GUIDELINE FOR EAR IRRIGATION

PROCEDURAL INFORMATION

SECTION 1
PROCEDURAL INFORMATION

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Document History Summary

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1	14.10.2015	Head of ear care and audiology	Reviewed in 2019	
2	01.07.2019	Head of ear care and audiology	Under review	
3.0	July 2022	Ear care lead	Draft review and update	
3.1	Nov 2022	Ear care lead Head of ear care and audiology	ratified	

Section 1 Contents

Section 2 Contents

1. INTRODUCTION

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 only be removed if it is causing the patient a problem such as tinnitus, hearing loss, vertigo, pain/discomfort; or if examination of the tympanic membrane or audiological assessment/ intervention is required.
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 should advise patients to instil olive oil 3-5 days prior to their wax removal appointment. The practitioner may decide that extended use of olive oil is required.
These recommendations have been developed to assist practitioners in gaining experience and knowledge in the provision of ear care. They do not replace the need for education, recognised training and supervision in order to perform these procedures.

2. EVIDENCE

In order to reduce litigation in ear irrigation 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 Ear Care Centre (2022).

3. DEFINITIONS AND ABBREVIATIONS

3.1. Definitions

Definitions Noots – receiver used to collect water

3.2. Abbreviations

None

4. PURPOSE

- Correctly treat chronic or fungal otitis externa where the meatus is obscured by debris
- Improve conduction of sound to the tympanic membrane when it is blocked by wax
- Remove keratin or debris to allow examination of the EAM and the tympanic membrane
- Remove wax in order to facilitate hearing aid mould impressions or other audiology assessment
- Facilitate the removal of wax and foreign bodies, which are not hygroscopic, from the EAM. Hygroscopic matter (such as peas and lentils) will absorb the water and expand, making removal more difficult

5. SCOPE

This procedure is only to be carried out by an experienced healthcare worker who has received recognised training in ear care and the use of ear care equipment. This training is available UK-wide from Primary Ear Care Centre trainers. The healthcare worker should also access a two yearly update.
An individual assessment should be made of every patient to ensure that it is appropriate for ear irrigation to be carried out.

Irrigation should **NOT** be carried out if:

- the patient has previously experienced complications following this procedure in the past
- there is a history of a middle ear infection in the last six weeks
- the patient has undergone ANY form of ear surgery (apart from grommets that have extruded at least 18 months previously and it is documented subsequently that the tympanic membrane is intact)
- the patient has a perforation
- the patient has a healed perforation
- there is a history of a mucous discharge in the past twelve months
- there is evidence of acute otitis externa with pain and tenderness of the pinna
- there is a history of cleft palate, repaired or not
- the patient has abnormalities of the meatus such as exostosis
- the patient has hearing in only one ear if it is the ear to be treated

This list is not exhaustive and the practitioner must use his or her own judgement for each individual

Precautions: (Ear irrigation should be carried out on a low setting)

- the patient has tinnitus
- the patient suffers from dizziness
- the patient is taking anti-coagulants or high dose steroids
- the patient is immunocompromised
- the patient has had radiotherapy of the head or neck

Children
Irrigation can be carried out on children as long as the child has no contraindications and is happy to co-operate with the procedure. The practitioner must ensure irrigation is appropriate and necessary. It may be advisable to instil olive oil for a longer period of time in children to avoid the need for irrigation. When carrying out otoscopy, gently pull the pinna down and backwards to straighten the EAM.

6. GUIDANCE EQUIPMENT REQUIRED

Guidance on irrigation equipment

The metal syringe is obsolescent for use in the EAM. The syringe design is inherently dangerous. Combined with the danger of the syringe itself and the pressure of water it creates within the EAM, there is the difficulty of disinfecting the syringe after each use. The Medical Devices Agency (MDA) also has reservations about the use of the metal syringe for wax removal. There are issues around the poor manufacture of some syringes, allowing them to break and cause injury during use, and the pressure of water that can be exerted manually on the tympanic membrane.

