Surgical management of otitis media with effusion in children
About this booklet
This is a quick reference guide that summarises the recommendations NICE has made to the NHS in ‘Surgical management of otitis media with effusion in children’ (NICE clinical guideline 60).

Who should read this booklet?
This quick reference guide is for healthcare professionals and other staff who care for children under 12 years with otitis media with effusion.

Who wrote the guideline?
The guideline was developed by the National Collaborating Centre for Women’s and Children’s Health, which is based at the Royal College of Obstetricians and Gynaecologists. The Collaborating Centre worked with a group of healthcare professionals (including consultants, GPs and nurses), patients and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

For more information on how NICE clinical guidelines are developed, go to www.nice.org.uk

Where can I get more information about the guideline?
The NICE website has the recommendations in full, reviews of the evidence they are based on, a summary of the guideline for patients and carers, and tools to support implementation (see back cover for more details).
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Introduction

Otitis media with effusion (OME) is a common condition of early childhood in which accumulation of fluid within the middle ear space causes hearing impairment. The hearing loss is usually transient and self-limiting, although in some cases it can persist, necessitating surgical intervention in the form of ventilation tube insertion.

This guideline provides recommendations on the surgical management of OME in children under the age of 12 years based on the best available published evidence. It places a 3-month period of active observation at the centre of the care pathway for children with suspected OME and provides guidance as to when surgery is most appropriate in selected patients. These recommendations will require more timely access to audiology services than is currently available. The guideline also considers the management of OME in children with Down’s syndrome and children with cleft palate. OME is particularly prevalent and persistent in these children, and they require management by multidisciplinary teams with appropriate expertise in managing these conditions.

Child-centred care

Treatment and care should take into account the individual needs and preferences of children with OME, and those of their parents or carers. Good communication is essential, supported by evidence-based information, to allow parents or carers to reach informed decisions about their child’s care. Follow Department of Health advice on seeking consent if needed.
Key priorities for implementation

**Diagnosis of OME**
- Formal assessment of a child with suspected OME should include:
  - clinical history taking, focusing on:
    - poor listening skills; indistinct speech or delayed language development; inattention and behaviour problems; hearing fluctuation; recurrent ear infections or upper respiratory tract infections; balance problems and clumsiness; poor educational progress
  - clinical examination, focusing on:
    - otoscopy; general upper respiratory health; general developmental status
  - hearing testing, which should be carried out by trained staff using tests suitable for the developmental stage of the child, and calibrated equipment
  - tympanometry.

**Children who will benefit from surgical intervention**
- Children with persistent bilateral OME documented over a period of 3 months with a hearing level in the better ear of 25–30 dBHL or worse averaged at 0.5, 1, 2 and 4 kHz (or equivalent dBA where dBHL not available) should be considered for surgical intervention.

**Surgical interventions**
- Once a decision has been taken to offer surgical intervention for OME in children, insertion of ventilation tubes is recommended. Adjuvant adenoidectomy is not recommended in the absence of persistent and/or frequent upper respiratory tract symptoms.

**Non-surgical interventions**
- The following treatments are not recommended for the management of OME: antibiotics; topical or systemic antihistamines; topical or systemic decongestants; topical or systemic steroids; homeopathy; cranial osteopathy; acupuncture; dietary modification, including probiotics; immunostimulants; massage.
- Hearing aids should be offered to children with persistent bilateral OME and hearing loss as an alternative to surgical intervention where surgery is contraindicated or not acceptable.

**Management of OME in children with Down’s syndrome**
- Hearing aids should normally be offered to children with Down’s syndrome and OME with hearing loss.

**Management of OME in children with cleft palate**
- Insertion of ventilation tubes at primary closure of the cleft palate should be performed only after careful otological and audiological assessment.
- Insertion of ventilation tubes should be offered as an alternative to hearing aids in children with cleft palate who have OME and persistent hearing loss.
Surgical management of OME in children

Care pathway 1. Children with suspected OME

Information provision: Give verbal and written information to parents/carers and children on nature and effects of OME.

