

Microsuction Guidelines

INTRODUCTION

This guideline has been written to ensure safe aural microsuction

CERUMEN MANAGEMENT

Cerumen, or wax as it is commonly known, is a normal secretion of the ceruminous glands in the outer meatus. It is slightly acidic, giving bactericidal qualities in both its wet, sticky form (as secreted by Caucasians and African-Caribbeans) or dry, flaky form (as, for example, secreted by S.E. Asian people). In addition to epithelial migration, jaw movement assists the movement of wax to the entrance of the External Auditory Meatus (EAM) where it emerges onto the skin. A small amount of wax is normally found in the EAM and its absence may be a sign that dry skin conditions, infection or excessive cleaning have interfered with the normal production of wax. It is only when there is an accumulation of wax that removal may be necessary. A build-up of wax is more likely to occur in older adults and patients with learning difficulties, hearing aid users, people who insert implements into the ear or have a narrow EAM. A build-up of wax may also occur as a result of anxiety, stress and dietary or hereditary factors. Excessive wax should be removed before it becomes impacted, which can give rise to tinnitus, hearing loss, vertigo, pain and discharge.

The experienced practitioner can use his or her clinical judgement on the best method for wax management and removal. Olive oil may be advised in favour of other cerumenolytics. The practitioner may decide that extended use of olive oil is preferable to wax removal procedures.

EVIDENCE

In order to reduce litigation in ear irrigation and microsuction and provide the patient with effective and safer ear care this document was originally produced by the 'Action On ENT' Steering Board (2002) and endorsed by the Royal College of General Practitioners, The Royal College of Nursing, The Primary Ear Care Centre and the Medical Devices Agency. It has subsequently been revised by the Primary Ear Care Trainers (2017).

The document provides the practitioner with guidance in microsuction.

PURPOSE

Use of the microscope and suction is carried out to:

- Remove cerumen and hygroscopic foreign bodies in patients who are not appropriate for ear irrigation
- Remove discharge, keratin or debris from the external auditory meatus or mastoid cavity

SCOPE

This procedure is only to be carried out by a doctor, nurse or audiologist who has trained in the use of the microscope and suction. An individual assessment should be made of every patient to ensure that microsuction is appropriate. The suction generates loud noise and patients should be advised of this.

MICROSUCTION SHOULD NOT BE CARRIED OUT IF:

- Valid consent has not been obtained
- Patients have experienced difficulties with the procedure in the past
- A history of severe dizziness
- Patients are unable to keep their head still or who are prone to unpredictable head movement
- Patients who have a sensitivity to loud noise (Hyperacusis)

PRECAUTIONS

Consideration should be given to the patient's age: there is no upper or lower age limit for microsuction, but each patient should be assessed in an individual and holistic manner. Children may require microsuction but may be unable to keep their head still or may be fearful of the procedure. In this instance it is advisable to give serious thought to the necessity of the procedure and whether treatment may hinder any future care needed.

GUIDANCE

EQUIPMENT REQUIRED

- Otoscope and spare bulbs
- Single use otoscope speculae
- Wall mounted or free standing suction bottles
- Height-adjustable couch with adjustable back rest
- Microscope and spare bulbs
- Couch roll
- Suction liner
- Suction connecting tube
- Fenestrated suction handle 30 degrees
- Single use speculae in sizes 2,3 and 4
- 18 G fine ends
- Galli pot
- Henckel
- Crocodile forceps
- Jobson Horne probe
- Gloves
- Tissues

PROCEDURE

At the beginning of every clinic the following should be performed:

- Ensure that all hard surfaces are cleaned with disinfection wipes as per local policy
- New suction liner fitted
- New suction tubing fitted
- Couch wiped clean
- Ensure suction is set as per manufacturer's guidelines and that it is working
- Ensure microscope eye pieces are set at the neutral position
- Turn microscope on to ensure it is functioning
- Place small, clean object on couch and view through microscope to ascertain if focus is working
- Ensure couch rises and lowers effectively and back rest adjusts safely

At the end of the day the waste within the liner and the tubing should be disposed of in the clinical waste as per local policy. All hard surfaces should again be cleaned with disinfection wipes as per local guidelines.

1. Before careful physical examination of the ear, listen to the patient, elicit symptoms and take a careful history. Explain each step of any procedure or examination and assure yourself that the patient understands and gives consent.
2. Check whether the patient has had microsuction previously and explain the nature of the noise and that they can ask for a rest if they experience any vertigo (if this should occur ask the patient to focus their eyes on a fixed object until the feeling subsides).
3. Adjust the magnification, eye piece and angle of the microscope to the appropriate position. Request that the patient position themselves comfortably on the examination couch or chair.
4. First examine the pinna, outer meatus and adjacent scalp by direct light and check for incision scars and observe for skin defects.
5. Gently pull the pinna upwards and outwards (in infants downwards and backwards) to straighten out the meatus. Remember that the skin lining of the deeper meatus is very delicate and sensitive.
6. Direct the microscope down into the ear. Insert the speculum gently into the EAM/cavity - use the largest size speculum that will fit comfortably into the ear.
7. Carefully check the cavity, tympanic membrane or drum remnant. Decide the size of suction tip most appropriate for the procedure and attach it to the suction tubing.
8. Turn the suction machine on, maintaining the pressure according to the suction machine's manufacturer's guidance. Apply the suction tip to the areas requiring debris removal. Use an appropriate solution to wash through the suction tubing when it becomes blocked.
9. Avoid touching the wall of the meatus, cavity or drum/ drum remnant. By only touching the debris, most pain can be avoided.
10. The ear cannot be judged to be completely free of ear disease until the entire cavity and tympanic membrane or drum remnant has been seen. You may need to ask the patient to move his/her head e.g. lean the head towards the opposite shoulder, to be able to see more clearly into the roof of the meatus and posterior aspect of the cavity.
11. Methodically inspect all parts of the EAM/cavity, tympanic membrane or drum remnant by varying the angle of the microscope.
12. The normal appearance of the EAM/cavity varies and can only be learned by practice. Practice will lead to recognition of abnormalities.
13. Carefully check the condition of the external auditory meatus as you withdraw the speculum.

14. Advice should be given to the patient as appropriate.
15. Document what was observed in both ears, the procedure carried out, the condition of the tympanic membrane and external auditory meatus and treatment given. Findings should be documented, nurses following the NMC guidelines on record keeping and accountability. If any abnormality is found a referral should be made to the ENT Outpatient Department following local policy.

RISK FACTORS

Dizziness
Trauma

DEFINITIONS AND ABBREVIATIONS

Hyperacusis – sensitivity to loud noise
Henckel – type of forceps used in ear care

RELATED GUIDANCE

Ear Care Guidance Document 2014

This document will be reviewed every three years unless such changes occur as to require an earlier review.