EAR CARE EXAMINATION GUIDLINES FOR COMMUNITY PHARMACY EAR CARE PILOT

This document provides clinical guidelines and evidence based practice for Registered Pharmacists performing ear examination under the requirements set out in the supporting Ear Care service specification. All healthcare professionals must exercise their own professional judgement when using these guidelines. However, any decision to vary from the guideline should be documented in the patient's records to include the reason for variance and the subsequent action taken.

INTRODUCTION

Wax (cerumen) is a normal secretion of the ceruminous gland. A small amount of wax is normally found in the ear canal, and its absence may indicate that excessive cleaning, dry skin conditions or infection has interferred with the normal production of wax.

It is only when there is an accumulation of wax that removal may become necessary. In order to ascertain whether removal by irrigation, OTC, Prescription medication or further assessment is necessary, a full initial assessment must be undertaken which includes examination of the ear with an otoscope. The ear care documentation below must be used to undertake assessment in conjunction with Pharmoutcomes. Registered Pharmacists who have undertaken Ear Care Training by Rotherham Ear Care can undertake ear examination, using the pathway, without prior examination by a General practitioner.

Each practitioner that undertakes this procedure must consider the disease processes that may indicate caution is required and the need for additional information about the patient and their treatment.

DEFINITIONS AND ABBREVIATIONS

Areas of tympanic membrane - Pars flaccida, Pars tensa, Anterior recess, Light reflex ,Handle of malleus

Audiology - field of health care that deals with hearing and balance disorders

Aural Toilet (also known as Dry mopping) - a procedure used to clear the External auditory meatus of debris, discharge, soft wax or excess fluid following irrigation, using cotton wool.

Aural speculum - A funnel shaped piece of plastic on a light source (otoscope) that is inserted into the auditory canal of the ear, allowing the examiner to look at the ear canal and ear drum.

Cerumen (Ear wax) - a normal wax-like substance that protects the ear canal

Cerumenolytics - agents that soften hardened cerumen (earwax) and make it easier for it to be removed from the ear.

Ear Nose and Throat (ENT) - the area of medicine that deals with disorders and conditions of the ear, nose, and throat

Ear irrigation (formerly known as ear syringing) - a routine procedure used to remove excess earwax, or foreign materials from the ear

External auditory meatus- (EAM) also known as the ear canal- a tunnel running from the outer ear to the middle ear

Grommets - a tube surgically implanted in the eardrum to drain fluid from the middle ear.

Hygroscopic foreign bodies - (eg: peas and lentils) will absorb water and expand making removal difficult.

Mastoid process - a large, bony prominence on the base of the skull behind the ear, containing air spaces that connect with the middle ear cavity

Microsuction - a wax-removal technique using a binocular operating microscope (which allows depth-perception and magnification) to look straight into the ear canal and a very fine sterile suction device at low pressure to remove the wax.

Otitis Externa - inflammation of the external auditory meatus

Otoscopy - an examination that involves looking into the ear with an instrument called an otoscope (or auriscope). This is performed in order to examine the ear canal– the tunnel that leads from the outer ear (pinna) to the eardrum.

Pinna - the projecting part of the external ear

Tinnitus - the word 'tinnitus' comes from the Latin word for 'ringing' and is the perception of hearing sound in the absence of any corresponding external sound.

Tragus - a cartilaginous projection anterior to the external opening of the ear.

Tympanic membrane (TM) - also known as the eardrum - a thin membrane that serves as a partition between the external ear and the middle ear, and transmits the motion of sound waves to the small of bones in the middle ear.

Vertigo - a sensation of dizziness and loss of balance, associated with disease affecting the inner ear or the vestibular nerve.

FOR INFORMATION: CONTRAINDICATIONS TO IRRIGATION

N.B. The following list is not exhaustive, clinical decision making is dependent upon taking a thorough assessment of the patient and examination of the ear canal.

