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- Call 800-753-2160 (M-F, 8 AM-8 PM ET)
- Email customerservice@AudiologyOnline.com



Grand Rounds at USD

- Lindsey Jorgensen AuD PhD
- Jessica Messersmith PhD
- Marni Johnson Martin AuD
- Agelia Stout AuD
- Michelle Novak BS
- Ashely Price BS



Learning Outcomes

- Describe the difference between fitting the audiogram and fitting the patient.
- Describe the impact of hearing aid choice on patient outcomes.
- Describe potential plans of action for clinicians who are unsure of what to do without seeming unqualified.

Disclosures

- The views expressed here are that of the authors and not
 - The Department of Veterans Affairs
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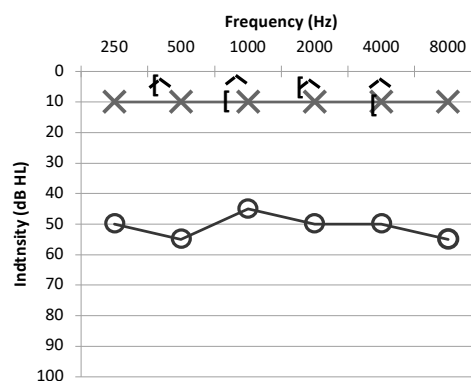
Format

- Each clinician will present their case
- Discussion will follow about concerns that they have/had

Lindsey Jorgensen

History

- 25 year old nurse
- Primary complaint – hearing loss right ear
- Primary concern – hearing stethoscope
- Mom has same hearing loss
 - Has seen ENT – otosclerosis
 - Declined surgery
- Went to another clinic
- Fit with RIC with power dome – within the last month or so



Concerns

- Started with a power dome?
- Gave her a RIC? – concerns were stethoscope
- How listen to stethoscope
 - Stethoscope options
 - Traditional
 - Traditional with different tip
 - Amplified

What Happened

- She contacted first clinic
 - Attempted to trade
 - Attempted to return
 - DENIED
- Returned to our clinic
 - Contacted company
 - Trade – RIC for CIC
 - Fit with new aid
 - Verified and Validated
 - Gave new tips for stethoscope

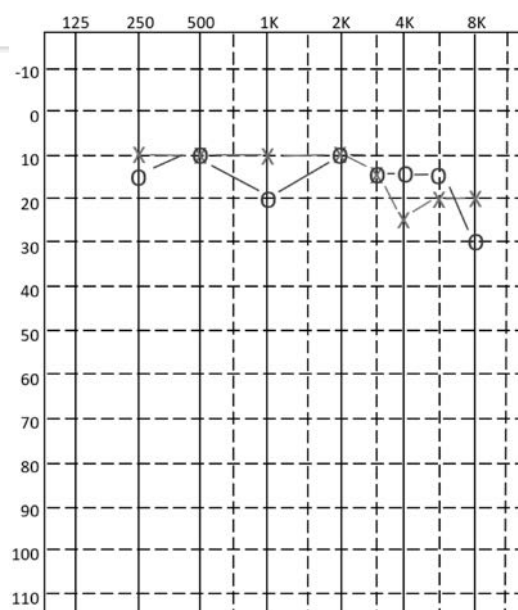
Questions

- How to explain to patient my concerns without undermining
 - Profession
 - Other professionals
- How to do this all without causing discord with our colleagues

Michelle Novak

Meet Colonel Mustard

- 58 y/o male; referred to the USD Speech and Hearing clinic from VA Healthcare Center for a CAPD evaluation
- Primary Concern: Feels socially isolated due to hearing difficulties
- Medical History of TBIs
- Otoscopy: WNL Bilaterally
- WIN: Mild difficulty As, Ad, & Au



Colonel Mustard's CAPD Results

- Competing Sentences & Dichotic Digits
 - Not WNL and left ear deficit noted
- Dichotic Rhyme, Time-Compressed Speech, and Frequency Patterns
 - WNL
- Dx: Weakness in areas of binaural separation and binaural integration

