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NHS
National Institute for Clinical Excellence

Radiofrequency volumetric tissue reduction for turbinate hypertrophy

1 Guidance

1.1 Current evidence on the safety and efficacy of radiofrequency volumetric tissue reduction for turbinate hypertrophy 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 radiofrequency volumetric tissue reduction for turbinate hypertrophy 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 Turbinate hypertrophy refers to the persistent enlargement of the inferior turbinates, part of the nasal air passages.

2.1.2 Symptoms of turbinate hypertrophy range from total nasal obstruction to mild congestion and/or excessive mucous secretion from the nose (rhinorrhoea). People with turbinate dysfunction may experience sleep apnoea, nasal congestion, postnasal drainage and, occasionally, mid-facial headaches or facial pain and discomfort.

2.1.3 Conservative medical treatment of turbinate hypertrophy includes steroid injections, nasal sprays and decongestants. Surgical treatment is reserved for symptomatic individuals with persistent enlargement of the turbinates who are not responding to medical management, or in whom medical management is contraindicated. Other surgical treatments include laser reduction, electrocautery and partial turbinate resection.

2.2 Outline of the procedure

2.2.1 Radiofrequency volumetric tissue reduction for turbinate hypertrophy is an outpatient procedure in which a needle electrode is inserted under local anaesthetic into the anterior inferior turbinate. Radiofrequency energy is then delivered by a power generator. There is variation in the energy levels and temperatures used. It is believed that the application of radiofrequency energy causes submucosal fibrosis and volume reduction.

2.3 Efficacy

2.3.1 In all studies considered, patients reported an improvement in nasal obstruction. In a controlled trial of 24 patients, the severity and frequency of nasal obstruction improved in 81% and 94% of patients, respectively, at 8 weeks. However, there was a large placebo response in this study. Other problems with interpretation were the use of subjective outcome measures and the application of different amounts of radiofrequency energy. For more details, refer to the 'Sources of evidence' (see overleaf).

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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.

Interventional procedures guidance is for health professionals and people using the NHS in England, Wales and Scotland.

2.3.2 Two of the Specialist Advisors expressed uncertainty regarding the efficacy of the procedure, based on the lack of evidence. One Advisor commented that, while the literature appeared to suggest that the procedure is as effective as laser reduction, it was based on small patient numbers with only short-term follow-up.

2.4 Safety

2.4.1 The most common complications reported in the studies were bleeding, swelling, crusting and formation of adhesions. Some patients reported experiencing pain during the procedure (19–40%). It is unclear what impact the delivery of different energy levels has on the incidence of complications. For more details, refer to the 'Sources of evidence' (see below).

2.4.2 The Specialist Advisors listed potential adverse events as bleeding and infection, and more extensive necrosis than was intended. One Advisor commented that there are no more safety concerns than for any other electrical procedure but noted the importance of using correctly regulated equipment.

2.5 Other comments

2.5.1 The Institute noted that there is insufficient evidence to assess efficacy, given that patient numbers were so small in the studies reviewed.

Andrew Dillon
Chief Executive
January 2004

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/IPG036publicinfoenglish and in English and Welsh from www.nice.org.uk/IPG036publicinfowelsh.

Sources of evidence

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

Interventional procedures overview of radiofrequency volumetric tissue reduction for turbinate hypertrophy, April 2003

Available from:
www.nice.org.uk/pdf/ip/210overview.pdf

Ordering information
Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0415. *Information for the Public* can be obtained by quoting reference number N0416 for the English version and N0417 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/IPG036distributionlist

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