- The patient has previously experienced significant complications following ear irrigation in the past e.g. perforation, severe vertigo.
- There is a diagnosis of middle ear infection in the past 6 weeks
- The patient has undergone any form of ear surgery (this excludes grommets that have extruded at least 18 months ago and the patient has been discharged from Ear, Nose and Throat services) The patient has current perforation (it is acceptable to irrigate the non affected ear if there are no abnormalities).

- The patient has a cleft palate (whether repaired or not)
- The patient has acute otitis externa with pain and tenderness around the pinna
- Patient is currently taking warfarin therapy and their most recent INR is above their target range
- Acute undiagnosed hearing loss that is not related to the accumulation of ear wax
- The patient has had mastoid surgery
- The patient is confused or agitated
- The patient is unable to cooperate or tolerate the procedure
- Presence of non hygroscopic matter such as peas, lentils, cotton ear buds

Ear irrigation should be used with caution in patients with:

- Tinnitus
- Healed perforation
- Dizziness

PROCEDURE FOR EAR EXAMINATION

Equipment for Ear Examination: Otoscope & disposable speculae

ACTION	RATIONALE
To promote continuity of care and patient safety.	To avoid mistaken identity
Introduce yourself as a staff member and any colleagues involved at the contact	For patients to know who they are seeing, to promote mutual respect and put patients at their ease
Explain procedure to patient including risks and benefits and gain valid consent.	To ensure client understands procedure and relevant risks
Before careful physical examination of the ear, listen to the patient, elicit symptoms and take a history. Explain procedure thoroughly	To allow patient to make an informed decision and gain cooperation
Establish patient has no known allergies, check in patients records (PMR & SCR) and also ask patient/ family of any known history	To reduce allergic reactions
Decontaminate hands prior to procedure	To reduce the risk of transfer of transient micro-organisms on the healthcare workers hands
Examine pinna, outer meatus and adjacent scalp	Evidence of surgical intervention, infection, discharge, swelling, scarring and signs of skin lesions may be evident
Choose appropriately sized single use speculum	To prevent damage to the ear canal

Gently palpate the tragus then pull the pinna upwards and outwards	To straighten the ear canal If this is painful do not continue, as pain may indicate infection / inflammation
Hold the otoscope like a pen and rest the small digit on the patient's head as a trigger for any unexpected head movement Insert the speculum gently into the ear canal. Use the left hand for the left ear and the right hand for the right ear.	To undertake visual assessment and reduce the risk of trauma
Attempt to view the tympanic membrane, and the external auditory meatus (EAM) observing for any abnormalities. The ear cannot be judged to be normal until all the areas of the membrane are viewed: the light reflex, handle of malleus, pars flacida, pars tensa and anterior recess. Refer to section 'Do not use irrigation to remove wax for people with the following'	Irrigation should only be carried out to facilitate the removal of cerumen, keratin and debris from the ear canal, in the presence of no abnormalities. NB Check if your surgery still irrigates as some don't
If the presence of wax inhibits examination of the tympanic membrane the wax removal may be necessary	To ensure full examination of the ear
Observe condition of skin when withdrawing otoscope and note the presence, amount, colour and consistency of any wax present.	Subsequent advice and treatment is dependent on condition of wax present
Dispose of single use speculum	To ensure speculum cannot be reused
Decontaminate hands after procedure	To prevent spread of micro-organisms.
Document observations of both ears on the ear care assessment form (Appendix 1)	Ensure compliance with NMC and local record keeping guidelines
If any abnormality is found ensure an appropriate referral is made in line with local policy	To promote continuity of care and patient safety.

MANAGEMENT OF EAR WAX

Cerumen, or wax as it is commonly known, is a normal secretion of the ceruminous glands the external auditory meatus (EAM), which is generally thought to be protective to the ear. It is slightly acidic, giving bactericidal qualities in both its wet, sticky form (as secreted by Caucasians and African-Caribbeans) and dry, flaky form (as, for example, secreted by people from South East Asia).

