electrodes is critical, and intraoperative monitoring is an important feature of the surgical procedure. Results of speech perception assessments with adult patients in the United States have shown that the ABI can provide significant speech benefits. Results with the first Australian ABI patient are also encouraging, and will be presented in combination with the United States data.

Current Trends in Speech Perception Performance in Adult Cochlear Implant Patients

Rod Hollow1, Kerrie Plant2, Lesley Whidford2, Marisa Skok1, Richard Dowell1 and Graeme Clark1
(1) Cochlear Implant Clinic, The Royal Victorian Eye & Ear Hospital and The University of Melbourne, East Melbourne VIC 3002
(2) CRC for Cochlear Implant, Speech & Hearing Research, East Melbourne VIC 3002

In 1994, Cochlear Pty Ltd (Now Cochlear Limited) released a new speech processor, the Spectra 22, for use with the Nucleus 22-channel cochlear implant. The Spectra 22 speech processor incorporates a new speech processing strategy called SPEAK, which is based upon research conducted by the University of Melbourne. This paper reports post-operative scores on open-set word and sentence materials for adult patients in the Melbourne Cochlear Implant Clinic who have been started up with the Spectra 22 speech processor. Speech perception data was collected at regular intervals for a period of 6 months from each patient’s 'start-up'. The results so far, illustrate that patients are gaining significant open-set speech perception advantage after two weeks' use of the cochlear implant. Speech perception scores are also seen to improve as patients gain more experience with the device. Comparison of the mean results at six months with similar data from patients using earlier speech processing strategies, confirms the findings from comparative studies that the SPEAK strategy is an improvement over the feature extraction type strategies. Although, to date, data has only been collected on a small number of people using the Spectra 22 speech processor, the trend in speech recognition performance obtained with cochlear implants is very encouraging. Cochlear implants should now be more widely considered as a viable option for severely, profoundly and totally hearing impaired people to improve their hearing ability.

Measuring the Ability of Hearing Impaired School-aged Children to Understand Connected Discourse: A Comparison of Two Methods

Joseph Kei and Veronica Smyth
Department of Speech Pathology and Audiology, The University of Queensland, Brisbane 4072

This study was undertaken to compare the use of two methods in measuring the ability of hearing impaired children in Hong Kong to understand connected discourse. Twenty-five normal hearing and 54 sensorineural hearing impaired school-aged children participated in an experiment in which they were required (1) to rate, on a scale of 0 to 5, how well they could understand a connected discourse passage and (2) to answer five content-related questions to show their level of understanding of the same passage, resulting in speech scores ranging from 0 to 5. The effect of two different hearing aid frequency responses and two listening conditions (quiet/noisy) on self-ratings and speech scores was also investigated. Findings revealed no significant differences between ratings and scores of the two methods, when pooling across subject groups, frequency responses and listening conditions. A high correlation between ratings and scores under the respective frequency responses and listening conditions (Spearman correlation coefficient, $r = 0.85$) was found, indi-
Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:
Hollow, Rod; Plant, Kerrie; Whitford, Lesley; Skok, Marisa; DOWELL, RICHARD; Clark, Graeme M.

Title:
Current trends in speech perception performance in adult cochlear implant patients [Abstract]

Date:
1996

Citation:

Persistent Link:
http://hdl.handle.net/11343/27487