AMERICAN ACADEMY OF OTOLARYNGOLOGY–HEAD AND NECK SURGERY FOUNDATION

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TOPICS, TRENDS, & SCIENCE WITH YOUR PEERS

Adult Sensorineural Hearing Loss

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AAO-HNSF Otology and Neurotology Education Committee

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Find a time to gather with your peers (online or in-person) for a table-talk exercise using the questions written by expert faculty to facilitate a robust discussion. Discuss how the education activities included in this section will improve your: clinical knowledge, clinical competence, clinical performance, patient outcomes, or other aspects of your otolaryngology practice.

At the end of the activity, complete the assessment to earn credit.

Lin FR, Pike JR, Albert MS, Arnold M, Burgard S, Chisolm T, Couper D, Deal JA, Goman AM, Glynn NW, Gmelin T, Gravens-Mueller L, Hayden KM, Huang AR, Knopman D, Mitchell CM, Mosley T, Pankow JS, Reed NS, Sanchez V, Schrack JA, Windham BG, Coresh J; ACHIEVE Collaborative Research Group. Hearing intervention versus health education control to reduce cognitive decline in older adults with hearing loss in the USA (ACHIEVE): a multicentre, randomised controlled trial. *Lancet*. 2023 Sep 2;402(10404):786-797. doi: 10.1016/S0140-6736(23)01406-X.

Discussion Questions

1. What are three hypothesized mechanisms through which hearing loss could increase the risk for dementia and cognitive decline?

2. What are the two study populations of this study and the difference in observed rates of cognitive change?

3. While the hearing intervention did not reduce 3-year cognitive decline in the primary analysis of the total cohort, in which study population did the hearing intervention showed a significant effect?

4. The authors theorize that a slower rate of cognitive decline in one cohort could explain the lack of a significant effect. What might explain the slower rate of cognitive decline?

5. What are the limitations of previous observational studies that have suggested hearing loss treatment might have beneficial effects on reducing cognitive decline and dementia?

Breslin NK, Varadarajan VV, Sobel ES, Haberman RS. Autoimmune inner ear disease: A systematic review of management. *Laryngoscope Investig Otolaryngol*. 2020 Nov 28;5(6):1217-1226. doi: 10.1002/lio2.508.

Discussion Questions

1. While there are no widely accepted diagnostic criteria for autoimmune inner ear disease, what diagnostic criteria do most studies adhere to?

2. What are the laboratory evaluations for autoimmune inner ear disease?

3. What are the treatment options for autoimmune inner ear disease?

4. If hearing loss progresses after systemic and or intratympanic steroid administration, what are additional treatment options available to patients?

Zwolan TA, Schvartz-Leyzac KC, Pleasant T. Development of a 60/60 Guideline for Referring Adults for a Traditional Cochlear Implant Candidacy Evaluation. *Otol Neurotol*. 2020 Aug;41(7):895-900. doi: 10.1097/MAO.0000000000002664.

Discussion Questions

1. What is the 60/60 referral guideline for identifying patients who should be referred for a cochlear implant candidacy evaluation?

2. What is the detection rate if the 60/60 referral guideline is used as a screening measure for cochlear implant candidacy evaluation?

3. In terms of testing hearing, how is a cochlear implant evaluation different from that of routine audiometric evaluation?

Tsai Do BS, Bush ML, Weinreich HM, Schwartz SR, Anne S, Adunka OF, Bender K, Bold KM, Brenner MJ, Hashmi AZ, Keenan TA, Kim AH, Moore DJ, Nieman CL, Palmer CV, Ross EJ, Steenerson KK, Zhan KY, Reyes J, Dhepyasuwan N. Clinical Practice Guideline: Age-Related Hearing Loss. *Otolaryngol Head Neck Surg*. 2024 May;170 Suppl 2:S1-S54. doi: 10.1002/ohn.750.

Discussion Questions

1. How often, and by what means, should clinicians assess communication goals with patients?

2. How often should clinicians retest hearing in patients with known hearing loss or with reported concerns for changes in hearing?

3. What are examples of genetic polymorphisms that may be risk factors for age related hearing loss?

4. What are chronic medical conditions that influence the development and progression of age-related hearing loss?

5. Which Key Action Statements are considered Strong Recommendations?

6. Which one Key Action Statement is considered an Option only?

Marx M, Mosnier I, Venail F, Mondain M, Uziel A, Bakhos D, Lescanne E, N'Guyen Y, Bernardeschi D, Sterkers O, Deguine O, Lepage B, Godey B, Schmerber S, Bonne NX, Vincent C, Fraysse B. Cochlear Implantation and Other Treatments in Single-Sided Deafness and Asymmetric Hearing Loss: Results of a National Multicenter Study Including a Randomized Controlled Trial. *Audiol Neurootol*. 2021;26(6):414-424. doi: 10.1159/000514085.

Discussion Questions

1. What is the definition of single-sided deafness (SSD) versus asymmetric hearing loss (AHL)?

2. What are the treatment options for patients with SSD/AHL?

3. What are auditory challenges faced by patients with both conditions?

4. What did the authors find in terms of the binaural performance in those patients with CI versus observation, and how do they explain their findings?

5. What did the authors report in terms of quality-of-life improvement in those patients in the “CI” arm, and what is a limitation of their finding?