Learning Objectives:

Objectives/Hypothesis: To observe the usefulness of anterior based periosteal (Palva) flap for mastoid cavity obliteration in canal wall down tympanomastoidectomy and review its efficacy in producing a dry, low-maintenance, small mastoid cavity.

Study design: Retrospective study of a consecutive series of procedures from 2012 to 2014.

Methods: Sixty one consecutive procedures for active chronic otitis media with a minimum follow-up of 6 months (mean, 21 mo; range, 6–40 mo).

Results: 45 ears of cholesteatoma and 11 ears of adhesive otitis media were enrolled this study, and others were chronic otitis media (4 ears), adenoma of middle ear (1 ear), 52 ears (85.2 %) maintained a small, dry, healthy mastoid cavity. 3 ears (4.9 %) had intermittent otorrhea easily controlled by topical treatment, 2 ears (3.2 %) had persistent otorrhea. 3 ears (4.9 %) had showed reperforation of tympanic membrane. There were 1 ears of residual or recurrent cholesteatomas. Outcomes remained stable over progressively longer follow-up, up to 40 months.

Conclusion: Obliteration of a canal wall down mastoid cavity by a postauricular periosteal flap is a reliable and effective technique that results in a dry, trouble-free mastoid cavity.

Differences in gain values amongst examiners varied from 0.2–0.58 with an average of 0.14 (95% CI 0.12–0.16) on the right ear and 0.17 (95% CI 0.15–0.19) on the left ear. Occurrences of saccades on the same patient were reproduced in 93% of the cases by all examiners. Interclass correlation coefficient (ICC) of the gain values between two examiners was 0.62. Kappa’s coefficient was calculated upon the interpretation of the graphical outcome to 0.83.

Conclusion: The gain value seems to be less reliable than the graphical occurrence of saccades in the judgement of VOR. Interpretation of vHIT results should therefore not depend on the gain value alone but should depend on both gain value and the occurrence of saccades.

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