Preventing Cerumen Impaction in Nursing Facility Residents

Attention to the hearing health of residents is necessary to maintain their functional independence and psychosocial well-being.

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Miss F is pleasant enough, but staff report that she rarely follows directions, and lately they "practically have to yell at her to do anything." She has been labeled as uncooperative.

Mr. P seems withdrawn and declines invitations to participate in diversional activities. His family reports that he used to love music. They are concerned about this change in him. He has been labeled as depressed.

Miss T believes people are talking about her. She has become verbally hostile toward her family, roommate, and staff. She has been labeled as paranoid.

Scenarios such as these are not uncommon in nursing facilities across the country. When labels such as "uncooperative," "depressed," and "paranoid" are placed on residents, orders for psychotropic drugs or the implementation of behavior modifications measures can occur. While these actions may be appropriate in certain situations, there may be one very simple explanation which has been overlooked. Perhaps the resident simply cannot hear.

Nurses should ask themselves this question: When was the last time the resident’s ears were examined? If the answer is "I don’t know," it is possible that an "uncooperative," "depressed," or "paranoid" resident has a cerumen impaction causing a debilitating, yet treatable, hearing impairment.

Cerumen (ear wax) impaction is a common, easily treated cause of hearing loss in people of all ages, but particularly in older adults. Nearly 35% of community-residing older adults have cerumen impaction in one or both ears (Mahoney, 1993), and the incidence in institutionalized older adults is believed to be much higher.

Hearing is essential to self-maintenance activities, independence, cognitive processes, communication, and safety. When cerumen impaction is superimposed on presbycusis (i.e., the hearing loss often associated with aging), the effect on individuals’ functional independence and psychosocial well-being is significant.

To varying degrees, many nursing home residents are dependent on nursing staff to meet their bathing and hygiene needs. Care of the ears and attention to hearing acuity may not necessarily be at the top of the priority list. However, nurses in long-term care facilities are in a unique position to have a positive impact on residents’ quality of life by establishing protocols for assessment, treatment, and prevention of cerumen impaction (Ney, 1993). Examination of the ear canal for cerumen impaction has been recommended as part of routine preventive health care screening programs for older adults (Beers, Fink, & Beck, 1991). This article will review how a cerumen impaction develops and the proper technique for examination of the ear canal. In addition, commonly used treatments of cerumen impaction will be described. Finally, suggestions for preventative measures will be offered.

WHAT IS CERUMEN?

A cerumen impaction is an accumulation of wax that partially or completely fills the external auditory canal. Cerumen is produced by the body to protect the ear canal and tympanic membrane from infection. It serves to lubricate the ear and prevent itching. The normal jaw motions of chewing and talking usually rid the ear of cerumen. However, as individuals age, a stif-
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EXAMINING THE EAR

It is important to correlate a suspected hearing deficit with the qualitative and quantitative findings an accurate history, hearing test, and ear examination will yield. Obtain the resident's history for ear disease including infections, previous impaction, and perforated tympanic membrane.

Inspect the auricle (outer ear) for lumps, lesions, and deformities. Examination of the ear canal and tympanic membrane is performed with an otoscope. Nurses should familiarize themselves with the otoscope, select a speculum attachment which is an appropriate size for the resident's ear canal, and use a clean, disposable speculum cover. The otoscope light should be turned on before the instrument is placed in the resident's ear. Hold the otoscope body in the dominant hand and place the ulnar surface of the hand on the resident's jaw, occiput, or temple. This positioning helps stabilize the otoscope in the event the resident's head moves. Most adult ear canals are angled anteriorly and inferiorly. Gently pulling the pinna upward and outward (with the opposite hand) will allow a better view of the tympanic membrane. Enter the ear canal approximately ½ inch with the speculum. Inspect the canal for cerumen build-up, foreign bodies, redness, swelling, or discharge. If cerumen is not obstructing the view, the normal tympanic membrane will appear pearly gray to white in color. If there is a cerumen impaction, the presence of the obstruction will obscure the view of a possible tympanic membrane perforation. Treatment of cerumen impaction in the presence of a suspected perforated tympanic membrane is best performed by a nurse practitioner or physician to avoid further damage to the eardrum or introduction of an infection. Observe, document, and report findings.

