

Otolaryngology and audiology: integrated and not separated subspecialties

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Audiologists and otolaryngologists are two similar professionals treating hearing loss and balance disorders. The overlap in their practice mandates that they should work together to give patients the most ideal individualized care.

There are a number of areas that require coordinated effort between them, which leads to superior and essential patient management. Early detection of childhood hearing loss, idiopathic sudden sensorineural hearing loss, tinnitus management, Meniere's disease, and cochlear implants (CI) are among the many disorders that need the best kind of audiologist–otolaryngologist partnership.

The best model of collaboration is seen in the field of CI. Preoperative candidate selection is a team decision: ENT physicians, audiologists, and phoniatrists. CI has a limited value in prelingual patients who have long-standing hearing loss and are using sign language. Medical or radiological contraindication to surgery is the responsibility of the ENT surgeon. Aided residual hearing with satisfactory speech intelligibility (perception and production) is measured by an audiologist. This fact highlights the importance of hearing aid use for a 3–6 months of intervals before the decision is taken to undergo surgery.

In case of progressive hearing loss, as in Usher's or enlarged vestibular aqueduct syndrome, the audiologist should alert the surgeon to the possible use of special type of electrodes. The recommendation of bimodal stimulation is another issue that needs effective communication in this regard.

The relationship between patients and physician audiologists postoperatively is an ever-lasting one, for device mapping, fine tuning, auditory training,

and outcome measures. The role of phoniatrists for enhancing and monitoring speech and language development and educational integration cannot be overlooked.

In good hands, CI surgery is a simple procedure but postoperative professional work shapes the future of the CI candidate.

Parents who have any concern about their child's hearing usually seek medical advice from ENT physicians. It is well known that hearing is not measured by a tympanogram. Although middle ear effusion is very prevalent and causes some degree of hearing impairment up to delayed language development, it may mask behind a significant degree of sensorineural element. Audiologists perform sound field testing, age-matched speech audiometry, frequency-specific auditory brainstem response, or auditory steady state response to establish exact hearing thresholds. It is the audiologist's responsibility to recommend the appropriate management plan, either medical, surgical, or hearing aid fitting.

Central auditory processing disorders comprise another entity that is also prevalent in toddlers and primary school children and may reflect on language development and scholastic achievement. A child with Central Auditory Processing Disorders may present clinically as if he or she has conductive or sensorineural hearing loss. In this condition, the audiogram and tympanograms are usually within normal limits. Measurements of the

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central auditory abilities is the key for diagnosis and, subsequently, management.

In adults the story is less complicated with smaller grey zones that need collaborate decisions nevertheless; red flags are also present. Ear selection in otosclerosis is the decision of the ENT physician guided by the basic audiological findings. Poor cochlear reserve should not be measured by bone conduction thresholds only but rather by compromised speech discrimination. Comorbid endolymphatic hydrop if diagnosed pre-operatively would postpone surgery to avoid intra-operative Gusher.

Finally, intratympanic injection in Meniere's disease patients is another major concern. The choice of medication, either corticosteroids or gentamicin, is based upon many factors including pure tone and speech audiometry in both ears. Furthermore in cases of intractable vertigo, vestibular assessment

must be done before chemical labyrinthectomy to avoid ablation of the only ear with functioning vestibular end organ.

The bottom line is that viewing audiology–otolaryngology issues from a political perspective is the wrong approach and it only builds barriers between the two specialties. The political issues should be subjugated for the larger issues of patient care. Both specialties need to target ignorance and lack of awareness of diagnostic and treatment options. As advances drive and develop both the otolaryngology and audiology specialties, the best coordinated effort later on will include preparing the youthful specialists and the cooperation between them for the best care of patients.

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