

9:00 AM

Assessing Risk of Falling in Elderly PatientsMarian Girardi MA (*presenter*); Horst R Konrad MD; Larry F Hughes PhD*Springfield IL; Springfield IL; Springfield IL*

Objectives: Fall-related injuries are a serious health issue for elderly individuals. This study was done to determine the relative effectiveness of computer dynamic posturography (CDP) for assessing risk of falling in elderly patients when compared to other types of assessments.

Methods: Retrospective chart review was performed for a study group consisting of 85 urban/rural elderly (age >70) patients referred to a Fall Prevention Clinic. Results from CDP (5 subscores), Dizziness Handicap Inventory (DHI) (4 categories), Tinetti Balance and Gait Tests (2 scores), Berg Balance Test, and Functional Reach Test (A/P, left and right) were examined and compared. Patients were assigned to one of four groups based on the number of falls they experienced in the year prior to their visit to the clinic: none (0), few (1-5), moderate (6-10), and many (>10).

Results: Correlations were obtained between the number of times an individual fell in the past year and their results from the above assessments. Only the Sensory Organization Tests (SOTs) from the CDP and the DHI emotional subsection results were significantly correlated with the number of falls. The CDP SOT conditions 1 (eyes open/firm surface), 2 (eyes closed/firm surface), and 3 (eyes open/perturbed surface) demonstrated significant differences between groups. The lack of significance for SOT condition 4 (eyes closed/perturbed surface) and for the LoS test was likely due to the depressed scores for all individuals.

Conclusions: Of the various assessments reviewed for these elderly balance-disordered patients, CDP measures were the only ones systematically related to the frequency of falls.

9:08 AM

DPOAE—grams in Patients with Acute Tonal TinnitusHaralampos T Gouveris MD (*presenter*); Jan Maurer MD PhD; Wolf J Mann MD PhD*Mainz Germany; Mainz Germany; Mainz Germany*

Objectives: To investigate cochlear outer hair cell function in patients with acute tonal tinnitus and normal or near-normal hearing threshold.

Methods: The amplitudes of the distortion products of otoacoustic emissions (DPOAE) as a function of the f2 pri-

mary tone frequency (so-called DPOAE-audiograms) in 32 ears with acute tonal tinnitus and normal hearing or minimal hearing loss were compared to those of 17 healthy non-tinnitus ears.

Results: Tinnitus ears exhibited relatively increased amplitudes of DPOAE at high frequencies (4-6.3 kHz) when compared to the group of healthy ears and relatively decreased DPOAE amplitudes at middle frequencies (1650-2400 Hz). Statistically significant ($P < 0.01$) increased mean values of DPOAE amplitudes were observed only at a frequency of f2 equal to 4.9 kHz.

Conclusions: These findings suggest an altered functional state of the outer hair cells at the high-frequency region of the cochlea in ears with acute tonal tinnitus and normal or near-normal hearing threshold.

9:16 AM

Intratympanic Steroid Perfusion for Refractory Sudden Sensorineural Hearing LossBrian D Herr MD (*presenter*); Sam J Marzo MD*Chicago IL; Maywood IL*

Objectives: Patients with sudden sensorineural hearing loss (SSHL) can benefit from systemic steroid therapy. Unfortunately, some patients are not candidates for steroid therapy due to concern over possible complications. Furthermore, not all patients will benefit from steroid administration. This study evaluates the efficacy and safety of treating patients with SSHL refractory to oral steroids with intratympanic steroid therapy.

Methods: A retrospective case review was performed on all patients who presented with sudden sensorineural hearing loss refractory to oral steroid therapy during the past year. Twelve patients were identified. All patients underwent intratympanic steroid administration, via microwick placement and/or round window catheter placement.

Results: Four patients with severe to profound sensorineural hearing losses showed a significant improvement with intratympanic steroid therapy, consisting of microwick placement with decadron administration for 1 to 2 weeks and/or round window catheter placement. None of the patients presenting with hearing losses present for greater than 8 weeks benefited from intratympanic therapy. Complications were few and included tympanic membrane perforation and dysgeusia.

Conclusions: Intratympanic steroid therapy is beneficial in treating patients with sudden sensorineural hearing loss refractory to oral steroid use.