The effects of tympanic membrane perforation on bone conduction hearing level.  
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Abstract

OBJECTIVE:
To assess the effects of pure tympanic membrane perforation on bone conduction hearing level.

PATIENTS AND METHODS:
Fifty-six ears of 52 consecutive patients with dry perforated tympanic membrane, and without any middle and/or inner ear pathology were involved in this retrospective study. Of these 52 patients 23 (44.2%) were male and 29 (55.8%) were female. Mean age and age range were 32.01±12.73 and 10-49 years, respectively. Bone conduction thresholds before and after the paper patch manipulation were recorded at the same day. Two measurements were compared to find out the effect of perforated tympanic membrane on the bone conduction hearing level.

RESULTS:
There were statistically significant differences between pre and post-paper patch values of bone conduction thresholds at 0.5, 1, 2 and 4kHz frequencies (P=0.001, 0.001, 0.001 and 0.01, respectively).

CONCLUSIONS:
Pure tympanic membrane perforation increases bone conduction thresholds. The exact mechanism that deteriorates the bone conduction hearing level in patients with pure dry perforated tympanic membrane needs further studies.

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