

### **A0003: Audiological Effects of Occupational Noise Exposure in High-Risk Staff in a Tertiary Care Hospital in South India**

Anjali Lepcha,<sup>1</sup> Manju Deena Mammen,<sup>1</sup>  
Ann Mary Augustine,<sup>1</sup> Ajay Philip<sup>1</sup>

<sup>1</sup>Department of ENT, Christian Medical College, Vellore, Tamil Nadu, India

**Aims** To determine the audiological effects of long-term noise exposure in high risk groups of staff working in a tertiary care hospital in South India.

**Materials and Methods** This study was done as part of the newly established occupational health program in the hospital. Boiler section, Artificial Limb Center (ALC), Laundry department, Central Sterile Supply Department (CSSD), and Dietary department were selected for the study based on questionnaires from employees about perception about noise hazards in their areas of work. The questionnaire that rated the noise levels on a scale from 0 to 5, where 0 was no noise to 5 was intolerable, extreme noise. Based on this, sound levels were assessed in these areas during different times of the day. The result of this questionnaire and sound measurement prompted the hospital administration to take several measures. Awareness programs were held in these areas, audiological examination was done, and ear protection devices were given to all employees working in these areas. This study data have been retrieved from chart reviews of staff working in the five high-noise level areas and screened for hearing loss between March 2015 and October 2017.

**Results** The noisiest area in the hospital rated grade 5 was the boiler room with an average of 95 dB noise, followed by the CSSD, laundry, and dietary sections. One hundred and seventeen staff, 80 males and 37 females underwent evaluation by an ENT surgeon. Duration of noise exposure in these workers ranged from < 5 to > 20 years. Out of the 116 staff, who underwent pure tone audiometry, 66 had sensorineural hearing loss in either or both ears. Otoacoustic emissions were done on 73 staff, 23 had absent OAE bilaterally. There was significant association between CSSD workers and noise induced hearing loss as compared with other departments (Chi-square test with *p*-value of 0.044).

**Conclusion** The proportion of staff from high noise areas having documented sensorineural hearing loss was 64%. CSSD workers had a significant higher association of noise-induced hearing loss when compared with other departments. This data emphasize the importance of ongoing hearing conservation programs among health workers.

### **A0004: Vertigo Clinic Patients: A 2-Year Clinical Audit** Anoop Chandran

**Introduction** Clinical audit “quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change.”

#### **Aims and Objectives:**

- 1. Database** of patient demographics serves as referral base.
- 2. Diagnoses** to better focus on investigative tools.

**3. Treatment** benefits to modify our treatment protocols.

**4. Academic** study planning.

**Materials and Methods** Audit of vertigo clinic was conducted at Sri Ramachandra Medical College and Research Institute, Chennai, India. Data comprised 231 patients from Vertigo clinic between November 2015 and October 2017. Clinic conducted a complete and comprehensive evaluation of patients. Various tests conducted as a part of this evaluation were pure tone audiometry (PTA), vestibular evoked myogenic potentials (VEMP), X-ray cervical spine, carotid and vertebral Doppler, and MRI brain. Routine blood investigations, lipid and thyroid profiles are also done as indicated.

#### **Results and Conclusion**

**Demographics** Sex distribution was female predominant, 140 females and 91 males.

**Diagnosis** Most common diagnosis was benign paroxysmal positional vertigo (BPPV) with 145 patients, systemic causes, such as postural hypotension and cardiogenic etiology, were seen in 36 patients, Meniere's disease and vestibular migraine showed similar incidence with approximately 15 patients each. Less common conditions included vestibular neurolabyrinthitis, cervicogenic, psychogenic, and central and dynamic visual vertigo.

**Treatment** Protocol based, systematic treatment, and referrals were followed for all the patients.

**Academic** Auditing opened the scope for research activity in vestibular migraine, head impulse test and helped with fine tuning of the evaluation proforma and treatment protocols.

### **A0005: Functional Endoscopic Middle Ear Surgery: Concept and Application**

Anupam Hazarika<sup>1</sup>

<sup>1</sup>Department of ENT and Head and Neck Surgery, Assam Medical College and Hospital, Dibrugarh, Assam, India

**Aim** The functional preservation of healthy mucosa and bone has been emphasized in relation to endoscopic management of sinonasal diseases since many decades. With the advent of endoscopic revisit to the middle ear anatomy and better understanding of the ventilation pathways of middle ear cleft, recent trend emphasis has been seen to be laid upon the maximum preservation of the functioning middle ear cleft structures. The original study conducted was to know the essence of reestablishment of the ventilation pathways for better surgical outcome of tympanomastoid diseases by minimal invasive endoscopic transcanal approach with particular reference to mucosal disease involving middle ear cleft.

**Materials and Methods** The prospective study has been conducted over a period of 9 years from 2009 in the medical colleges of Assam and nongovernment Operative Establishments of Jorhat, Assam. Mandatory HRCT scans of temporal bone and a set sequence of interventions and reconstruction as per disease and defect were part of the protocol-based management by endoscopic transcanal approach.