

Transilluminated powered phlebectomy for varicose veins

1 Guidance

1.1 Current evidence on the safety and efficacy of transilluminated powered phlebectomy for varicose veins includes small numbers of patients and is of limited quality. It does not appear adequate to support the use of this procedure without special arrangements for consent and for audit or research. Clinicians wishing to undertake transilluminated powered phlebectomy for varicose veins should inform the clinical governance leads in their Trusts. They should ensure that patients offered it understand the uncertainty about the procedure's safety and efficacy and should provide them with clear written information. Use of the Institute's *Information for the Public* is recommended. Clinicians should ensure that appropriate arrangements are in place for audit or research. Publication of safety and efficacy outcomes will be useful in reducing the current uncertainty. NICE is not undertaking further investigation at present.

2 The procedure

2.1 Indications

2.1.1 Transilluminated powered phlebectomy is used to treat varicose veins, which affect 25–33% of women and 10–15% of men. Varicose veins are a sign of underlying venous insufficiency.

2.1.2 People with venous insufficiency may have symptoms of fatigue, heaviness, aching, burning, throbbing, itching and cramps in the legs. Chronic venous insufficiency can lead to skin discolouration, inflammatory dermatitis, recurrent or chronic cellulitis, cutaneous infarction and ulceration.

2.1.3 Transilluminated powered phlebectomy is intended as an alternative to hook phlebectomy for symptomatic varicose veins in the leg, and is usually done as an adjunct to surgery for long or short saphenous vein incompetence.

2.2 Outline of the procedure

2.2.1 Under anaesthetic, an endoscopic transilluminator is inserted underneath the skin to illuminate the vein clusters to be resected; tumescent anaesthesia is then instilled under pressure via the cannulated illuminated device. A suction device with guarded blades (resector device) is then introduced via another incision at the other end of the varicose vein, and the varicosities are cut and removed by suction. Once removal of the veins is complete, tumescent anaesthesia is again introduced via a cannulated illuminator device to minimise bruising, pain and haematoma formation.

2.2.2 The resector device can also be inserted through the first incision, minimising the number of incisions made during the procedure.

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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.

2.3 Efficacy

- 2.3.1 The main efficacy outcomes identified in the studies were reduced pain and greater cosmetic satisfaction compared to hook phlebectomy. Comparative data suggested that transilluminated powered phlebectomy resulted in similar or less pain, at six weeks, and greater cosmetic satisfaction. The evidence reported in the non-comparative studies supported these findings. The available studies reported short-term results only.
- 2.3.2 The evidence indicated that fewer incisions were required for transilluminated powered phlebectomy than with hook phlebectomy (mean 6 versus 17 incisions in one study). There was also some evidence to suggest that the number of incisions reduced with surgeon experience. For more details, refer to the 'Sources of evidence' (see below).
- 2.3.3 One Specialist Advisor commented that the cosmetic advantages of the procedure can be negligible because of damage to the subcutaneous fat. It was noted by one Advisor that this procedure might be particularly suitable for the treatment of multiple and recurrent varicosities, which can be difficult to treat by hook phlebectomy.

2.4 Safety

- 2.4.1 The comparative data indicated that transilluminated powered phlebectomy had fewer complications than hook phlebectomy. Common complications reported in the studies included haematomas, bruising and paraesthesia.
- 2.4.2 One case of deep vein thrombosis, in a study of 114 patients (0.9%), was also reported as a complication of the procedure. For more details, refer to the 'Sources of evidence' (see below).

- 2.4.3 The Specialist Advisors listed the main potential complications as haematoma, pain and bruising. Neuropraxia, causing sensory disturbance, was also listed by one Advisor as a potential complication, although it was considered that the incidence of this would be low.

2.5 Other comments

- 2.5.1 Although the evidence suggested the procedure is effective, the evidence was too limited to be conclusive. A particular weakness is that there are no data on the number of veins treated during the procedure in each patient.
- 2.5.2 The Institute noted the lack of long-term follow-up data and the Specialist Advisors' anxiety about potential complications.

Andrew Dillon
Chief Executive
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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/IPG037publicinfoenglish and in English and Welsh from www.nice.org.uk/IPG037publicinfowelsh.

Sources of evidence

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

Interventional procedures overview of transilluminated powered phlebectomy for varicose veins, April 2003

Available from: www.nice.org.uk/pdf/ip/178overview.pdf

Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0418. *Information for the Public* can be obtained by quoting reference number N0419 for the English version and N0420 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/IPG037distributionlist

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National Institute for Clinical Excellence

MidCity Place, 71 High Holborn, London WC1V 6NA, website: www.nice.org.uk

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