Effect of Interaural Electrode Pairing on Binaural Sensitivity in Bilateral Cochlear Implant Users

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ABSTRACT

Binaural sensitivity was studied in 11 patients with bilateral cochlear implant (CIC) users. Effect of electrode pairing across the ears was investigated by selecting pairs based on pitch magnitude estimation. Single tones presented through the CIC were delivered to the ears sequentially with a range of interaural electrode distances (IEDs) and frequency matches between the CICs. Subjects were asked to identify the direction of the IEDs. Age of deafness, type of deafness, and results from psychometric functions (e.g., Fig. 5) are discussed. The results indicate that IED lateralization can be a harder task, resulting in lower performance. Performance across different frequency ranges, IEDs, and electrode positions may differ, indicating the need for individualized threshold measurements and psychometric functions.