

Variability of an ideal insertion vector for cochlear implantation

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© 2015, Otology & Neurotology, Inc. Hypothesis: Based on a three-dimensional analysis, the orientation of the basal turn of the cochlea, the disposition of the basilar membrane, and the characteristics of the hook region - all of which determine the ideal electrode insertion vector during cochlear implantation - might vary among individuals to a greater degree than previously considered. The aim of this study is to assess the variability of an ideal insertion vector among a sample of surgical candidates from a purely anatomical perspective as well as from a more intraoperative-surgical perspective. Background: During cochlear implantation through a cochleostomy or round window approach, the angle or vector of insertion after the first entry point seems to be related to intracochlear damage, which might correlate with anatomical and functional features. Methods: Three-dimensional reconstructions of the temporal bones of 50 cochlear implant candidates (a total of 100 ears) were assessed.