

عنوان مقاله:

The Relationship Between Reaction Time of Electrical Stapedius Reflex and Auditory Performance in Cochlear-implanted Children

محل انتشار:

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خلاصه مقاله:

Objectives: A common concern in some cochlear-implanted children is the lack of desired progress in auditory and listening skills. Such a concern remains despite proper verbal processor programming, additional disabilities, and continuous participation in hearing rehabilitation programs. A more detailed assessment of pathways and centers of the auditory processing at the lower end of the brain stem by measuring the time of the Electrical Stapedius Reflex (ESR), and investigating its relation to auditory perception skills can provide significant information about choosing the appropriate rehabilitation method. **Methods:** In total, 20 unilateral cochlear-implanted children (3-7-year-olds) participated in this research. All of them were implanted for ≥ 2 years and participated for ≥ 1 year in the auditory-verbal rehabilitation program. The ESR reaction time was measured for 3 electrodes in the apex, middle, and basal areas. The Categories of Auditory Performance (CAP-II) test score was used to assess the progress of auditory skills. Then the correlation between CAP-II test score and ESR reaction time was investigated per each electrode. **Results:** There was a significant inverse correlation between the ESR reaction time and the CAP II test scores in the apex electrodes ($r = -0.5$, $P < 0.05$). However, no such correlation was observed in the middle ($r = 0.34$, $P > 0.05$) and basal ($r = -0.06$, $P > 0.05$) electrodes. **Discussion:** There was a significant correlation between the shorter reaction time of ESR in the apex electrode and the higher scores in the CAP-II test for auditory skills in children. Therefore, examining the ESR reaction time can be useful for prediction of the benefits of cochlear implantation as well as choosing a better rehabilitation approach for cochlear-implanted children.

کلمات کلیدی:

Cochlear implantation, Electrical stapedius reflex reaction time, Auditory performance, Categories of Auditory Performance

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