

IMMEDIATE EFFECTS OF BIMODAL FITTING ON CORTICAL AUDITORY EVOKED POTENTIALS AND CONSONANT DISCRIMINATION IN PEDIATRIC COCHLEAR IMPLANT USERS

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The main objective of this study is to assess the advantage of bimodal hearing for children with cochlear implant (CI) using Cortical Auditory Evoked Potential (CAEP) as well as consonant discrimination test. Subjects comprised of thirteen monaural CI users aged 7;5 to 12;3 years old (mean = 9;1 years old) who has been using CI for at least 3 years and 11 months. Subjects were fitted with a suitable hearing aid on the contralateral ear prior to testing. CAEP waves were measured using three different latencies (P1, N1 P2 and N2) and amplitude (P1/N1, N1/P2, and P2/N2) of CAEP as well as consonant discrimination scores were compared for monaural and bimodal hearing conditions. The findings showed that the latencies of N2 [$F(1,50) = 15.774, p < 0.005$] was significantly bigger for bimodal hearing than for monaural hearing. The other variables recorded did not significantly change for consonant discrimination scores ($r = 0.723, p < 0.005$). In conclusion, significantly longer modality, acoustic and electric, this results in confusion or interference in the stimulus processing.

Low, S. L. 2010. Immediate Effects of Bimodal Fitting on Cortical Auditory Evoked Potentials and Consonant Discrimination in Pediatric Cochlear Implant Users. Bachelor of Audiology Thesis. Universiti Kebangsaan Malaysia.