NICE National Institute for Health and Care Excellence

NICE guidance

Lumbar subcutaneous shunt

HealthTech guidance
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www.nice.org.uk/guidance/htg41

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.

Contents

This guidance replaces IPG68.

1 Recommendations

1.1 Current evidence on the safety and efficacy of lumbar subcutaneous shunt 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 lumbar subcutaneous shunt 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 lumbar subcutaneous shunt.

1.3 Publication of safety and efficacy outcomes will be useful in reducing the current uncertainty. NICE may review the procedure on publication of further evidence.

2 The procedure

2.1 Indications

2.1.1 This procedure is used to treat communicating hydrocephalus (normal pressure hydrocephalus) and benign intracranial hypertension (pseudotumour cerebri).

2.1.2 Communicating hydrocephalus is an uncommon condition caused by excess cerebrospinal fluid collecting in the subarachnoid space. Causes include congenital abnormality, brain haemorrhage and meningitis, but in some cases, no cause is found. The symptoms include confusion, gait disturbance and urinary incontinence. Untreated, the condition may cause brain damage or death.

2.1.3 Benign intracranial hypertension is an uncommon condition of unknown cause, in which the pressure of the cerebrospinal fluid is increased. The symptoms include headache, dizziness and visual problems. The prognosis is generally good, although a few people may experience permanent visual loss.

2.2 Outline of the procedure

2.2.1 A cerebrospinal fluid shunt is a system of valved tubes that carries cerebrospinal fluid from the subarachnoid space to another part of the body to drain it and prevent damage to the brain or eyes. Usually, a shunt is tunnelled under the skin, with the upper end in a cerebral ventricle and the lower end in the heart (ventriculo–atrial shunt) or in the peritoneum (ventriculo–peritoneal shunt). Alternatively, the upper end of the shunt may be placed in the subarachnoid space in the lumbar part of the back, with the lower end draining fluid into the peritoneum (lumbar–peritoneal shunt).

2.2.2 A lumbar subcutaneous shunt differs from the types of shunt described in section 2.2.1 in that the cerebrospinal fluid drains into the space immediately under the skin. A narrow tube is inserted percutaneously into the subarachnoid space in the lumbar part of the back and is tunnelled under the skin to a site where fluid can

drain, usually in the flank or abdomen. The advantage is that general anaesthetic is not required, unlike for other shunt procedures.

2.3 Efficacy

2.3.1 No studies reporting efficacy outcomes of lumbar subcutaneous shunt were identified.

2.3.2 The Specialist Advisors noted that this procedure is only being undertaken by 1 surgeon in the UK. One Advisor was unsure about the efficacy of the procedure because the subcutaneous tissues do not absorb cerebrospinal fluid; however, data are being collected to investigate this.

2.4 Safety

2.4.1 No studies reporting safety outcomes of lumbar subcutaneous shunt were identified.

2.4.2 One Specialist Advisor considered the main potential adverse effects of the procedure to be infection, subdural haematoma and irritation of nerve roots.

3 Further information

3.1 The surgeon who has been carrying out this procedure has been collecting data for several years on patients who have undergone the procedure, but there have been no publications to date.

Sources of evidence

The evidence considered by the committee is in the overview.

Information for the public

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.

Update information

Minor changes since publication

January 2026: Interventional procedures guidance 68 has been migrated to HealthTech guidance 41. The recommendations and accompanying content remain unchanged.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.