

**Case Presentation** A 70-year-old diabetic man came with complaints of severe left ear pain and left ear discharge for 2 months and headache and facial deviation for 1 week. On examination, he had tenderness over the tragus and pain on pulling the auricle. External auditory canal was edematous and granulation present. Deviation of angle of mouth toward right was noted. Minimal palsy of left side of soft palate was noticed. Computed tomography showed irregular lytic destruction in the left middle ear. We managed the patient with diabetic control, and broad-spectrum antibiotics through oral, intravenous, and topical routes. Patient was symptomatically feeling better.

**Discussion** Toulmouche in 1838, was the first to report a case of malignant external otitis. In 1968, Chandler described an aggressive clinical behavior, poor treatment outcome, and a high-mortality rate for the patients affected by this disease. MOE is an aggressive infection in the external auditory canal. It is more common in elderly males with uncontrolled diabetes. Imaging, like computed tomography, magnetic resonance, technetium bone scanning, and radioisotope scanning, helps in confirming diagnosis and extend of spread. Treatment is aggressive medical therapy with pseudomonal coverage. Early infections may be treated with an oral fluoroquinolone (ciprofloxacin), except for resistant organisms. More advanced cases may require parenteral antibiotics with diabetes control and regular follow-up. Hyperbaric oxygen therapy has been used as an adjunct to medical therapy. Surgical debridement of nonviable sequestra of bone is also done.

**Conclusion** The symptoms and line of management vary with stage at which we diagnose. The earlier it is diagnosed the better the prognosis. As it is a bone eating disease of skull base, it has all the dangers involved and thus requires an aggressive and quick treatment.

**A0028: Hearing Outcomes following Canal Wall down Mastoidectomies with Tympanoplasty**  
Architha Menon

**Aim** To determine the hearing status in post canal wall down mastoidectomies and comparison in hearing outcome following use of PORPs, TORPs and cartilage grafts, or a combination of all.

**Objectives** To measure the pure tone average values of patients' preoperatively and postoperatively and assess the improvement or decrement. To evaluate the efficacy of various materials used for reconstruction.

**Materials and Methods** Patients with chronic suppurative otitis media, atticofacial type in a tertiary institute between January 2013 and January 2018, who underwent canal wall down mastoidectomy with tympanoplasty. The study involved comparison of the pure tone audiogram values done as per standard care of treatment of patients who underwent canal wall down mastoidectomy. The efficacy of reconstruction material used was based on the hearing outcomes of the patient. Results were analyzed using appropriate statistical methods. Outcome measured based on the improvement or worsening of hearing parameters following surgery as per the audiogram values.

**Result** Hearing improvement was noted in significant percentage following canal wall down mastoidectomy. Further details shall be discussed during the presentation.

**A0029: Comparison of Microscopic and Endoscopic Myringotomy With or without Grommet**  
Ashish G. Rao

**Aims** Otitis media with effusion (OME) is a common middle ear condition in younger age group and if medical line of treatment fails, it is treated surgically by myringotomy which is usually done under microscope. As the use of endoscope in ear surgeries has increased in the past decade, we thought of doing myringotomy under endoscope and comparing its advantages and disadvantages over conventional microscopic procedure.

**Materials and Methods** Design: A time-bound descriptive nonrandomized study. Setting: tertiary care hospital. Patients: 33 children of age group 3 to 13 years suffering with OME, who failed medical treatment were included in the study. Methods: 18 underwent myringotomy ± grommet insertion under microscope, and remaining 15 underwent endoscopic procedure.

**Results** The primary outcome observed was time taken for the procedure which was more in conventional microscope group than that in endoscopic group. Additional observations like visualization of entire tympanic membrane without adjusting patients head and satisfactory clarity of view and depth perception were found to be better in endoscopic group.

**Conclusion** Less operative time, satisfactory depth perception, satisfactory clarity of field, and visualization of entire tympanic membrane without turning patient's head make myringotomy ± grommet insertion with endoscope a better alternative than with a conventional procedure.

**Keywords** otitis media with effusion, myringotomy, microscope endoscope

**A0030: Mapping of Pediatric Cochlear Implant Using Neural Response Threshold and Behavioral Observation Audiometry**

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**Aim** To measure the correlation between neural/auditory response threshold (NRT/ART) and most comfortable level for behavioral (MCLB), whichever is better for rehabilitation purpose and to calculate the impedance.

**Materials and Methods** Mapping may be done by various methods. We performed neural/auditory response threshold (NRT/ART) and behavioral observation audiometry (BOA). NRT/ART is the technique by which we measure the response from the auditory nerve using the hi-resolution bionic ear system. Neural response measurement depends on the neural tissue, stimulus used, and recording technique. BOA is used for observing motor response on presenting sound to the implanted child. Most comfortable level for behavioral

(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)**

Geetha N.

**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