NICE guidance

Endoscopic axillary lymph node retrieval for breast cancer

Interventional procedures guidance
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www.nice.org.uk/guidance/ipg147

1 Guidance

1.1 Current evidence on the safety and efficacy of endoscopic axillary lymph node retrieval for breast cancer does not appear adequate for this procedure to be used without special arrangements for consent and for audit or research.

1.2 Clinicians wishing to undertake endoscopic axillary lymph node retrieval should take the following actions.

- Inform the clinical governance leads in their Trusts.
- Ensure that patients understand the uncertainty about the procedure's safety and efficacy and provide them with clear written information. In addition, use of the Institute's information for the public is recommended.
- Audit and review clinical outcomes of all patients having endoscopic axillary lymph node retrieval for breast cancer.

1.3 This procedure should only be undertaken by surgeons skilled in endoscopic techniques.

2 The procedure

2.1 Indications

2.1.1 Axillary clearance has been used as part of surgery for breast cancer. Biopsy of lymph node tissue helps in the staging of breast cancer, providing prognostic information and identifying patients who will benefit from systemic therapy.

2.1.2 Traditionally, surgeons remove lymph nodes for staging through an incision in the axillary skin under direct vision. However, this procedure may have side effects, including wound infection and lymphoedema. There are two surgical alternatives that are standard practice. The first involves clearance to level one, two or three of the axilla, taking up to 20 lymph nodes, which provides very accurate diagnostic information. The second requires sampling of a minimum of four lymph nodes, which causes less morbidity but provides only qualitative rather than quantitative information about the status of the axillary basin of lymph nodes. A new procedure is sentinel node mapping, which requires specific training in the use of imaging. Endoscopic techniques, sometimes combined with liposuction, have been developed as a less invasive approach to removing lymph nodes for diagnosis.

2.2 Outline of the procedure

2.2.1 In endoscopic axillary lymph node retrieval, very small incisions are made in the axillary skin and nodes are removed using an endoscope and special instruments. The patient is placed in a supine position under general anaesthesia. Liposuction is used to remove excess axillary fat. An endoscope is inserted through the incision used for liposuction, and trocars are introduced through two additional small incisions. Fibrous tracts and small lymph and blood vessels are coagulated and cut, and lymph nodes are freed and removed. Following a saline rinse of the

surgical field, the incisions are sutured. Drains are not normally required.

2.3 Efficacy

2.3.1 Conversion to open surgery was reported in 8% (4/53) of operations in a historically controlled study. In a large case series, only 2% (2/100) of operations were converted to open surgery.

2.3.2 In one randomised controlled trial, the operative time for endoscopic axillary lymph node retrieval was found to be significantly longer than for open surgery (mean time 61 and 33 minutes, respectively).

2.3.3 One quasi-randomised study found good shoulder–arm mobility at 7 days postoperatively, with more than 90% mobility being achieved after either endoscopic axillary lymph node retrieval or open surgery. Only 18% (7/40) of patients who had endoscopic axillary lymph node retrieval reported pain on the first postoperative day, compared with 33% (13/40) of patients who had open surgery. One small randomised controlled trial found that all ten patients reported no pain at 3 days after endoscopic axillary lymph node retrieval.

2.3.4 Length of hospital stay after endoscopic axillary lymph node retrieval varied from 2.5 days to 9 days, although one study reported that most of the later patients in the series were discharged within 24 hours.

2.3.5 Two case series reported no axillary recurrence among 100 patients followed up to 14 months, and 103 patients followed up to 18 months. For more details, refer to the Sources of evidence.

2.4 Safety

2.4.1 Data on the safety of the procedure were not reported consistently in the studies. The incidence of seroma reported after endoscopic axillary lymph node retrieval varied from 90% (36/40) to 4% (4/100). Similarly, rates of haematoma formation ranged from 16% (16/100) in one case series to 1% (1/103) in a second case series.

2.4.2 Other reported adverse events after endoscopic axillary lymph node retrieval included lymphocoele in 25% (5/20) of patients and wound infection in 5% (2/40) of patients. For more details, refer to the Sources of evidence.

2.4.3 The Specialist Advisors noted that theoretical adverse effects include bleeding, damage to nerves or the axillary artery, pneumothorax, lymphoedema and pain or sensory disturbance in the arm and shoulder.

2.5 Other comments

2.5.1 These recommendations refer to the use of endoscopy rather than open surgery for the retrieval of selected axillary lymph nodes. They do not address clinical decisions about the number of lymph nodes that should be removed.

2.5.2 The Committee noted that this procedure is seldom carried out in the UK, and that sentinel node retrieval has become common practice.

Andrew Dillon
Chief Executive
December 2005

3 Further information

Sources of evidence

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

'Interventional procedures overview of endoscopic axillary node retrieval for breast cancer', March 2004.

Information for patients

NICE has produced information on this procedure for patients and carers. It explains the

nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

4 Changes since publication

The guidance was considered for reassessment in December 2008 and it was concluded that NICE will not be updating this guidance at this stage. However, if you believe there is new evidence which should warrant a review of our guidance, please contact us.

22 January 2012: minor maintenance.

5 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE interventional procedure guidance process.

It has been incorporated into the NICE pathway on early and locally advanced breast cancer, along with other related guidance and products.

We have produced a summary of this guidance for patients and carers. Information about the evidence it is based on is also available.

Your responsibility

This guidance represents the views of NICE and 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.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.