

## Care and Treatment Plan: Ceruminosis (Impacted Cerumen) – Adult

### Definition

An accumulation of cerumen causing symptoms and/or preventing a needed assessment of the ear.<sup>1,2</sup>

Registered Nurses with **Remote Nursing** Certified Practice designation (RN(C)) are authorized to manage, diagnose, and treat adults with ceruminosis (impacted cerumen).

**Note:** A *consultation* refers to the RN(C) collaborating with members of the care team, such as a physician, nurse practitioner, or pharmacist, to support decision-making processes related to the diagnosis, treatment, and management of the diseases, disorders, and conditions that the RN(C) are authorized to diagnose, treat, and manage. A *referral* is when an RN(C) refers a patient to a medical care provider for further treatment, care, or management. This occurs when patients are presenting with symptoms outside of what is provided in this document, including symptoms that require urgent referral.

### Management and Intervention

#### Goals of Treatment<sup>1</sup>

- Alleviation of symptoms
- Removal of cerumen necessary for ear assessment

Cerumenolytic treatment or irrigation cannot be used for patients who have a history of recurrent ear infections, otologic surgery, including tympanostomy tubes, or if there is suspicion of tympanic membrane damage or perforation.<sup>1,2</sup>

#### Cerumen Removal

##### **Cerumenolytics – softening or emulsifying cerumen:**<sup>1,3</sup>

5-10 drops of the chosen cerumenolytic solution should be instilled twice daily for up to four days. Clients can receive cerumenolytic treatments from the clinic or apply them themselves at home.

All clients should follow up with the clinic for assessment and otoscopy following cerumenolytic treatment, as in some cases, the solution can become trapped behind cerumen and cause irritation or damage to the skin of the ear canal.<sup>1</sup>

The cerumenolytics listed below have similar efficacy in comparison to no treatment. The following is a list of common ceruminolytics:<sup>1,4</sup>

- Water or saline solutions
- Mineral oil
- Hydrogen peroxide
- Carbamide peroxide
- Docusate sodium

**Note:** Peroxide liquids (hydrogen or carbamide) should not be used in clients with dryness or excess exfoliation, as it may exacerbate those concerns and increase cerumen accumulation.<sup>1</sup>

**Note:** Clients may inquire about complementary and alternative medical (CAM) treatments. However, CAM treatments may not be supported by empirical evidence and may cause harm. Client education regarding recommended treatment options is important.<sup>1,5</sup>

##### **Irrigation:**<sup>3,6</sup>

Improper technique and excessive pressure during irrigation of the ear canal can result in perforation of the tympanic membrane and cause middle ear damage. RN(C)s must use a device that has a regulated pressure per square inch (PSI) and is indicated for cerumen removal, such as an “Elephant Ear” syringe.<sup>7</sup>

##### **Contraindications:**<sup>2,3</sup>

- Patients who are unable or unwilling to sit still

- History of middle ear disease, ear surgery or inner ear problems, including vertigo
- A perforated or suspected tympanic membrane perforation
- Typanostomy tube(s)
- Foreign body presence in the ear
- Opening to the mastoid
- Severe otitis externa

### **Use of “Elephant Ear” Irrigation Tool:<sup>1</sup>**

- Straighten the ear canal by pulling up and posteriorly on the auricle
- The tip of the irrigation tool should only be inserted up to one-third the depth of the ear canal (no more than 8mm)
- Irrigate with warm water upwards within the ear canal until cerumen is cleared, paying careful attention to patient comfort and tolerance of the procedure
- After the cerumen is cleared, examine the patient using an otoscope to evaluate the success of the procedure and assess for other concerns, including the condition of the ear canal and tympanic membrane
- Discard the disposable tip of the “Elephant Ear” – do not reuse

**Note:** Manual manipulation of the external ear may cause Vagus nerve stimulation and cause a reflex cough or gag.<sup>1,3</sup>

**Note:** Water used for irrigation should be close to body temperature to promote patient comfort and reduce the risk of causing vertigo.<sup>1,3</sup>

### **Special Considerations:<sup>1,6</sup>**

- Individuals with HIV, immunocompromise and/or diabetes are at higher risk for bacterial growth post-irrigation—sterile water or saline for these clients is recommended
- Clients on anticoagulant therapy are at higher risk of hemorrhage or subcutaneous hematomas post-irrigation
- Additional care should be taken for high-risk populations, and a referral for treatment may be required for patients with underlying risk factors
- All high-risk clients should be scheduled for follow-up post-irrigation

### **Debridement:**

Manual debridement can only be done by a physician or nurse practitioner.

### **Potential Complications of Irrigation<sup>1</sup>**

- Allergic reaction (cerumolitics)
- Otic water retention related to incompletely removed cerumen can lead to maceration and increased risk of infection
- Vertigo or dizziness
- Otitis externa
- Tympanic membrane perforation

### **Client Education and Discharge Information<sup>1,3,7</sup>**

- If asymptomatic, cerumen does not need to be removed as it has protective, emollient and bactericidal properties
- Explain treatments and expected outcomes, and risks
- Avoid use of cotton swabs for ear cleaning due to increased risk of impaction (or inserting other objects into the ear)
- Return to the clinic if no improvement or if symptoms return

### **Monitoring and Follow-up<sup>1,7</sup>**

- Return to the clinic if symptoms persist for 24-48 hours

- All high-risk clients (i.e., diabetes, HIV, anticoagulant therapies) should return to the clinic for follow-up
- Return to the clinic if new or worsening symptoms, including bleeding or discharge

## Consultation and/or Referral<sup>1</sup>

- RN(C)s should consider consultation or referral when they are unable to meet the BCCNM RN(C) practice standard: *Acting within Autonomous Scope of Practice.*<sup>8</sup>
- Consult or refer to a physician or nurse practitioner if ceruminosis is complicated or an underlying pathology is suspected (including tympanic membrane rupture), the condition does not respond to treatment, or if debridement is required
- Urgent consult if necrotic tissue is noted on assessment<sup>9</sup>

## Documentation

According to agency policy and BCCNM standards.

## References

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