NICE guidance

Intralesional photocoagulation of subcutaneous congenital vascular disorders

Interventional procedures guidance
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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, 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 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 NICE'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. NICE 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 out of 100) of patients had a greater than 90% reduction in the size of the lesion, and the other 54% (54 out of 100) had a 50% to 90% reduction in the size of the lesion. In this study, 76% (76 out of 100) of patients had a subsequent surgical resection and reconstruction. In another study of patients with periorbital haemangiomas, 83% (19 out of 23) of patients had a 50% or greater reduction in the size of the lesion within 8 months. For more details, see the overview.

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 out of 23) to 25% (3 out of 12); continued gradual bleeding requiring surgical control 8% (1 out of 12); scar contracture needing surgical revision 8% (1 out of 12); infection 4% (1 out of 23); residual weakness of branches of the facial nerve 2% (2 out of 100); requirement for transfusion during treatment 2% (2 out of 100); and small burns 2% (2 out of 100). For more details, see the overview.

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.

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.