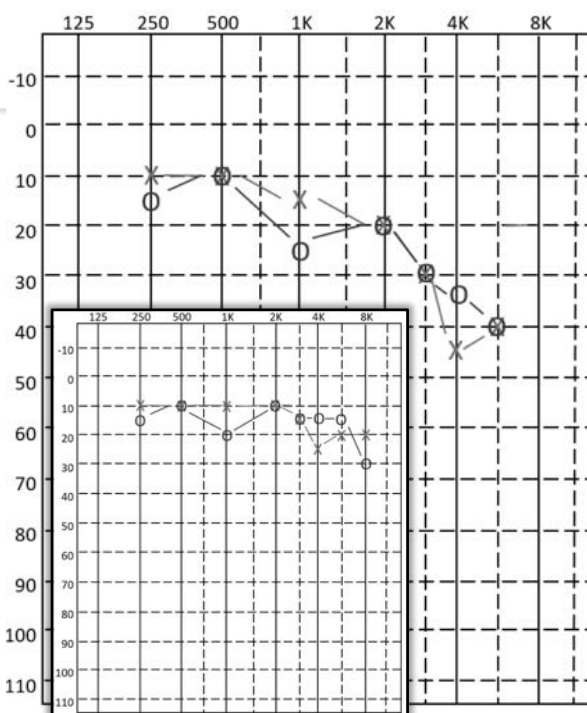
Dichotic Listening Therapy

- Plan
 - Home-based dichotic listening therapy
 - 30-45 minutes for 6-8 weeks
 - Alternating target ear every two weeks
- Follow Up:
 - No improvement on behavioral tests
 - Colonel Mustard reported little benefit
 - Referred to Dr. Jorgensen



Low Gain Hearing Aids

- Counselling on current research at USD where other former military personnel have reported benefit from low gain hearing aids.
- Fit hearing aids to provide extra high frequency cues.
 - Thin tube BTEs
 - Phone Clip
 - Remote Mic
 - Verified and Validated



Hearing Aid Follow Up

- Colonel Mustard returned to the clinic for a two week follow up after the fitting.
 - Highly satisfied with the aids.
 - Wife reports reduced frustration.
 - Overall improvement in quality of life.

Ashley Price

Patient A

- Background
 - HA user bilaterally
 - Diagnosis of Early On-set Alzheimer Disease in 2017, but have experienced mixed diagnosis from different specialists
- Diagnosis
 - Bilateral moderately severe to severe SNHL

Patient A

- Being a new clinician
 - This is an established patient, just new to you
- Arrived to appointment with spouse and daughter
 - When considering cognitive impairment, and its confounds on hearing, who is my patient ?
- Treatment
 - Daughter & spouse report dictated appointment.
 - Pt was not aware of anything going on in the appointment. She could not report if the changes in the sounds were beneficial or made situations worse.
 - No difference in communication with devices vs. without devices
 - Cognition impairment limits benefit we expect to gain from hearing devices

Patient A

- How do new clinicians develop rapport with a pre-existing patient
- How does a clinician develop rapport with a patient that has cognitive impairment?
 - Is it the patient, the family, or both?
- When we provide services until end of life, we ultimately provide services for caregiver burden.!
 - How much of caregiver burden services are our responsibility?

Marni Johnson Martin

History

- Male, 55 years old, moderate intellectual disability
- Referred on multiple hearing screenings performed at the center supporting him
- No staff concerns re: hearing
- Ready to pursue a comprehensive hearing evaluation

Diagnosis

- Mild to moderate SNHL w/ cookie bite configuration in the right ear and a mild SNHL in the left ear

Recommendations/Treatment

- Discussed with patient
- Full-shell ITE for right ear
- Staff and individual counseling. Encourage independence, but ease anxiety.
- Video modeling
- Collaboration

Considerations

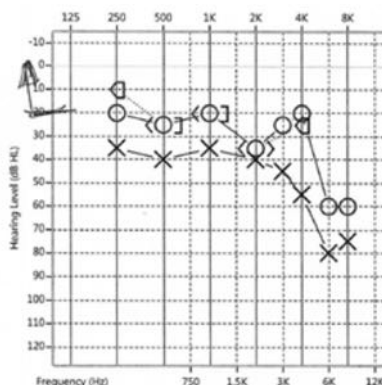
- How do you get buy-in from non-familial caregivers or direct support professionals?
- How do you convince people that communication is as important if not more important than other “medical” needs?



