Extended high-frequency audiometry and DPOAES in "normal" hearing noise-exposed young adults

Ishan Bhatt, PhD, CCC-A, F-AAA
Communication Sciences and Disorders, Northern Arizona University

RESULTS AND DISCUSSION

1. Pearson product-moment correlation coefficients between NEB and hearing thresholds were computed to investigate the relation between NEB and hearing thresholds. The Bonferroni correction was applied to the p-value of 0.05 to counteract the problem of multiple comparisons. The analysis obtained no significant association between NEB and hearing thresholds at any audiometric frequency (Fig. 2).

2. Repeated measure ANCOVA showed no significant difference between hearing thresholds for individuals with high versus low NEB in both ears (Right ear: F(1, 30)=4.30, p=0.097; Left ear: F(1, 30)=4.30, p=0.097). The repeated measure ANCOVA further revealed that DPOAES were not significantly different between the groups for 65/55 and 75/75 primary levels (Fig. 4).

3. A statistically significant correlation coefficient was obtained between NEB and DDT (r = -0.575, p<0.001) (Fig. 5). However, no significant association was found between NEB and QuickSIN (eta = 0.021, p = 0.87) (Fig. 6).

The results suggest that EHFA and DPOAES might have limited utility in diagnosing cochlear synaptopathy. Binaural hearing skills revealed a promising association with NEB suggesting that a central auditory processing test battery might be useful in delineate cochlear synaptopathy in young adults.

MAJOR REFERENCES


