Speech Perception Outcomes for Older Patients Using the Nucleus Cochlear Implant

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With improved medical technology and increased life expectancy, more patients are receiving cochlear implants at a later age. It is important to examine speech perception outcomes for older patients, in order to be able to provide appropriate pre-operative counselling regarding post-operative expectations. Speech perception scores for patients at the Melbourne Cochlear Implant Clinic implanted at age 65 or more were examined, and compared to the adult population implanted under the age of 65. (All of these patients were users of SPEAK or later strategies.) The aims were to see if speech perception scores were significantly different between the two groups as a whole, and to see if a correlation existed between increasing age of implantation above 65 and speech perception scores. Preliminary results suggest that there is a small but significant effect of age on speech perception outcomes. The findings from this study will be used to help clinicians provide more accurate advice and counselling for older patients, regarding the potential outcomes from a cochlear implant.

Objective Methods in Speech Processor Adjustment in Cochlear Implant Users

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The standard procedure for cochlear implant (CI) speech processor adjustment includes stimulus sensation levels as well as most comfortable levels, psychoacoustical determination for each channel of the multielectrode system. Recently the validity of objective methods in CI patients during speech processor adjustment was demonstrated. In our practice contralateral electrically evoked stapedial muscle reflex (C/L EESR), neural response telemetry (NRT) and electrically evoked brainstem responses (EEBR) were used in 20 CI patients. It was demonstrated that successful recordings are not possible in all CI users: C/L EESR was registered in 66% of patients (at the same time SR was visualised during surgery in all patients), NRT was negative in one patient and EEBR was negative also in one patient. It was shown that EESR thresholds were highly correlated with MCL. Based on the EEBR peak amplitudes patients were divided into 3 groups. EEBR visual detection thresholds in groups 1 and 2 were close to stimulus sensation levels and usually were higher. In patients with negative NRT results, EEBR were registered and speech processor adjustment was performed based on these data. The data obtained suggest that objective methods could be widely used in speech processor adjustment but it’s necessary to mention that they supplement each other.

The Little Tactile Device: Could It Assist Signing Adults?

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A trial of the new Little Tactile Device’s (LTD) ability to assist in the detection and/or identification of speech and environmental sounds was undertaken. The LTD is a small two-channel vibrotactile device allowing wearers to access information about sounds around them. It is smaller in size than previous such devices and has improved information coding and noise reduction features. This study was aimed at discovering whether Deaf Signing Adults would make use of the information provided by such a device. The four participants had been profoundly deaf since birth. Participants were fitted with a LTD unit. Recorded environmental tapes were used to assess and train participants. At the initial testing with the LTD, pre-training, participants identification scores ranged between 0/10 to 3/10 correct. Participants were then given training with each of the sound effects and retested. Identification
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