

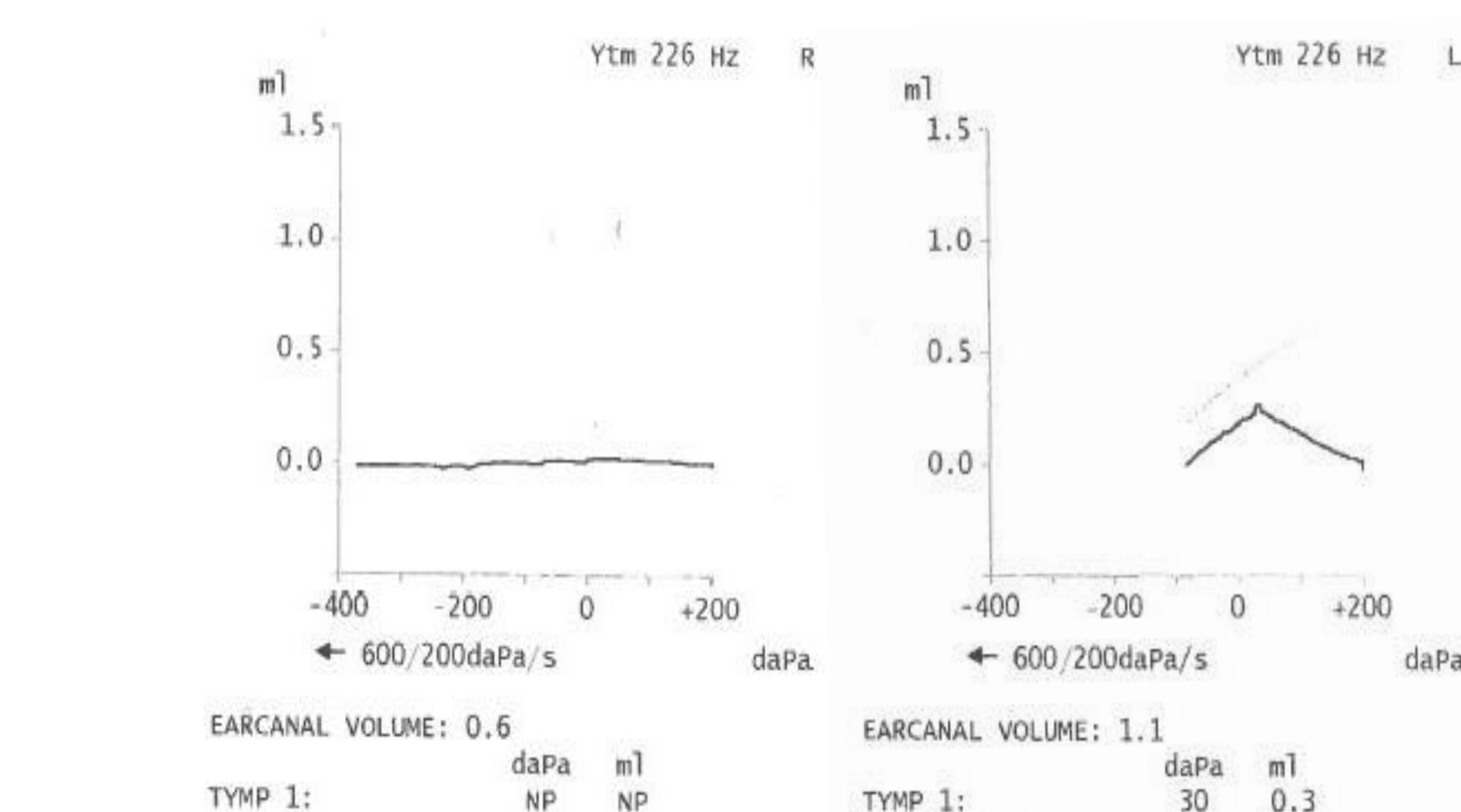
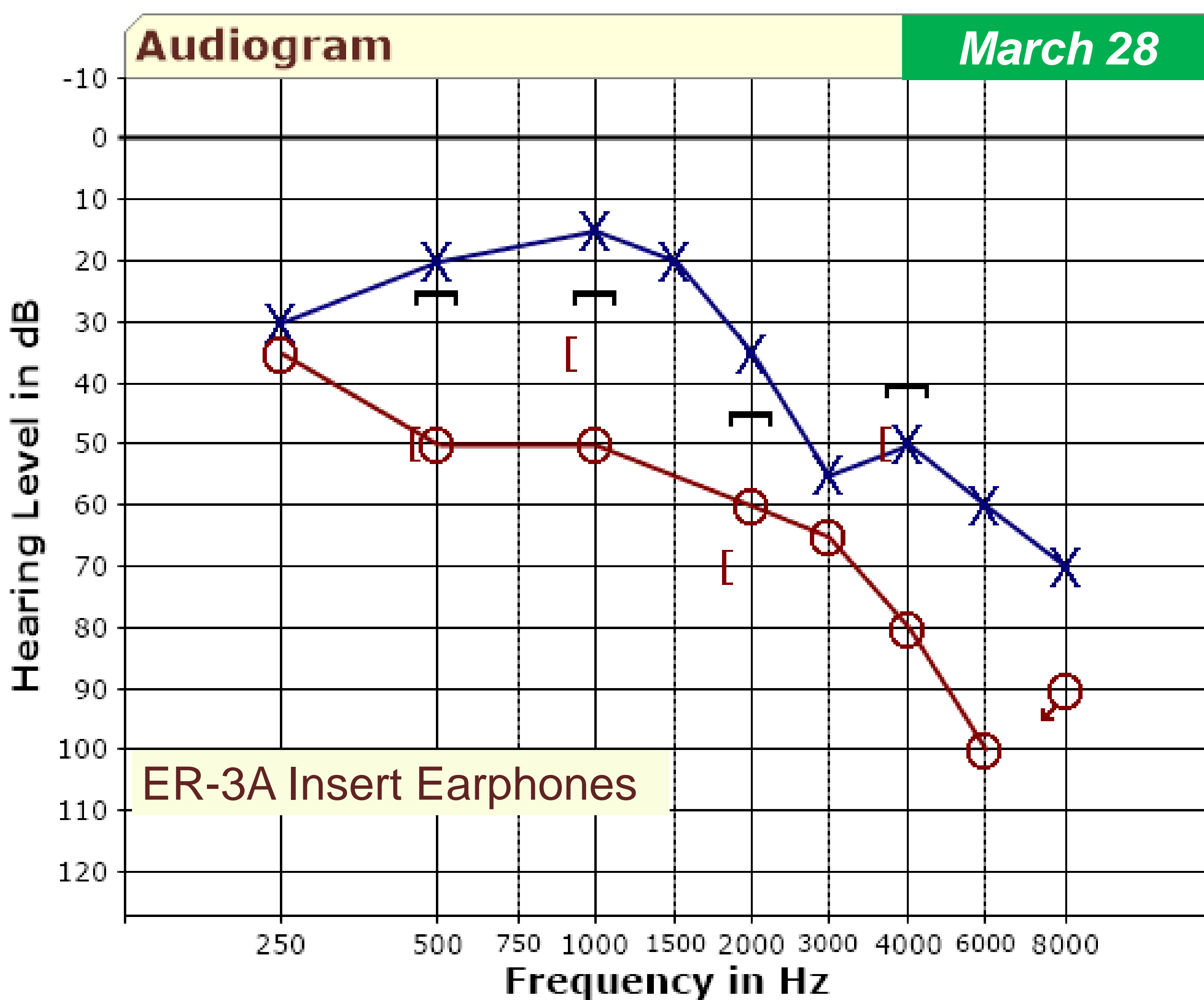
Resolution of Mixed Hearing Loss following Epithelial Debris Removal from the Tympanic Membrane

