Imaging of 7th and 8th Cranial Nerve Anomalies in PTCD
Lindsay Young, MD (presenter); Tim Booth, MD; Peter Roland, MD; Joe Kutz, MD; Mario Miranda, MD

OBJECTIVE: 1) Describe the radiographic findings of the membranous labyrinth, facial nerve, and cochleovestibular nerve in patients with pontine tegmental cap dysplasia (PTCD). 2) Correlate the radiographic findings and the potential for successful cochlear implantation.

METHOD: A retrospective case series at a tertiary care pediatric hospital was performed. Three patients were identified with PTCD. High-resolution CT and MR scans were reviewed by a pediatric neuroradiologist. Variables evaluated included radiographic findings typical of PTCD, the presence and course of cranial nerves, the appearance of the cochlea and vestibule, the size of the IAC and the presence of a duplicated IAC. Clinical data was reviewed.

RESULTS: All patients demonstrated characteristic MRI findings of PTCD. Mild, bilateral cochlea dysplasia was noted in two patients and all patients had a normal vestibular labyrinth. The cochleovestibular nerves were absent bilaterally in all patients. The facial nerves were deficient bilaterally in one patient, unilaterally in the second patient, and normal in the third. An accessory canal for the seventh cranial nerve was present in all patients (duplicated IAC). ABR testing revealed profound bilateral sensorineural hearing loss in all the patients. No patient had facial weakness. One patient was implanted with bilateral cochlear implants and had minimal response to sound-field audiometry at one-year follow-up.

CONCLUSION: Bilateral profound hearing loss in patients with PTCD is due to absence of the cochleovestibular nerve. The entity should be recognized and prognosis for successful cochlear implantation is poor.

Impact of Gender, Age and Hearing Loss on Tinnitus Severity
Shiro Tomita, MD, PhD (presenter); Tanit Sanchez; Patricia Ciminelli

OBJECTIVE: Evaluate the relationship between age, gender, and the degree of hearing loss on tinnitus severity.

METHOD: Sixty eight patients were selected to the study at the tinnitus center at the University Hospital of Rio de Janeiro Federal University, from March 2007 through March 2008. All patients were submitted to a detailed interview and physical examination following a tinnitus protocol used routinely at the clinic. All patients answered the Tinnitus Handicap Inventory (THI) and underwent a pure tone audiometry. Data from the protocol, questionnaire and audiometry were used in the statistical analysis. Pearson’s test was used to compare the following numeric data: age x total THI value; tritonal average (500, 1000, 2000Hz) and total THI value; all averages from audiometry (250-8000Hz) and total THI value and tritonal average for high frequencies (4000, 6000, 8000Hz) and total THI values. Kruskal-Wallis test was used for comparison between gender and total THI. For these statistical analysis SAS 9.1 was used.

RESULTS: The age varied from 24 to 83 with a mean of 59 and the mean value for the THI was 39. The mean THI for the female gender was 36 and for the male 44. The THI grades obtained were divided in: slight: 22 patients (32.3%); mild: 13 patients (19.1%); moderate: 14 patients (20.6%); severe: 9 patients (13.2%) and catastrophic: 10 patients (14.7%). There was no statistically significant difference between all the variables analyzed: gender (p=0.30), age (p=0.77) and all the calculated threshold averages and the value of the THI (tritonal average p=0.32; quadritonal average p=0.11; average all p=0.16; average high p=0.13)

CONCLUSION: Patients gender, age and the degree of hearing loss did not influence tinnitus severity, using the THI.

Impact of Hearing Loss on Quality of Life in Older Adults
Miguel Caballero, PhD (presenter); Ana Franco, MD; Pilar Navarrete, MD, PhD; Eduardo Lehrer-Coriat, MD; Manuel Bernal-Sprekelsen, MD, PhD

OBJECTIVE: To evaluate the prevalence of hearing impairment in the elderly, and to investigate the impact of hearing loss on quality of life in older adults.

METHOD: Cross-sectional study on a random sample of elderly people aged 65 and over. Difficulties with communication were assessed by using the Hearing Handicap for the Elderly-Screening version (HHIE-S). Health-related quality of life was assessed by using the Short Form 36 (SF-36). Hearing loss measured by audiometry was categorized on the basis of the pure-tone average of hearing thresholds at 0.5, 1, 2 and 4 kHz.

RESULTS: Initial sample (n=100). The overall participation rate in the study was 64% (n=64) with a mean age of 72 years (65-88) and 68% female. Of the participants, 33% has a mild hearing loss and 25% had moderate to severe hearing loss. Severity of hearing loss was significantly associated with having a hearing handicap (p<0.001), with self-reported communication difficulties (p<0.001), and with the scores of the SF-36.

CONCLUSION: Severity of hearing loss is associated with reduced quality of life in older adults.

Intralabyrinthine Schwannomas
Matthew Carlson, MD (presenter); Colin Driscoll, MD; Brian Neff, MD; Charles Beatty, MD; Michael Link, MD

OBJECTIVE: Understand the symptom presentation, radiographic findings and management of patients diagnosed with intralabyrinthine schwannomas (ILS).