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Is noise tolerance for an apparently normal contralateral ear similar to that in the affected ear in unilateral Menière's disease?

Background: The Acceptable Noise Level (ANL) determines the tolerable noise level. This study aims to investigate the effect of speech presentation level on the ANL in people with unilateral Menière's disease (MD) compared to normal hearing people. Methods: 33 people with unilateral MD and 38 normal hearing people participated. ANL growth was evaluated unilaterally at four different speech presentation levels: Most Comfortable Level (MCL), -10 dB lower than MCL, +10 dB higher than MCL, and a range between MCL and uncomfortable level.

Results: In MD patients, the ANL of the affected ear was significantly different from that of the contralateral ear (p<0.010). Compared to the normal hearing people, the pattern of ANL growth in MD patients was significantly different, but the ANL growth patterns were similar between the affected and contralateral ears.

Conclusion: ANL and its growth pattern are different between the affected and contralateral ears of patients with unilateral MD. Despite the apparently normal hearing thresholds, the performance of the contralateral ear in noise seems to be similar to that of the affected ear.