

Endoscopic transsphenoidal pituitary adenoma resection

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 endoscopic transsphenoidal pituitary adenoma resection appears adequate to support the use of the procedure, provided that the normal arrangements are in place for consent, audit and clinical governance.
- 1.2 The procedure should be carried out by clinicians with special experience in endoscopic pituitary surgery, and within a multidisciplinary centre.

2 The procedure

2.1 Indications

- 2.1.1 Endoscopic transsphenoidal pituitary adenoma resection is used to treat pituitary adenomas. Pituitary adenomas are benign slow-growing tumours that arise within the pituitary gland.
- 2.1.2 The symptoms of pituitary adenoma depend on the location, type and size of tumour and any hormone that it may secrete.
- 2.1.3 The treatment options for pituitary adenoma include surgery, pharmacological therapy, and radiotherapy.

2.2 Outline of the procedure

- 2.2.1 Under general anaesthetic, an endoscope is inserted into the nose and is directed towards the base of the tumour at the skull base. Surgical instruments are then inserted and the tumour is removed.

2.3 Efficacy

- 2.3.1 The evidence indicated that endoscopic transsphenoidal pituitary adenoma resection results in surgical outcomes, such as adequacy of removal and normalisation of hormone levels, comparable with those achieved using conventional surgery.
- 2.3.2 The operating time for endoscopic transsphenoidal resection was shorter compared with conventional surgery. For more details, see the [overview](#).
- 2.3.3 The majority of the Specialist Advisors considered the procedure to be a variation of an existing procedure, and the likely efficacy of resection to be unchanged.

2.4 Safety

- 2.4.1 The evidence indicated that major morbidity (cerebrospinal fluid leak, meningitis, stroke, intracranial haemorrhage, or visual loss) occurred in between 1.4% (3 out of 215) and 15% (3 out of 20) of patients. Less serious complications (sinusitis and nasal septal perforations) occurred in less than 7% of patients. The complication rate associated with endoscopic transsphenoidal pituitary adenoma resection was lower than the rates associated with conventional surgery.
- 2.4.2 The most serious reported complication of the procedure was meningitis. This occurred in 2 patients in the 2 largest case series, which included 310 patients. For more details, see the [overview](#).
- 2.4.3 The Specialist Advisors did not report any particular safety concerns, though bleeding, optic nerve damage, cerebrospinal fluid leakage, and carotid artery

injury were noted as potential complications of endoscopic transsphenoidal pituitary adenoma resection.

2.5 Other comments

2.5.1 It was noted that there was a lack of long-term follow-up data on this procedure.

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 decision made, and has been written with patient consent in mind.

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Endorsing organisation

This guidance has been endorsed by [Healthcare Improvement Scotland](#).