NICE guidance

Transilluminated powered phlebectomy for varicose veins

Interventional procedures guidance
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Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account, and specifically any special arrangements relating to the introduction of new interventional procedures. The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with

those duties. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

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 NICE'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% to 33% of women and 10% to 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.

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, see the overview.

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, see the overview.

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 NICE noted the lack of long-term follow-up data and the Specialist Advisors' anxiety about potential complications.

3 Further information

Sources of evidence

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

Information for patients

NICE has produced information for the public on this procedure. It explains the nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.