

Malleostapedotomy prosthesis size and shape: Key measurements from a temporal bone study

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HYPOTHESIS: By determining the dimensions of middle ear anatomic relationships pertinent to malleostapedotomy (MS), a simplified, yet optimized scheme for sizing, shaping, and placing a prosthesis can be generated. **METHODS:** Surgical dissection of 20 fresh (nonpreserved) cadaveric temporal bones was undertaken. Needlepoint calipers were used to manually measure pertinent distances between the ossicles. These measurements were then used to calculate the dimensions of anatomic triangles within the middle ear that were applied to the process of MS prosthesis sizing, shaping, and placement. **RESULTS:** Mean distances were 6.3 mm (range, 5.75-7.0 mm) between the usual MS crimp site and stapedotomy site, 3.6 mm (range, 3.00-4.25 mm) between the crimp site and the lateral edge of the distal incus long process, 4.9 mm (range, 4.50-5.00) between the lateral edge of the distal incus long process and the stapedotomy site, 3.7 mm (range, 3.25-4.00) between the crimp site and the umbo, and 3.3 mm (rang