Concerns from parents/carers or professionals

Assess features suggestive of OME and refer for formal assessment if necessary
- Hearing difficulty
- Indistinct speech or delayed language development
- Repeated ear infections or earache
- Poor educational progress
- Recurrent upper respiratory tract infections or frequent nasal obstruction
- Behavioural problems
- Less frequently, balance difficulties, tinnitus, intolerance of loud sounds

Formal assessment
- Clinical history (focus on poor listening skills, indistinct speech or delayed language development, inattention and behaviour problems, hearing fluctuation, recurrent ear infections or upper respiratory tract infections, balance problems and clumsiness, educational progress)
- Clinical examination (focus on otoscopy, general upper respiratory health, general development)
- Hearing testing (use tests appropriate for child's developmental stage)
- Tympanometry

OME confirmed

Consider co-existing causes of hearing loss (sensorineural, permanent conductive and non-organic)

Manage

Active observation for 3 months
- Confirm persistence of bilateral OME and hearing loss over 3 months
- Advise on educational and behavioural strategies to minimise impact of hearing loss
- Offer autoinflation for children likely to cooperate
- Reassess after 3 months

Persistent bilateral OME with a hearing level in better ear of 25–30 dBHL or worse confirmed over 3 months

Persistent bilateral OME with hearing loss less than 25–30 dBHL and significant impact on child’s developmental, social or educational status

OME resolves

Surgical interventions
- Give information about benefits and risks of treatment
- Insert ventilation tubes
- Do not use adjuvant adenoidectomy in absence of persistent and/or frequent upper respiratory tract symptoms

Follow up and reassess hearing

Non-surgical interventions
- Give information about benefits and risks of treatment
- Offer hearing aids as an alternative to surgery where surgery is contraindicated or not acceptable
- Do not offer the following for OME: antibiotics, antihistamines, decongestants, steroids, homeopathy, cranial osteopathy, acupuncture, dietary modification, immunostimulants, massage

Assessment

Presentation

Interventions

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Care pathway 2. Children with Down’s syndrome

Regularly assess all children with Down’s syndrome for OME
- Involve a multidisciplinary team with expertise in assessing and treating children with Down’s syndrome
- For formal assessment of OME see ‘Care pathway 1’

OME confirmed

Consider co-existing causes of hearing loss (sensorineural, permanent conductive and non-organic)

Manage

Active observation for 3 months
- Advise on educational and behavioural strategies to minimise impact of hearing loss
- Reassess after 3 months

Persistent bilateral OME with hearing loss and/or significant impact on child’s developmental, social or educational status

OME resolves

Interventions
- Give information about benefits and risks of treatment
- Offer hearing aids (normally)

- Before offering ventilation tubes as an alternative, consider:
  - severity of hearing loss
  - child’s age
  - practicality and risks of ventilation tube insertion
  - likelihood of early extrusion of ventilation tubes

Follow up and reassess hearing
Surgical management of OME in children

Care pathway 3. Children with cleft palate

Regularly assess all children with cleft palate for OME
- Involve local ENT/audiology services with expertise in assessing and treating children with cleft palate in liaison with the regional multidisciplinary cleft lip and palate team
- For formal assessment of OME see ‘Care pathway 1’

OME confirmed

Consider co-existing causes of hearing loss (sensorineural, permanent conductive and non-organic)

Manage

Active observation for 3 months
- Advise on educational and behavioural strategies to minimise impact of hearing loss
- Reassess after 3 months

Persistent bilateral OME with hearing loss and/or significant impact on child’s developmental, social or educational status

OME resolves

Interventions
- Give information about benefits and risks of treatment
- Offer ventilation tubes as an alternative to hearing aids
- Insertion of ventilation tubes at primary closure of cleft palate only after careful otological and audiological assessment

Follow up and reassess hearing
Implementation tools

NICE has developed tools to help organisations implement this guidance (listed below). These are available on our website (www.nice.org.uk/CG060).

- Slides highlighting key messages for local discussion.
- Implementation advice on how to put the guidance into practice and national initiatives that support this locally.
- Costing tools:
  - costing report to estimate the national savings and costs associated with implementation
  - costing template to estimate the local costs and savings involved.
- Audit support for monitoring local practice.

Further information

Ordering information
You can download the following documents from www.nice.org.uk/CG060

- A quick reference guide (this document) – a summary of the recommendations for healthcare professionals.
- The NICE guideline – all the recommendations.
- ‘Understanding NICE guidance’ – information for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or ‘Understanding NICE guidance’, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk and quote:

- N1461 (quick reference guide)
- N1462 (‘Understanding NICE guidance’).

Updating the guideline
This guideline will be updated as needed, and information about the progress of any update will be posted on the NICE website (www.nice.org.uk/CG060).