HEARING TESTS

A number of reliable screening tests are available to assess hearing acuity. The most accurate tests involve pure tone screening, but these require special equipment such as tuning forks or an audiometer, and staff need to be specially trained to obtain reliable results (O'Rourke, Britten, Gatschet, & Krien). The simplest hearing screening test which could be conducted in a nursing facility is the Whisper Test (Swan & Browning, 1985). The test should be performed in a relatively quiet area, free from extraneous sounds and interruptions. Instruct the resident to repeat the test words or phrases (e.g., double digit numbers, two-syllable words, or a sentence). Ask the resident to cover one ear (repeat the following steps for the opposite ear). Stand behind the resident, approximately 1 foot from the ear to be tested and whisper the test words or phrases. If the resident is unable to hear the whisper, the hearing should be retested using a normal speaking voice at the same distance (1 foot). Inability to hear the whispered words at a distance of 1 foot indicates a slight hearing impairment. An inability to hear the spoken voice at a distance of 1 foot suggests severe hearing loss. Unfortunately, the Whisper Test (Swan & Browning, 1985) offers only gross findings. Any abnormal results (especially in the absence of cerumen impaction) should be followed by a referral for audiometric testing. Document and report findings.

REMOVING CERUMEN FROM THE EAR CANAL

The two common methods for removal of cerumen from the ear canal are:

- Curet.
- Lavage or irrigation.

Because of the risk of tympanic membrane perforation or damage to the lining of the ear canal, the curet method should only be performed by a nurse practitioner or physician. The lavage or irrigation method may be performed by licensed nursing staff with a physician order and if facility policy and procedure permits. Neither curet nor lavage or irrigation removal of cerumen should be attempted if a perforated tympanic membrane is present or suspected.

The lavage or irrigation method is simple to perform and will remove all but the most stubborn
cerumen impaction. The necessary equipment which is commonly available in nursing facilities includes: 20 cc irrigation syringe, sterile water for irrigation (use sterile saline for diabetic residents), a collection basin, and towels. Some of the literature suggests the use of a dental or oral irrigation device on the low setting is helpful in breaking up the cerumen plug (Zivic & King, 1993). Always make sure the irrigation water is body temperature (37°C as tested by a thermometer) because any variation can cause vertigo, nausea, and vomiting from stimulation of the inner ear.

The nurse should explain the procedure to the resident and ask that they not move their head. If needed, an assistant can hold the resident's head during the procedure. Fill the syringe with warmed water, expelling the excess air. Drape the resident's shoulder with a towel and turn the resident's head to the side. Ask the resident or an assistant to hold the basin up to the ear to collect the irrigated solution.

The tip of the syringe should be placed just inside the external auditory opening so the tip is still visible. The auricle should be gently pulled upward and to the back to straighten the external auditory opening. Direct the flow of water toward the posterior wall of the auditory canal. Ensure proper fluid direction by comparing the perimeter of the auditory canal to a clock face. For the left ear, the fluid should be directed toward the 1:00 position, 11:00 for the right ear (Zivic & King, 1993).

The irrigation fluid can be delivered in either a gentle, steady flow or in short, quick bursts (as with a dental or oral irrigation device). As the irrigation solution flows behind the cerumen plug, small or large pieces may begin to flush out of the ear canal. Examine the ear canal periodically during the irrigation. Stop the procedure immediately if the resident complains of pain, nausea, or vertigo. After the irrigation, examine the ear canal with an otoscope for the presence or absence of the cerumen plug. Excess fluid can be drained by tilting the resident's ear toward the affected side. The external ear canal can be dried with a cotton-tipped swab.

If irrigation alone does not remove the cerumen impaction, instilling a wax-softening agent for 2 to 5 days prior to repeating the irrigation may be necessary. Mineral oil is a good solution to use. It is inexpensive, available over the counter, and nonallergenic. If facility policy allows, and with a physician's order, instill as much as ½ mL mineral oil into the ear(s). In some cases, the softening agent will cause the cerumen to drain out of the ear. If it does not, lavage or irrigation steps may be repeated as previously described.

After the cerumen impaction has been removed, retest the resident's hearing. If there is little or no improvement in hearing acuity, further evaluation by an audiologist or ear, nose, and throat specialist may be indicated. Document and report the findings.

NURSING IMPLICATIONS

Nurses in skilled nursing facilities are in an excellent position to take a proactive role in maintaining the hearing health of their residents. By establishing a program of regular otoscopic ear examination for residents in the nursing facility, cerumen impaction and the accompanying hearing deficits can be minimized or prevented. A Whisper Test (Swan & Browning, 1985), otoscopic examination of the ears, and an aural history should be part of every new resident's admission assessment. Cerumen impaction should be reported to the attending physician and treated per orders. Cerumen impaction should be included on the resident's written care plan. Thereafter, ear examinations can be part of the residents' 90-day evaluations. Any observed accumulation of cerumen can be treated with a softening agent. Standing orders or protocols allowing nursing staff to treat cerumen before an impaction occurs will decrease the risk of lavage or irrigation trauma. This also can decrease the potential for social isolation and mental status changes which often accompany hearing deficits. The outcome is residents who are able to communicate better with loved ones and staff and participate in activities of daily living.

REFERENCES


