AUDIOMETRIC OUTCOMES IN PATIENTS WITH TEMPORAL BONE FRACTURES

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LONGITUDINAL FRACHTURES
The mean PTA was 35 dB (range 5-90 dB). The mean WRS was 94% (range 72-100%). Fifteen patients (75%) had WRS >90%. Twelve patients (60%) had an ABG >5 dB, and of those the mean ABG was 12 dB (range 0-35 dB). Three patients (15%) had an ABG ≥30 dB. Five patients (25%) had ossicular disruption evident on CT.

TRANSVERSE FRACHTURES
The mean PTA was 57 dB (range 20-110 dB). The mean WRS was 84% (range 28-100%). Four patients (67%) had WRS >90%. Two patients (29%) had an ABG >5 dB, and of those the mean ABG was 6 dB (range 0-20 dB). No patients had an ABG ≥30 dB, or ossicular disruption evident on CT.

MIXED FRACHTURES
The mean PTA was 47 dB (range 5-110 dB). The mean WRS was 92% (range 64-100%). Ten patients (53%) had WRS >90%. Ten patients (53%) had an ABG >5 dB, and of those the mean ABG was 14 dB (range 0-37 dB). Four patients (21%) had an ABG ≥30 dB. Five patients (26%) had ossicular disruption evident on CT.

RESULTS
1,279 patients with a diagnosis of temporal bone (TB) fracture were identified. Of those, 5 had bilateral fractures, for a total of 35 fractures that made up the final study cohort. Mean age was 41 years (range 19–83 years). Thirty-one patients (78%) were males, and 11 (22%) were females. The mean time interval from trauma to audiometric assessment was 38 days (range 1–167 days).

TRADITIONAL CLASSIFICATION SYSTEM
Twenty fractures (56%) were longitudinal, 7 (13%) were transverse, 19 (35%) were mixed and 9 (16%) were “other”.

OTIC CAPSULE CLASSIFICATION SYSTEM
Forty-eight fractures (87%) were otic capsule sparing, and 7 (13%) were otic capsule involving.

A one-way between-groups analysis of variance was conducted to explore the impact of fracture type using the traditional classification system on degrees of hearing loss, WRS and ABG. There was a statistically significant difference at the p < 0.05 level in PTA scores between transverse and longitudinal, and transverse and “other” fractures, whereby the transverse fractures had worse PTA scores.

REFERENCES