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Multi frequency test: Is it reliable for preoperative diagnosis of otosclerosis?

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Otosclerosis has been derived from a Greek word meaning ear hardening. Clinical judgment was the only way to diagnosis this disease. Confirmation of the diagnosis preoperatively is needed in order to explain to the patient the procedure and the outcome. Multiple-frequency tympanometry (MFT) is a non-invasive, quick, and inexpensive method for examining the middle-ear function that found to be with value in differentiating otosclerotic from normal middle ears that caused researchers to evaluate its sensitivity to detecting otosclerosis. Resonant frequency had been found to be higher in otosclerotic middle ears than normal. We conducted multiple-frequency tympanometry measurements in three groups. First group otosclerotic ears (25 subjects) before stapes surgery, second group normal ears control group (24 subjects) and the third group the FMT was conducted after stapes surgery (10 subjects). Mean middle-ear resonant frequency for the otosclerotic group was found to be 1190 Hz and mean middle – ear resonant frequency of the control group was 934.6 Hz ($p < 0.001$) and post-operative group where as 800 Hz. The present findings confirm the advantage of the resonant frequency tympanometry in detecting middle – ear status and mechanics in patients with otosclerosis. As a conclusion, multiple-frequency tympanometry is sensitive in detecting the otosclerosis and we recommend it to be part of diagnostic toll before stapes surgery. However, further studies are necessary in order to brace this proposal.

Biography

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