In addition to epithelial migration, jaw movement assists the movement of wax to the entrance of the ear canal 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 excessive wax that removal may need to be considered.

A build-up of wax is more likely to occur in older adults and patients with learning difficulties (reason unknown), 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, or it can give rise to tinnitus, hearing loss, vertigo, pain and discharge. If wax is removed due to the presenting complaint of hearing loss, it is important to ascertain whether good hearing is restored after treatment, or consider if the patient would benefit from a formal assessment by the ENT surgeon or Audiologist.

Following assessment and examination 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 as it is the softening agent with least likelihood of causing irritation. The practitioner may decide that extended use of olive oil is preferable to wax removal procedures, please discuss with GP surgeries how they like this to be dealt with locally.

Patients should always receive education and advice, to help them to give informed consent for any procedures, and written advice in the form of a patient leaflet may reduce contributory factors and therefore the need for future ear irrigation or intervention (see Appendix 9).

	LEFT EAR		**RIGHT EAR**	
AURAL RISK ASSESSMENT RECORD	YES	NO	YES	NO
History of tympanic perforation, if yes please detail?				
Cleft Palate?				
Diagnosed middle ear infection in past six weeks?				
Does the patient have history of hearing loss that is not related to the excess production of wax?				

	LEFT EAR		RIGHT EAR	
Have there been any previous ear irrigation/ microsuction or significant problems previously with ear irrigation? e.g perforation / severe vertigo after procedure / other? Please state:				
Discharge other than waxy discharge?				
Is there a recent history of dizziness, nausea, vertigo or ear surgery e.g. mastoid, grommets?				
Tinnitus or menieres disease?				
Is the patient currently taking Warfarin, and is their last INR within range?				
Unable to cooperate with the procedure?				
Have wax softening agents been used alread? If so how much, how often and for how long?				
Date of Assessment:	Name of Pharmacist:			

	LEFT EAR		RIGHT EAR	
CLINICAL ASSESSMENT RECORD	YES	NO	YES	NO
Pain in or about ear when moving pinna? Please state:				
Swelling in or around the ear?				
Evidence of impacted wax which requires further oiling? Please state amount and colour:				
Tympanic membrane visible? Light Reflex seen? Intact? If no describe perforations and enter on diagram.				
Dry skin/scaling/ erythema? Please state:				
Discharge/ Oedema/Pain? Please state:				
2nd Examination only - Have Olive oil drops been instilled as recommended? (minimum of 5 days).If the patient has not undertaken appropriate preparation then give advice and rebook appointment for one week				

	LEFT EAR	RIGHT EAR
Visual of TP		
Date of assessment:	Name of Pharmacist:	

EAR CARE ADVICE FOLLOWING OUTCOME OF ASSESSMENT

WAX BUILD UP

Olive oil has been shown to be less irritant in some individuals, so it is first line choice for hard and soft wax build up. Olive oil should be at room temperature. Advise patient/ carer to insert olive oil into the affected external auditory canal: Insert 2-3 drops/spray, 2-3 x per day, for a minimum of 5-7 days. Advise patient to lie on unaffected side, if possible, while olive oil is inserted using a dropper, and to remain on side for 5 minutes afterwards. Advise patient not to put cotton wool in to ear after olive oil has been inserted, as the cotton wool absorbs the oil which could lead to ineffective wax softening. Care must be taken not to advise any products that may contain nut oils, such as almond oil, if a patient has a nut allergy, to avoid risk of anaphylactic reaction.

Patients should be re-assessed, and ears re-examined after 5-7 days, and consider if any further intervention is required, and document rationale for any procedures being reccommended on referral form. If further wax softening is required prior to further intervention the patient could be advised to continue with olive oil.Patient should be advised that the only reason for carrying out ear irrigation is when hearing is reduced due to wax impacted on the eardrum. Regular or routine irrigation is not recommended.