Electronic irrigators such as the "Propulse" or “Projet” allow irrigation of the EAM rather than wax removal under pressure. The MDA issued Safety Notice SN 9807 in February 1998 which advised users that the original Propulse electronic irrigator required an isolation transformer for electrical safety. Subsequently, the manufacturer designed and marketed the Propulse II and later the Propulse III to replace the original Propulse. Propulse NG and G5 are now available which is both mains and battery operated.

This guidance document does not recommend the use of manual syringes or the Propulse 1, even with an isolation transformer, but recommends that practitioners should use the Projet or Propulse II, III, NG or G5 irrigators and refer to the procedure as ear irrigation.

The Projet and Propulse II III NG and G5 irrigators have a pressure-variable control, allowing the flow of water to be easily controlled by commencing irrigation on the minimum setting. For patient safety, the manufacturers have limited the maximum pressure available: this limit is stated in the user instructions. The Projet, Propulse III, NG and G5 irrigators have specific disinfecting guidelines issued.

Equipment Requirements:

- Otoscope
- Headlight or other suitable light source and spare batteries
- Electronic irrigator
- Tap water at 38 oC - 40oC or temperature comfortable for the patient, avoiding cool water
- Noots trough/receiver
- Jobson Horne probe /carbon curette or an appropriate cotton wool carrier and good quality cotton wool or ear mop/ear canal wick
- Tissues
- Disposable waterproof cape and paper towels
- Disposable apron and gloves

PROCEDURE

This procedure should be carried out with both participants seated and under direct vision, using a headlight or head mirror and light source.

1. The patient's presenting complaints and the result of the initial examination should be documented. Valid consent should be obtained and documented prior to proceeding

2. Examine both ears by first inspecting the pinna and adjacent scalp using direct light. Check for previous surgery incision scars or skin defects, and then inspect the EAM with the otoscope.

3. Check whether the patient has had his/her ears irrigated previously, or if there are any contraindications why irrigation should not be performed.

4. Explain the procedure to the patient and ask the patient to sit in an examination chair (a child could sit on an adult's knee with the child's head held steady).

5. Check that the headlight/light source is in place and is working correctly.

6. Place the protective cape and paper towel on the patient's shoulder and under the ear to be irrigated. Ask the patient to hold the receiver under the same ear.

7. Fill the reservoir of the irrigator; check that the temperature of the water in the tank is approximately 38°C - 40°C. Set the pressure at minimum.

8. Connect a new tip applicator to the tubing of the machine with a firm 'push/twist' action. Push until a "click" is felt.

9. Direct the irrigator tip into the Noots receiver and switch on the machine for 10-20 seconds in order to circulate the water through the system and eliminate any trapped air or cold water. This offers the opportunity for the patient to become accustomed to the noise of the machine. The initial flow of water is discarded, thus removing any static water remaining in the tube. Check the temperature of the water again.

10. Twist the tip so that the water can be aimed along the posterior wall of the EAM (towards the back of the patient's head).

11. Gently pull the pinna upwards and outwards to straighten the EAM (directly backwards in children).

12. Warn the patient that you are about to start irrigating and that the procedure will be stopped if he/she feels dizzy and/or experiences any pain. Ensure that the light is directed down the EAM. Place the tip of the nozzle into the EAM entrance and, using the foot control, direct a stream of water along the roof of the EAM and towards the posterior wall (direct towards the back of the patient's head). Increase the pressure control gradually if there is difficulty removing the wax. It is advisable that a maximum of one reservoir of water per ear is used in any one irrigation procedure.

13. There is evidence to suggest that leaving water in the canal for 15 minutes will increase the chance of success. You may find it beneficial to instil water into both ears (if both require irrigation with water) and return to the procedure after a rest of 15 minutes. (Eekhof J et al 2001)

14. Periodically inspect the EAM with the otoscope and inspect the solution running into the receiver.

15. After removal of wax or debris, dry mop excess water from the meatus under direct vision using the Jobson Horne probe/carbon curette/ear canal wick or an appropriate cotton wool carrier and good quality cotton wool. Stagnation of water and any abrasion of skin during the procedure predispose to infection. Removing the water with the cotton wool tipped probe reduces the risk of infection.