Aggie Stout

Izzy 66yr old Female

- Medical Hx
 - Head Trauma- 11/2009
 - Stood up too quickly, got “fuzzy” and passed out. She has a concussion with subsequent vomiting, diarrhea, and true vertigo
 - Head Trauma- 11/2017
 - Stood up too quickly got “fuzzy”, passed out. Hit the left side of her head. Vomiting, diarrhea and true vertigo
 - Continues to have severe dizziness on a daily basis.
 - Is unable to drive, scan items when shopping, socialize, or go out to eat at restaurants
 - Short term memory loss



Izzy

- Audiologic Hx
 - Tinnitus Au (buzzing). Started with the onset of first concussion 4 years ago. Tinnitus does get worse during dizzy episodes.
 - Reports some intermittent left ear pain.
 - Audiogram from 01/04/2010 indicated an asymmetric mild to moderate mixed hearing loss in the left ear and a mild high frequency SNHL in the right ear.
 - Audiogram from 06/27/2018 shows a general shift in hearing, specifically in the left ear from 4000-8000Hz
 - WRS 100% on NU-6 Au
 - WIN shows moderate difficulty Au
 - Denies concerns for hearing- understands she struggles - more focused on resolving her dizziness.

Other Medical Evals

- ER- Multiple ER visits that did not resolve issues
 - Was taught the at home Epley maneuver
- ENT- Saw ENT in conjunction with Audiology
 - ENT recommended VNG and imagining
 - Previous imagining normal CT and MRI
 - New imaging (including integrity of ossicular chain) suggested normal findings
 - VNG: completed out of house, indicated normal central and peripheral vestibular function.
- Neurology
 - Neurology suggests normal findings, and attributes her tinnitus and dizziness to her Hx of concussions
- Additional Referrals?

Hearing Aid Fitting

- RIC bilaterally
- Patient goals: Tinnitus relief and the sensation of feeling more balanced
- Originally fit to NAL-NL 2 targets
- Patient has complaints of sound being “overwhelming”.
 - Hearing aid adjustments
 - Adjusted attack and release times
 - Acceptance Manager
- Volume control?
- Tinnitus Management?

Where is she now?

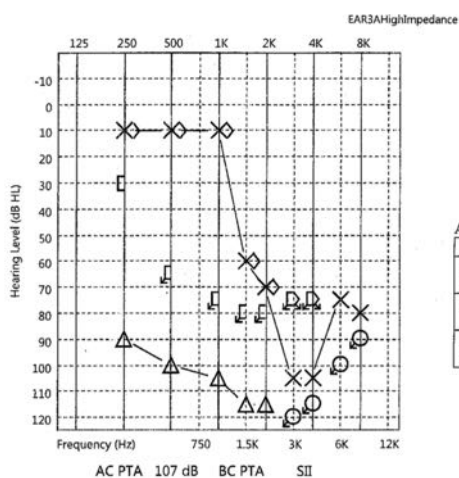
- Aided for 2 months
- Victories
 - She is regaining control of her dizziness
 - She recognizes she was missing out on a lot prior to hearing aids
 - Tinnitus has subsided when wearing aids
- Take away
 - Empathy goes along way
 - Celebrate the little victories
 - Did her hearing aids solve all of her problems?
 - What more could I have done?

Jessica Messersmith

History

- Male, 67 years old
- History of hearing loss since birth
- Previous CI work up at a different center in 2006
 - Hybrid CI was recommended
- Currently utilizes BiCros
 - Fit in July 2016
 - Occasionally prefers not to wear devices, especially in noisy situations
 - Discontinued use of right hearing aid ~5 years ago due to headaches
- Rupture of left tympanic membrane ~1 year ago
 - Noticeable change in hearing afterwards that never recovered

Audiogram



REF. ANSI S3.6 / IEC 60645-1

Ear	Test Type	Word List	%	dB HL	dB EM	Ear	Test Type	Word List	%	dB HL	dB EM
L	SRT	Spondee A		25		L	WRS	NU-6 LIST 2A	92	55	

Aided Test Results: Presented auditory only at 55 dB SPL unless otherwise indicated.

	Right (A ₄)	Left (A ₅)	Binaural (A ₆)
Az Bio (quiet, noise + 5 dB SNR)	26.3%	38%	34.3%
BKB-SIN	--	--	--
CNC word list (quiet, noise + 10 dB SNR)		56%	

Recommendations

- Discussed appropriate expectations of right ear implantation
 - Concern regarding viability of auditory nerve
- Look at online resources such as hearingjourney.com

Post Appointment Communication

- Will a cochlear implant aid in ability to use phone effectively?
- Would a OID be an option?



Thank You