Advise patients that wax protects the ear and that the ear is self-cleaning and does not need poking with flannels and direct streams from the shower head or cotton buds or keys. Ear candles are not a safe option of wax removal as they may result in serious injury. To prevent build-up of excessive wax, if this is a recurrent problem, it may be helpful to instil olive oil in to the ear canal once or twice a week and wear ear plugs when in water.

OTITIS EXTERNA

Otitis externa is extremely common. Predisposing factors are scratching of the external canal with cotton buds or other implements and narrow external auditory canals. A particularly important factor is wet ears (humid climates, swimming, syringing without drying the canal, frequent hair washing or lying in the bath to wash the hair). Whatever the predisposing factor, the skin of the external auditory canal becomes oedematous. Otalgia, otorrhoea and a blocked sensation in the ears with a mild hearing loss are common in the acute stage. In the chronic form itching is a frequent complaint. It is essential that debris in the ear canal is removed so that the ear drops can penetrate effectively, the patient may need to be referred for suction clearance. Systemic antibiotics are not usually required unless there are signs of associated lymphadenitis, perichondritis or cellulitis. Advise the patient to keep the ears dry and not to insert implements. For recurrent mild conditions, proprietary diluted acetic acid (Earcalm) can be used in primary care to prevent the condition progressing. Follow Earcalm Protocol.

RECURRENT ACUTE OTITIS MEDIA (RAOM)

Approximately 40% of children will suffer one or more episodes before the age of 7 years. At least 85% will resolve within 72 hours without treatment and it is uncommon in adults. A significant proportion of children with RAOM failing medical management appear to have a partial maturational IgA deficiency. Children with RAOM may require long-term low-dose antibiotic treatment or grommet insertion until they grow out of the condition. Grommet surgery in children with RAOM can prevent infection, pain and the need for antibiotics. Earache, hearing loss and a red bulging drum prior to tympanic membrane rupture. The child may be irritable with a fever and sickness. After rupture there will be relief of pain and a purulent discharge.

Advise on analgesia such as a combination of ibuprofen and Paracetamol. Encourage nose blowing.

REFERRALS

Any referrals to health professionals must follow the guidelines provided, be followed up with a phone call and all professional advice or guidance documented in the patients Pharmoutcome record.

REFERRAL GUIDELINES

This guideline will provide information on the management of the following common conditions which can affect the ear, and when to refer to the General Practice for referral on to the local ENT department:

- Wax Impaction
- Otitis Externa
- Recurrent Acute Otitis Media
- Otitis Media with Effusion (Glue Ear)
- Dizziness
- Tinnitus

- Deafness

Wax Impaction

Refer to GP requesting the routine ENT clinic if there is difficulty removing the wax despite olive oil. Refer if a patient is uncooperative or there is uncertainty about the condition of the tympanic membrane. The local ENT department may have a direct referral ear care clinic. Patients will require microsuction if contraindications to irrigation exist.

Otitis Externa

Refer if there is persistent discharge or pain, diagnostic doubt about the condition of the tympanic membrane or if the patient is immuno-compromised or a poorly controlled diabetic as there is a risk of “malignant “ otitis externa (temporal bone osteomyelitis). If the skin of the external canal is so swollen that drops will patently not enter the canal, then a dressing or wick may need to be inserted.

Dizziness

If the symptoms are from the inner ear then the patient will describe a hallucination of movement, usually rotational in nature and frequently accompanied by nausea, vomiting and nystagmus. Mèniére’s syndrome consists of a triad of episodic vertigo, associated tinnitus and a fluctuating hearing loss. In benign paroxysmal positional vertigo (BPPV), short-lived episodes of rotational vertigo usually occur when turning over in bed. Loss of consciousness is unlikely to be caused by inner ear problems. All patients presenting with dizziness should be referred to the GP as they are out of the scope of this service.