16. Examine the ear, both meatus and tympanic membrane, and treat as required following specific guidelines, or refer to a doctor if necessary.

17. Give advice regarding ear care and any relevant information. Advise the patient to return if the ear starts to discharge or become painful. If the presenting symptom was hearing loss and the hearing doesn't improve following wax removal advise patient to seek further advice as per local policy.

18. 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.

19. All contaminated equipment and PPE should be disposed of in clinical waste, with sharp instruments to be disposed of in appropriate sharps disposal.

NB. IRRIGATION SHOULD NEVER CAUSE PAIN. IF THE PATIENT COMPLAINS OF PAIN, STOP IMMEDIATELY.

It is recommended that you follow the manufacturer's guidelines and local policy for cleaning, disinfecting and calibrating the irrigator and its components

RISK FACTORS

Potential complications following procedure:

- Trauma
- Infection
- Dizziness
- Tinnitus

7. RELATED DOCUMENTS AND GUIDANCE

Ear Care Guidance Document 2014 .

GUIDELINE FOR AURAL MICROSUCTION
PROCEDURAL INFORMATION

SECTION 2
DOCUMENT DEVELOPMENT, COMMUNICATION, IMPLEMENTATION AND MONITORING

8. CONSULTATION AND COMMUNICATION WITH STAKEHOLDERS

This document was developed in consultation with:

Clinical governance group - Ear Care and Audiology at Rotherham NHS Foundation Trust

9. APPROVAL OF THE DOCUMENT

TRFT – Ear Care and Audiology - Clinical Governance Group

10. RATIFICATION OF THE DOCUMENT

This document was ratified by the Clinical Governance Group

11. REVIEW AND REVISION ARRANGEMENTS

This document will be reviewed every three years by the ear care specialist nurse team unless such changes occur as to require an earlier review.

12. DISSEMINATION AND COMMUNICATION PLAN

To be disseminated to	Disseminated by	How	When	Comments
Library & Knowledge Services via "policies" email.	Author	Email	Within 1 week of ratification	Remove watermark from ratified document and inform DRG Admin Support if a revision and which document it replaces and where it should be located on the Hub. Ensure all documents templates are uploaded as word documents.
All email users	Communication Team	Email	Within 1 week of ratification	Communication team will inform all email users of the policy and provide a link to the policy.
Key individuals Staff with a role/responsibility within the document Heads of Departments / Matrons	Author	Meeting / Email as appropriate	When final version completed	The author must inform staff of their duties in relation to the document.
All staff within area of management	Heads of Departments / Matrons	Meeting / Email as appropriate	As soon as received from the author	Ensure evidence of dissemination to staff is maintained. Request removal of paper copies

To be disseminated to	Disseminated by	How	When	Comments
				Instruct them to inform all staff of the policy including those without access to emails

13. IMPLEMENTATION AND TRAINING PLAN

This document references current practice and will be reviewed annually by all relevant staff.

14. PLAN TO MONITOR THE COMPLIANCE WITH, AND EFFECTIVENESS OF THE TRUST DOCUMENT

14.1. Process for Monitoring Compliance and Effectiveness

Audit / Monitoring Criteria	Process for monitoring e.g. audit, survey	Audit / Monitoring performed by	Audit / Monitoring frequency	Audit / Monitoring reports distributed to	Action plans approved and monitored by
Local Procedures	On going review	Internal peer review	Annually reviewed	Ear Care and Audiology Clinical Governance Group	Lead ear care nurse Head of service
Staff Awareness	On going with annual update	Lead ear care nurse Head of service	Annually reviewed	Ear Care and Audiology Clinical Governance Group	Lead ear care nurse Head of service

14.2. Standards/Key Performance Indicators (KPIs)

None