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Case Presentation

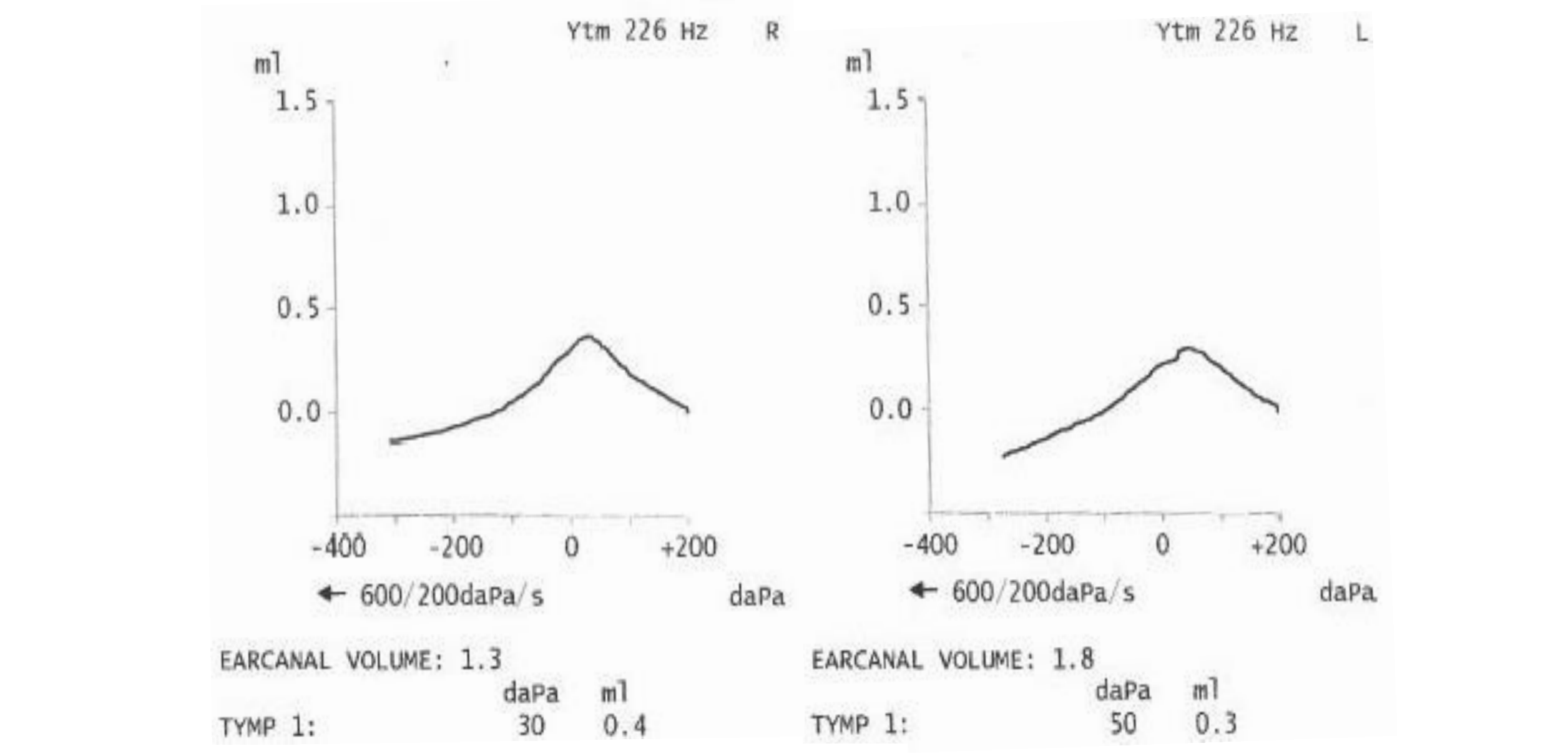
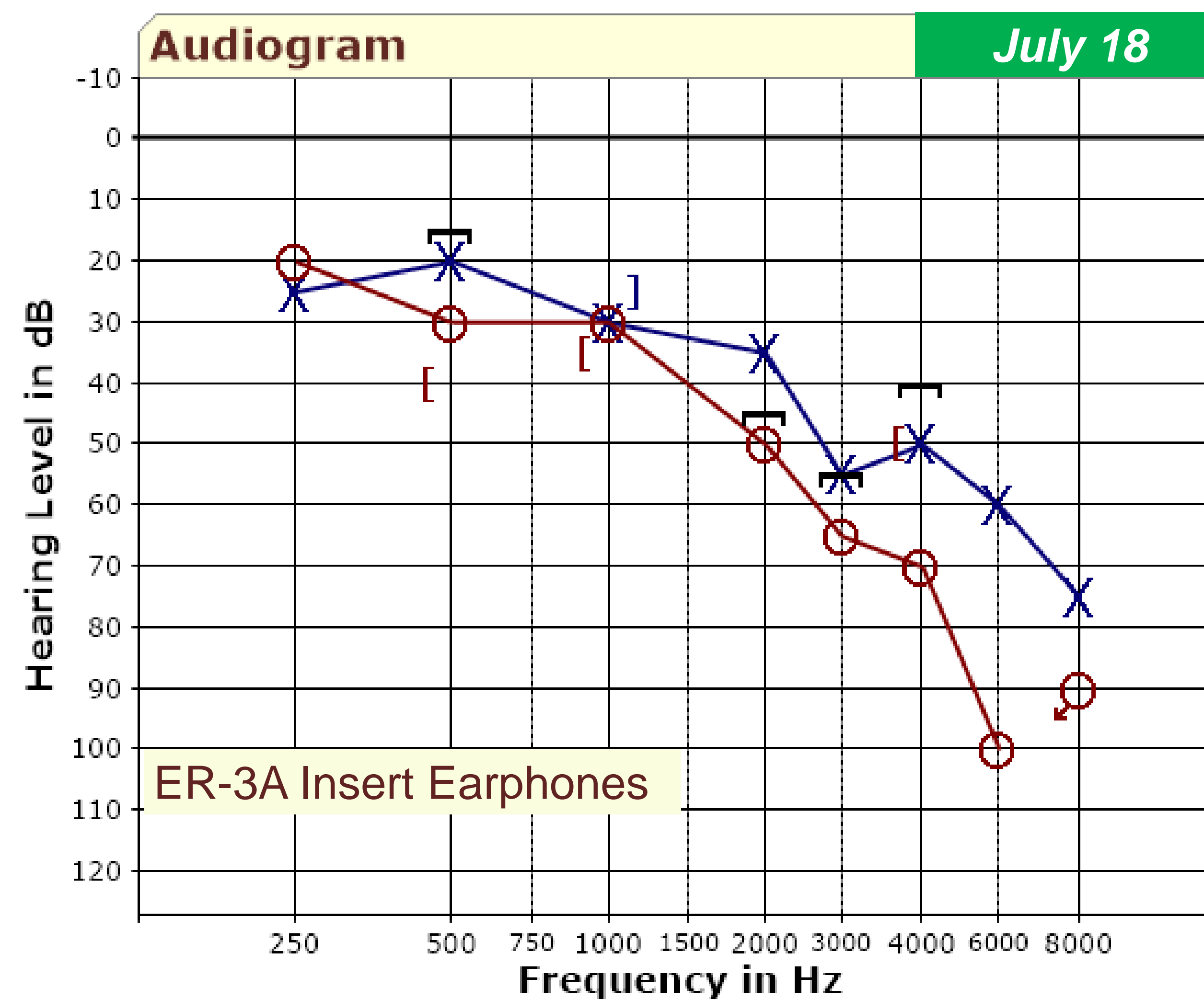
- 88 year-old female presented with:**
- Asymmetrical, mixed hearing loss
 - Intermittent right-sided tinnitus
 - No report of vertigo or ear surgery
 - Medical history significant for ataxia and GERD
 - Flat type B tympanogram for the right ear
 - Otосcopy revealed clear ear canals with easily visualized tympanic membranes bilaterally
 - Phonak Milo Plus CICs dispensed at another clinic
 - Aids did not match target and were reprogrammed
 - Ideal targets for the right ear could not be matched due to degree of mixed loss
 - Referral was made to ENT for medical management



