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group was 28 dB at 1 kHz and grew to 52 dB at 16 kHz. However, the average CAP amplitude recovered monotonically over time, resulting in almost complete recovery after 8 weeks: only 4 dB loss at 1 kHz and about 8 dB loss at 16 kHz. These results indicate that guinea pig cochlear function can regenerate spontaneously after cisplatin injury and therefore there might be a target process that can be affected by a compound such as ORG2766.

## Reference

- 1 HAMERS *et al.* (1994) *Eur Arch Otorhinolaryngol* **251**, 117–121

## Hearing loss in elderly people

H. J. A. VISSER, L. C. M. RILEY, J. J. GROTE & J. A. P. M. DE LAAT (Leiden)

The purpose of this study was to review the hearing of people of 85 years and older, who were studied in their domestic situation in Leiden and the surrounding area and in the ENT department of the University Hospital of Leiden. The results of the audiometric research and mini mental state examination (MMSE) were analysed in 98 persons in the period June–August 1994. Eighty-three percent of the elderly people (82 persons) were eligible for a hearing aid; however, 62% (51 persons) did not yet have a hearing aid. Of the number of elderly people who did not have a hearing aid, 62.2% (61 persons) would, if necessary, try a hearing aid. A correlation between hearing and MMSE could not be proven in this study.

Being hard of hearing is very common among people of 85 and older; however, only a few of these elderly people benefit from the advantages of hearing aids. An important responsibility is given to primary health care in the form of information and referrals to ENT doctors and possibly the audiological centres. A relationship between MMSE and loss of hearing could not be proven in this study.

## The relationship between speech perception and the integrity of the auditory neural system in cochlear implant users

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One of the challenges in cochlear implant research is to explain the variability in the results. It has been argued that the loss of integrity of the auditory neural system may play a significant role. Auditory late responses (N1/P2) reflect signal detection. The P300 is a cortical response to stimulus differ-

ences, and is optimally evoked by unpredictable, infrequent acoustic stimuli presented randomly with a low probability.

Event-related cortical potentials were collected in seven post-lingually deaf adults who were experienced users of the Nucleus multichannel cochlear implant. The patient group was divided into a subgroup of good performers and moderate performers with regard to speech perception. The cortical N1-P2 complex (signal detection) showed normal latencies and amplitudes for the good performers but was variable in the group of moderate performers. This may indicate a disturbed cochleotopical organization in the auditory cortex in the latter group. P300 measurements showed normal results for the good performers. The P300 latencies for the moderate performers were prolonged.

The results suggest that electrophysiological measurements, assessing the integrity of the patient's auditory neural system at a cortical level, are related to the patient's performance with the implant.

## Determining factors for cochlear implantation in children

A. F. VAN OLPHEN (Utrecht)

The aim of education for deaf children is to teach them to communicate by means of sign language and spoken Dutch. Cochlear implantation may facilitate this communication. The main targets of implantation are:

- 1 better orientation in the environment;
- 2 better control of the voice; and
- 3 increased understanding of spoken Dutch.

To achieve these targets a special training programme is required. A positive result can only be obtained when:

- 1 the child's reactions to sensory input are sufficiently structured;
- 2 the child and its parents have sufficient potential to make the extra efforts for training, in addition to education; and
- 3 the training schedule can be fitted in with the existing education programme.

At present deaf children are well cared for. Cochlear implantation is therefore only justified if it adds to this care.

The ENT surgeon determines whether implantation is medically safe. A team, consisting of an audiologist, a psychologist and a speech therapist, examines what added value cochlear implantation might have for the child's development. Finally, the views within the deaf community, in which deafness is seen as a cultural identity and not as a handicap, are considered in the advice given.