

Intralesional photocoagulation of subcutaneous congenital vascular disorders

Interventional procedures guidance

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[nice.org.uk/guidance/ipg90](https://www.nice.org.uk/guidance/ipg90)

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. However, 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.

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.

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 intralesional photocoagulation of subcutaneous congenital vascular disorders 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 intralesional photocoagulation of subcutaneous congenital vascular disorders 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. Use of the Institute's [information for the public](#) is recommended.
 - Audit and review clinical outcomes of all patients having intralesional photocoagulation of subcutaneous congenital vascular disorders.
- 1.3 Publication of safety and efficacy outcomes will be useful in reducing the current uncertainty. The Institute is not undertaking further investigation at present.

2 The procedure

2.1 *Indications*

- 2.1.1 Intralesional photocoagulation is a laser treatment for people with congenital abnormalities of the blood vessels of the skin (including haemangiomas, port wine stains and arteriovenous malformations). Often these abnormalities require no treatment because they may resolve spontaneously or cause only mild cosmetic problems.
- 2.1.2 Laser treatment is often recommended for lesions near the eyes or orifices, or if lesions bleed, ulcerate or become infected. However, external laser treatment of these vascular abnormalities may not be effective because the laser beam does not penetrate far beneath the skin.

2.2 *Outline of the procedure*

- 2.2.1 Intralesional photocoagulation involves inserting a laser fibre into the lesion to deliver light deep within it. More than one treatment may be needed.

2.3 *Efficacy*

- 2.3.1 The evidence was limited to small case series studies. The largest study, which

only included children, reported that after intralesional photocoagulation, 46% (46/100) of patients had a greater than 90% reduction in the size of the lesion, and the other 54% (54/100) had a 50–90% reduction in the size of the lesion. In this study, 76% (76/100) of patients had a subsequent surgical resection and reconstruction. In another study of patients with periorbital haemangiomas, 83% (19/23) of patients had a 50% or greater reduction in the size of the lesion within 8 months. For more details, refer to the Sources of evidence section.

2.3.2 The Specialist Advisors noted that use of the procedure in the UK was very limited.

2.4 *Safety*

2.4.1 The following complications were reported in the identified studies: ulceration 17% (4/23) to 25% (3/12); continued gradual bleeding requiring surgical control 8% (1/12); scar contracture needing surgical revision 8% (1/12); infection 4% (1/23); residual weakness of branches of the facial nerve 2% (2/100); requirement for transfusion during treatment 2% (2/100); and small burns 2% (2/100). For more details, refer to the Sources of evidence section.

2.4.2 The Specialist Advisors listed the main potential adverse events as ulceration, nerve injury, tissue necrosis, scarring, contracture, and arteriovenous fistula formation.

2.5 *Other comments*

2.5.1 The commonest outcome measure in the studies was reduction in the size of the lesions. Evidence on other outcome measures, such as function or the need for further treatment, was very limited.

2.5.2 The procedure may sometimes be used as an adjunct to surgery; this can make interpretation of outcomes more difficult.

2.5.3 There is particular uncertainty in the literature about the severity and consequences of ulceration and scarring caused by the procedure.

2.5.4 Facial nerve damage is an important potential complication.

Andrew Dillon
Chief Executive
September 2004

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 intralesional photocoagulation of subcutaneous congenital vascular disorders', May 2003.

Information for patients

NICE has produced [information on this procedure for patients and carers](#) ('Understanding NICE guidance'). 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 March 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](#).

26 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.

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

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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](#).