

Therapeutic percutaneous image-guided aspiration of spinal cysts

1 Guidance

- 1.1 Current evidence on the safety and efficacy of therapeutic percutaneous image-guided aspiration of spinal cysts is very limited but is adequate to support the use of the procedure in the context of this rare condition, provided that normal arrangements are in place for clinical governance and audit.
- 1.2 During the consent process, clinicians should ensure that patients understand that there is uncertainty about the procedure's benefits and that subsequent interventions may be necessary. They should provide patients with clear written information. In addition, use of the Institute's information for patients ('Understanding NICE guidance') is recommended (available from www.nice.org.uk/IPG223publicinfo).

2 The procedure

2.1 Indications

- 2.1.1 There are several types of spinal cyst, all of which are rare. Tarlov or perineural cysts affect nerve roots, most commonly in the sacral region of the spine. The majority are asymptomatic, but they may occasionally cause symptoms such as radicular pain or urinary dysfunction. Arachnoid cysts develop as a result of defects of the dura, usually in the thoracic region of the spine. They can cause radicular pain or loss of sensory or motor function. Spinal echinococcal cysts are a rare feature of hydatid disease, and may also cause radicular pain or loss of neurological function.

- 2.1.2 Painful spinal cysts are often managed conservatively with analgesics. Open surgery to drain or remove cysts may be indicated if pain is refractory to medical therapy, or if there is a threat of permanent neurological impairment.

2.2 Outline of the procedure

- 2.2.1 A small-gauge needle is inserted into the cyst under computed tomography (CT) or magnetic resonance imaging (MRI) guidance. Cyst contents are aspirated, and the decrease in cyst volume is documented by imaging. Where cysts are present at more than one spinal level, several aspiration procedures may be needed.

2.3 Efficacy

- 2.3.1 The evidence available is from one case series and three case reports. In a case series of three patients with sacral perineural cysts, two experienced pain relief for up to 3 weeks and one for several weeks (number not stated). Case reports of two patients, one with an arachnoid cyst and one with spinal hydatid cysts, reported that image-guided aspiration rendered each patient asymptomatic during follow-up of 1 year. A case report of a patient with a Tarlov cyst reported that aspiration produced immediate pain relief; however, pain recurred after 5 days and the patient underwent open decompression.

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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. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare 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 healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland.

This guidance is endorsed by NHS QIS for implementation by NHSScotland.

- 2.3.2 Follow-up imaging of cysts was undertaken in the case series and one of the case reports described above. The patient with hydatid cysts demonstrated collapsed cysts and spinal cord decompression on MRI at 4-month follow-up. Conversely, the cysts eventually refilled in the three patients with sacral perineural cysts and all subsequently received operative treatment. For more details, refer to the 'Sources of evidence' section.
- 2.3.3 The Specialist Advisers did not raise concerns about the efficacy of this rare procedure.

2.4 Safety

- 2.4.1 Only one case report, of a patient whose spinal hydatid cysts were aspirated under CT guidance, reported safety outcomes. The patient tolerated the procedure well, with no allergy or anaphylaxis. For more details, refer to the 'Sources of evidence' section.
- 2.4.2 The Specialist Advisers listed potential adverse events as bleeding, infection, and nerve or spinal cord damage, including paraplegia.

Andrew Dillon
Chief Executive
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Information for patients

NICE has produced information describing its guidance on this procedure for patients and their carers ('Understanding NICE guidance'). 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/IPG223publicinfo

Sources of evidence

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

'Interventional procedure overview of therapeutic percutaneous image-guided aspiration of spinal cysts', December 2006.

Available from: www.nice.org.uk/ip384overview

Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N1274. 'Understanding NICE guidance' can be obtained by quoting reference number N1275.

The distribution list for this guidance is available at www.nice.org.uk/IPG223distributionlist

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Interventional procedures guidance makes recommendations on the safety and efficacy of a procedure. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS.

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