Speech perception outcomes in Large Vestibular Aqueduct Syndrome (LVAS) - Should we be implanting earlier?

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Conclusions

LVAS patients should be considered amongst the best early candidates for surgery when poor speech perception is identified in association with severe hearing loss rather than profound.

This allows stable hearing to be established without the associated disadvantages and sequelae of hearing impairment resulting in long-term successful implant usage in to adulthood.

Introduction

The purpose of this study was to examine the post-operative speech perception outcomes in a large group of LVAS patients at a major cochlear implantation centre

Methods

Retrospective analysis of the Sydney Cochlear Implant Centre database and medical records from January 1994 – January 2016 was performed.

This identified patients with a diagnosis of LVAS who received a cochlear implant. Only those with speech perception outcomes recorded at least 12 months post implant were included in our analysis.

Results

Between 1994-2014, 162 patients were included for analysis.

130 were paediatric patients, defined as sixteen years of age or less at the time of cochlear implant surgery.

Mean duration of cochlear implantation analysed was 9.2 years. There were no non-users within the timeframe studied.

Pre-operative scores          Post-operative scores
Upper Quartile: Q3 = 98%     Upper Quartile: Q3 = 98%
Median = 95%                  Median = 95%
Lower Quartile: Q1= 76%      Lower Quartile: Q1= 76%

Post-operative Speech Perception scores in LVAS

The median age of the group at the time of first cochlear implantation was 6.0 years old with an inter-quartile range of 12 years