Tinnitus

Tinnitus is the sensation of sound which does not come from an external source. Tinnitus is a troublesome and common condition which is not always curable. It can occur in any age group but is more common with increasing age. Persistent tinnitus occurs in about 10% of the population. It is essential to exclude serious pathology (such as an acoustic neuroma if the tinnitus is unilateral) and then to treat and to support the sufferer as best one can. Tinnitus affects people in different ways. On the one hand it may be non intrusive, or on the other hand it can contribute to suicide. Most patients recognise the link between their level of emotional and physical stress and the perceived “loudness” of the tinnitus. All patients presenting with tinnitus should be referred to the GP as they are out of the scope of this service.

Adult Deafness

Sudden-onset conductive hearing loss (usually unilateral)

After URTI / air flights / diving. The patient is unable to ‘pop’ the ear (no movement of the drum on performing the Valsalva manoeuvre). There may be the appearance of fluid behind the drum. The bone conduction is better than air conduction in that ear. Advise to decongest the nose and encourage auto-inflation of the ears. If there are continued problems despite nasal treatment then refer to a routine GP appointment.

Sudden–onset unilateral sensori-neural hearing loss

The patient will usually report suddenly going deaf in one ear. There is a normal looking tympanic membrane. Treatment remains controversial because of the lack of high quality evidence. Many doctors in the UK use a short course of prednisolone, possibly combined with antivirals. Spontaneous recovery is seen in 50% of patients. All patients presenting with this should be referred to the GP within a week as they are out of the scope of this service.

Presbyacussis (age related hearing loss)

A symetrical, gradual, high frequency hearing loss in old age. Referr to GP and request direct referral to the audiology department should be used if this facility exists. If the hearing loss is asymetrical then refer routinely to ENT as further investigations may be required to exclude an acoustic neuroma. All patients presenting with this should be referred to the GP as they are out of the scope of this service.

Recurrent Acute Otitis Media (RAOM)

Referr if unresolved after three days to prescribe amoxicillin or erythromycin. If antibiotics are prescribed the length of the course should be reviewed after three days. If treatment fails with the first line antibiotics, prescribe co-Amoxiclav or Clarithromycin. When to refer: Refer to a routine ENT clinic if:

a) there is a failure of the infection to resolve despite the above treatment.
b) there is a persistent perforation.
c) there are more than 6 attacks in one year for a period of more than one year.

Otitis Media with Effusion (OME) ‘Glue Ear’

85% of children experience glue ear at some stage. 50% will resolve spontaneously within three months. Peak ages are two and five years and a hearing assessment quantifies severity. Winter, URTIs, child care settings and passive smoking are accepted environmental risk factors. There will be a noticeable hearing impairment and/or speech and language difficulties and behavioral problems. There may be an association with recurrent acute otitis media. The key features on examination are a drum that appears dull, retracted or poorly mobile. There may be an air-fluid level or bubbles visible behind the tympanic membrane.

Treatment includes reducing exposure to cigarette smoke. Persistent effusions do not respond to oral decongestants or mucolytics. Treatment of rhinitis may be appropriate and helpful. Auto-inflation of the eustachian tube has been shown to produce short term improvement in older children. Generally, a three month period of watchful waiting is recommended prior to referral. If the condition persists and there is a clinically obvious effect on speech, language, learning or behaviour, then children over 3 1/2 years may benefit from adenoidectomy and/or ventilation tube (grommet) insertion.All patients presenting with this should be referred to the GP as they are out of the scope of this service.

Refer children to the routine ENT clinic if there have been 8-12 weeks of hearing problems, associated speech delay or behavioural problems (4 weeks if the child has other disabilities making correction of the hearing loss more urgent). Referral should take into account parental concerns or those raised by the school or health visitor.

Refer adults urgently if there is no history of URTI or barotrauma and especially if oriental (higher risk of nasopharyngeal carcinoma).

Adapted from: A Guide to the Referral of Common ENT Conditions Paul Harkness Consultant ENT Surgeon Rotherham General Hospital Revised 2011