

(MCLB) is calculated for behavioral response. It measures the useful information about low-frequency hearing, it provides more information about the hearing of neurologically immature babies, it demonstrates the benefit of hearing aids, and give indication of uncomfortable loudness levels. The NRT/ART and MCLB were calculated for second, sixth, and eleventh electrode for different patients in our study.

**Result** Neural response threshold is better for rehabilitations then behavioral observation audiometry for CI patients. Mean value and standard deviation of auditory/neural response threshold were 10.23, 3.67; 11.27, 4.39; and 10.71, 3.88 at second, sixth, and eleventh electrodes, respectively. Mean value and standard deviation of most comfortable level for behavioral response were 20.49, 7.08; 21.26, 7.31; and 21.01, 6.03 at second, sixth, and eleventh electrodes, respectively.

**Conclusion** Neural response threshold is better for postoperative rehabilitations and MCL and THR vary with different electrodes and in different patients.

**Clinical Significance** Neural/auditory response threshold (NRT/ART) is much more significant and better for rehabilitations for cochlear implant recipient than most comfortable level for behavioral (MCLB).

#### A0031: Anatomy of Mesotympanum: Human Temporal Bone Study

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**Introduction** The medial wall of the middle ear has two windows, the oval window and round window. The oval window accommodates the foot plate of stapes, while the round window is covered by the round window membrane (RWM). There are no published studies to measure area of round window membrane. The purpose of this study is to know the variations in anatomy of mesotympanum, to know accessibility of round window membrane for cochlear implantation.

**Aims** (1) To study anatomy of posterior mesotympanum, inferior wall of round window (fustis), subiculum, operculum of round window.

(2) To measure the area of round window membrane.

(3) To measure angle of insertion of electrode.

**Methods** Formalin preserved human temporal bone were used. Through transmastoid facial recess approach, endoscope and microscope were used to identify structures in mesotympanum point where perpendicular drawn from superior most part of round window to vertical segment of facial nerve and tangent drawn from osseous spiral lamina to superior part of round window meet are used as a reference point. Molding material (Aquasil Soft Putty) used to procure three-dimension mold of round window membrane. Using caliper, measurements were performed and mean measurement was calculated. Under direct visualization, dummy electrode was inserted in anterior vector from reference point through facial recess.

**Results and Conclusions** More obtuse the angle of insertion, cochleostomy for electrode insertion. The area of round window was measured and tabulated.

#### A0032: Evaluation of Temporal Bone Cholesteatoma and the Correlation between High-Resolution Computed Tomography and Surgical Findings

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**Aims and Objectives** To study the role of HRCT in the preoperative evaluation of patients with cholesteatoma

**Materials and Methods** For the purpose of this study, a total of 60 patients attending outpatient department (OPD) and clinically diagnosed as squamosal type of chronic otitis media were included in the study. All the patients underwent a detailed history taking and clinical ENT examination. All otoscopic findings were confirmed by otomicroscopy. A preoperative HRCT of the temporal bone was done, using 128 slice GE CT scanner (VCT GE) in all the 60 patients. The selected patients then underwent tympanomastoidectomy via post aural route both under local and general anesthesia. Intraoperative findings were noted and preoperative HRCT findings were confirmed and compared with the intraoperative surgical findings.

**Result** Based on the findings, the present study concludes that preoperative HRCT has an excellent correlation with the intraoperative findings in detecting the location and extension of soft tissue and bony erosions for most of the structure except facial canal erosion and stapes where sensitivity was found to be low. Also, in this study, HRCT could not differentiate cholesteatoma from other pathology.

**Conclusion** The early identification of soft tissue and subtle bony erosions on HRCT helps the surgeon in planning the appropriate management and preventing impending complications.

**Clinical Significance** HRCT also serves as a tool in guiding the surgeon during surgery by giving prior information about the extent of the disease and associated bony erosions. Thus, HRCT of the temporal bone, as a preoperative investigation modality, is invaluable in the diagnosis and management of cholesteatoma.

#### A0033: Case Series of Veria Technique Cochlear Implant Done at Our Centre (VIMS and RC)

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**Introduction** Veria technique used for cochlear implantation is a technique involving endaural route for the cochleostomy with a transcanal tunnel drilled in posterior canal wall, it is a nonmastoidectomy technique which provides a wide visible area for performing the electrode insertion into cochlea.

**Case Presentation** Six prelingual deaf and mute children coming to our outpatient department within the age group of 2 to 5 years during 2011 to 2017 with preoperative assessment, which included detailed antenatal, intranatal, postnatal, and developmental history and speech assessment

including brainstem-evoked response audiometry, otoacoustic emissions, electroencephalogram, a complete clinical-psychological evaluation, and radiological assessment including HRCT temporal bone. All these patients had undergone a hearing aid trial with no significant benefit. Hearing improvement and patient response to speech therapy was noted in the postoperative period.