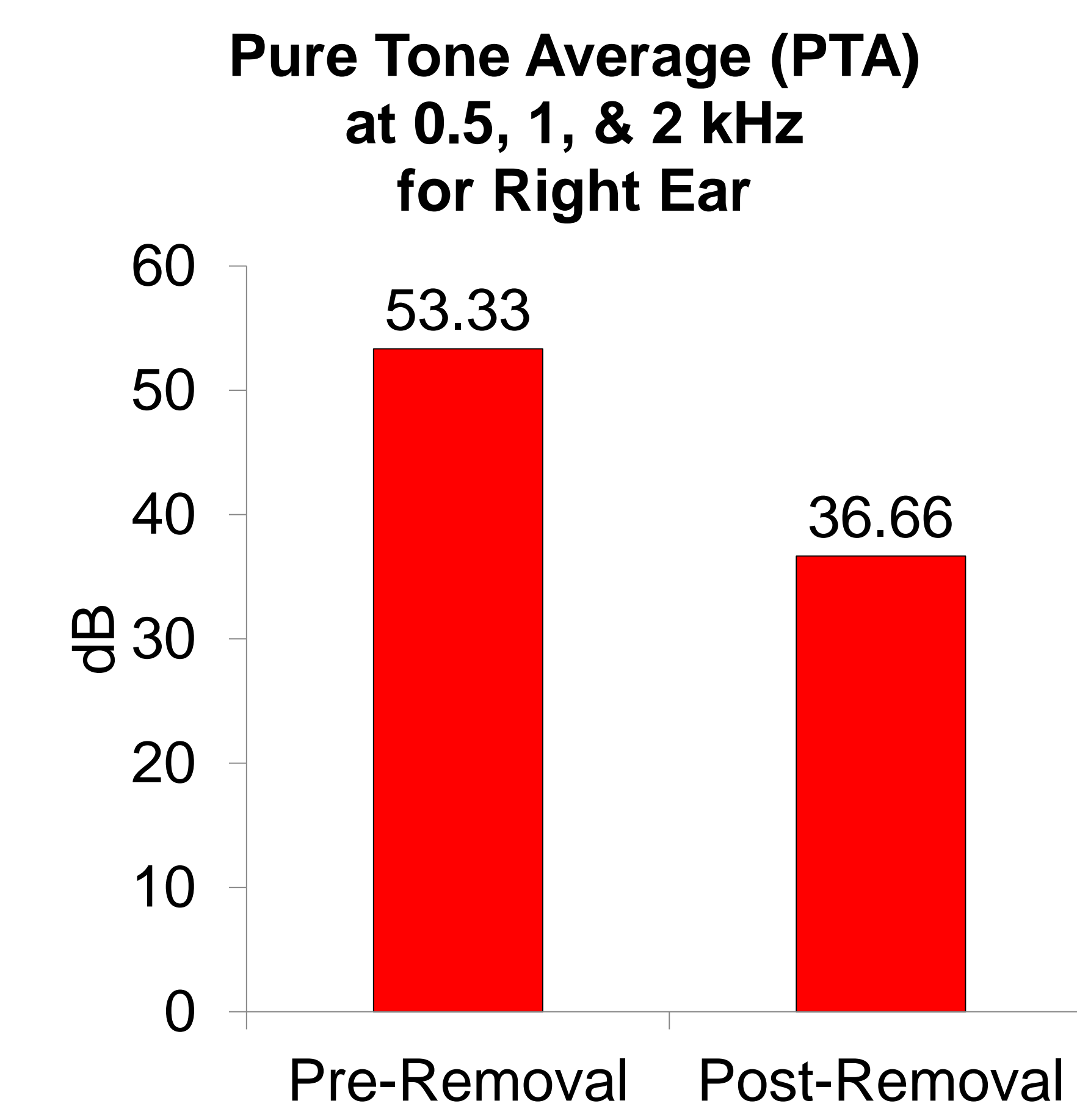
Case Resolution

- ENT Provider #1** April 19
- Right myringotomy – no fluid evident
 - Audiogram at ENT clinic revealed no improvement
 - Report stated “no answer to flat tymp and CHL”
- New hearing aid fitting** May 23
- Widex Unique 440 Fusion RIC hearing aids
 - Open dome – left ear
 - Custom, silicone mold – right ear
 - Patient reported significant hearing improvement
 - Patient expressed concerns about her ENT appointment so recommendation was made to see another ENT provider

- ENT Provider #2** June 21
- Right ear findings
- Negative Rinne, BC>AC; normal Weber
 - Prominent anterior overhang in canal
 - Debris build up medial to overhang
 - Tympanic membrane (TM) had abundant crusting and epithelial debris/cast adherent to TM
 - Debris was removed with alligator forceps and five suction with right angle hook
 - Immediately following procedure patient noted improvement in hearing
 - Positive Rinne, AC>BC



- Re-evaluation** July 18
- Right ear hearing improvement at 0.25-2 and 4 kHz and right tympanometry improvement
 - Symmetrical hearing from 0.25-1 kHz
 - PTA improvement by 16.67 dB
 - Hearing aids were reprogrammed
 - Acoustic coupling for right ear was changed from custom mold to open dome



Discussion

- This case demonstrates the possibility of mixed hearing loss resolution, necessity of ENT referral, and identification of a pathology that is not readily apparent by all ENT physicians.
- Instances of epithelial debris are rare in the literature.^{1,2} Some cases of other growths on the tympanic membrane have been reported including keratosis obturans,^{3,4} fibrosis,⁵ fibroma,⁶ paraganglioma,⁷ schwannoma,⁸ cholesteatoma,⁹ hemangioma,^{10,11} and squamous cell carcinoma.¹²
- Desquamation and epithelial migration have been discussed as well in the literature,^{13,14,15} but few cases have been reported¹⁵ involving mixed hearing loss and resolution as presented in this case.

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