

dB estimation difference lines. All the threshold assessments (the two automated methods and the three observers) found that the whole rat population for this study falls into two clusters. This suggests that there is a small number of rats, 2 to 4 depending on the method or the observer, that are hearing impaired. **Acknowledgment:** Authors were supported by Universidad Central de Venezuela. and by the Venezuelan Foundation of Otolaryngology, Venezuela. **Key words:** Auditory brainstem response, linear regression, hearing impairment, hearing threshold. **Preferred type of presentation:** Oral presentation.

Cochlear implant in far advanced otosclerosis. performance-complications-long term results

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Abstract: Objective: To evaluate clinical characteristics of these patients, complications, and observation of the benefits of implants to medium and long term. **Design:** retrospective. **Material and method:** 32 adult patients, range age 50 years old, 22 women and 10 men, with profound neurosensorial hearing loss and otosclerosis far advanced, were treated with implants multi-channel cochlear implants (CI). 3 patients had initially stapedectomy in the same ear of the cochlear implant. All patients had a previous otological medical examination, psychological, audiometry and 0% of speech discrimination with well fitted hearing aid, CTS (4 of them with RMI) in order to determine hypodensity or morphologic changes within the cochlea. Clinical and audiological observations of their performance were analyzed. **Implants and n°:** Advanced bionics 4, Med-El 2, nucleus 26. The time of use of CI in the sample, was of 1 to 16 years. **Results:** CTS with morphologic changes in the cochlea in 24/32 patients (Rottevel's grading): 12 had type 2 (localized retrofenestral disease), 6 types 3 (retrofenestral diffuse). Full insertion inside the cochlea in 28/32 cases, where in 6 patients it was necessary to drill the bone in 4 to 6 mm in the tympanic basal turn of the cochlea. 4 patients had partial insertion of electrodes, one of them with 2 electrodes in the IAC and leakage of CSF (otosclerosis Type 3). 2 with stimulation of the facial nerve (FNS) (otosclerosis type 3) and was managed with deactivation of the offending electrodes and resetting the current levels for comfort level. 4 patients experienced diminution of the auditory skill in the time by failures of the device, where 3 were reimplanted, with upgrade of the same brand and they obtained improvement of the performance. Auditory diminution and presence of sudden episodes of tinnitus, with sensation of resounds, were observed in 5 patients (otosclerosis type 3), where in 1 the tinnitus diminished with fitting. Good discrimination in the speech in 26/32 patients. Mediocre performance in 5/6 patients (otosclerosis type 3) being good in one of them. **Summary:** Patients with far advanced otosclerosis demonstrated good performance with CI in 26/32 cases. In the cases with otosclerosis type 3, 5/6 patients had more difficulty in the insertion of electrodes, 1 of them with 2 electrodes within the IAC and leakage of LCR, and 5 of these recipients with tinnitus and poorer auditory outcome, with greater number of calibrations and adjustments in levels T and C. Only two patient, 2/32 had FNS and were in otosclerosis type 3 with straight electrodes. None with perimodiolar electrodes. **Key words:** Otosclerosis, stapedectomy, hearing loss, cochlear implant. Area: Otolaryngology, audiology, cochlear implants.

The role of subtotal petrosectomy in cochlear implantation

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Current standard cochlear implantation technique involves a transmastoid approach with posterior tympanotomy and round window or cochleostomy insertion of the array. Indications for cochlear implantation have widened over the years and nowadays include patients affected by diseases or situations in which the standard technique is unfeasible or contraindicated. Lateral or subtotal petrosectomy has been introduced years ago for CI in ear with chronic otitis and/or previous surgical procedures like radical or open mastoidectomy cavities. The key for successful implantation in these settings is complete elimination of the middle ear and mastoid cleft in order to obtain a disease free cavity without any communication with the outer environment reducing the risk for implant extrusion or infection. This goal can be achieved using a subtotal petrosectomy with blind sac closure of the external auditory canal and obliteration with abdominal fat. Subtotal petrosectomy gives moreover definite advantages in terms of surgical exposure, anatomic control with easy identification of surgical landmarks and CSF leak/gusher management. Complex situations like inner ear malformations, otic capsule fractures, revision surgery and cochlear ossification can be safely managed with CI using a subtotal petrosectomy with blind sac closure of the external canal. In this way, CI may also be a part of complex procedures like skull base surgery. It is important to emphasize the role of radiology in the follow up of patients treated by subtotal petrosectomy (with or without CI); while adding no or minimal adjunctive morbidity this procedure carries an intrinsic risk of iatrogenic cholesteatoma. Indications and intraoperative technical details of subtotal petrosectomy in CI patients will be described as well as postoperative and long term results. Subtotal petrosectomy is a safe and effective procedure that allows CI in almost all situations.

Implantes auditivos de conducción ósea percutáneo, transcutáneo: Comparación

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Introducción: Los implantes de conducción ósea son alternativas de rehabilitación auditiva disponibles para pacientes con hipoacusia conductiva/mixta o con sordera unilateral. Se observan ganancias auditivas con sistemas osteointegrados percutáneos; sin embargo, una de las dificultades reportadas es insatisfacción estética. Nuevos desarrollos tecnológicos han producido un dispositivo de conducción ósea transcutánea que procura resolver esta limitación con similares resultados audiológicos. **Objetivo:** Comparar y analizar desenlaces audiológicos, calidad de vida y percepción subjetiva de los beneficios auditivos en pacientes con hipoacusia conductiva y/o mixta o con sordera unilateral usuarios de uno de los dos sistemas de implantes de conducción ósea: sistema osteointegrado BAHA® o sistema activo de conducción ósea Bonebridge®. **Material y métodos:** Diseño prospectivo con usuarios de sistema transcutáneo y comparación con una muestra de usuarios del sistema percutáneo. Comparación de resultados audiométricos con y sin el sistema, encuesta de calidad de vida mediante inventario de beneficios Glasgow Benefit Inventory-GBI, escala de satisfacción con el dispositivo-HDSS, beneficio auditivo en lenguaje, espacial y cualidades del sonido-SSQ. **Resultados:** Se presentará el perfil y características demográficas de la población a estudio y los desenlaces propuestos en la metodología. **Discusión:** Este estudio permitirá evaluar y comparar los resultados en términos de desenlaces audiológicos, percepción de calidad de vida y satisfacción que los usuarios identifiquen con los dispositivos. **Conclusiones:** A la fecha nuestro estudio permite identificar alto grado de satisfacción en los desenlaces obtenidos con el dispositivo transcutáneo, especialmente en relación con el tiempo de adaptación necesario para apreciar beneficios, sumado a la aceptación cosmética y estética. Área de trabajo: Implantes auditivos de conducción ósea.