**Discussion** Veria technique also known as Transcanal technique, which can also be called as the minimally invasive technique for cochlear implant is a nonmastoidectomy technique done through endaural route for choleostomy with transcanal tunnel drilled in posterior canal wall using a specially designed perforator to make the tunnel in the posterior canal wall. Conventional methods have been effective as well but are more time consuming but are more prone to complications in patients with small facial recess and cochlear malformations and cochlear rotation. Veria technique can be performed in infants who have not yet developed mastoid completely. This technique can be used in cases of cochlear malformations and rotations with no damage to facial nerve.

**Conclusion** In the six cases operated, Veria technique prove to be a simple, safe, and effective method of cochlear implantation with postoperative speech therapy playing a crucial role.

#### **A0034: Comparison of Different Vascularized Tympanomeatal Flaps Used in Tympanoplasty**

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This will be a retrospective and prospective study of tympanoplasty where different vascular flaps of the ear canal will be utilized. The advantage of different tympanomeatal flaps in dry and self-cleaning ear with widest possible canal, as well as amplification obtain shall be studied.

In this study, patients with CSOM shall be selected and tympanoplasty surgery shall be performed. Patients will be followed up for 3 months for any complications.

#### **A0035: Surgical Management of Menière's Disease: Our Experience**

Harikrishan B.

**Introduction** Menière's disease, even though is a distressing condition, responds well to medical management. In patients with Menière's disease, refractory to intratympanic gentamicin and management with surgical options need to be assessed. Here, we are sharing our experience of surgical management of Menière's disease.

**Case Presentation** Patients, with Menière's disease, who are refractory to intratympanic gentamicin therapy were subjected to either endolymphatic sac decompression or vestibular neurectomy. During the past 10 years, we had around four to five patients per month with Menière's disease. All were managed conservatively. Out of these, six

patients were refractory to intratympanic gentamicin therapy. Among them, four patients underwent endolymphatic sac decompression. Complications encountered in one patient were hearing loss and CSF leak. Another patient developed vertigo after 7 years, who was conservatively managed. Two patients underwent vestibular neurectomy, of which one patient had wound infection and meningitis which was managed medically. All patients are on regular follow-up.

**Discussion** Surgical modalities like endolymphatic sac decompression, vestibular neurectomy and labyrinthectomy, definitely have a key role in management of refractory cases of Menière's disease.

**Conclusion** Although intratympanic gentamicin has revolutionized the treatment of Menière's disease, there are still refractory cases which can be managed with surgery efficiently.

#### **A0036: Screening of Hearing Impairment in High-Risk Neonates with the Use of OAE and BERA**

Latha Naik

**Introduction** WHO defines disabling hearing loss as: "hearing loss greater than 40 dB in the better hearing ear in adults (15 years or older) and greater than 30 dB in the better hearing ear in children (0 to 14 years)". Any problem with hearing could mean a severe impairment in language learning and speech formation abilities. Failure to detect and effectively manage hearing impairment in the first 6 months of life has been associated with substantial and irreversible deficits in speech, linguistic, and cognitive development, which can result in poor educational and vocational attainment in later life. The prevalence of congenital hearing loss has been reported to be 1 to 6 per 1,000 live births by American Speech Language Hearing Association.

**Aims and Objectives** Screening of hearing impairment in high-risk neonates with the use of OAE and BERA. The study was focused to identify children with profound SNHL in high-risk neonates. For the study babies admitted to NICU during the study period were screened through a three-stage screening process.

**Materials and Methods** The study was done at HBTMC and Dr. R. N. Cooper Municipal General Hospital, Vile Parle (west), Mumbai-56. The study population comprised all the high-risk babies born in HBTMC and Dr. R.N.C.H and admitted to NICU during the study period which qualified the inclusion and exclusion criteria mentioned in following sections. This was a prospective observational study.

**Methodology** Screening was done for neonates by DPOAE within 72 hours of NICU admission (OAE-1). Babies referred by OAE-1 were instructed to come back within 28 days of birth for repeat DPOAE test (OAE-2). Babies referred by OAE-2 were asked to come back after further 2 months for BERA.

**Conclusion** OAE and BERA are used globally for screening of newborn for hearing disability. This study found prevalence of profound SNHL as 5 in 410, which means 12.20 (or 12 on rounding off to nearest digit) per 1,000. This is much higher compared with prevalence of 1 to 6 per thousand live births among normal babies.