk/ip284overview

Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0992. *Information for the public* can be obtained by quoting reference number N0993.

The distribution list for this guidance is available at www.nice.org.uk/IPG158distributionlist

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