Non users after Cochlear Implantation in Single Sided Deafness

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CI in Single Sided Deafness

- Established method of choice
- Good results in most cases, especially after short duration of deafness
- Long time for patients to achieve their personal goals
- Intensive rehabilitation required
Non-Users vs. Limited Users

- Non-user: sound processor not in use, implant is working
- Limited user: daily use < 2 hours
Non-Users so far…

- (Too) late implanted praelingual deaf children
- In cases of severe other disabilities / autism
- In cases of no substantial benefit
- Tinnitus after CI
- Dementia, general health reasons, pain after CI
Non-users after CI in SSD

- Do we see more non users then in classical indications?
- Are there „hidden“ non users?
- Are there limited users?
- What benefits has the data logging?
Data logging

- Objective recording of data about the use of the individual CI-System
- Duration of daily use
- Individual hearing environment (quiet, speech in quiet, speech in noise, noise ...)
- Use of accessories
- Overview of used programs
Data logging CP910 / CP920
Patients

- 88 in Halberstadt implanted patients with functionally sufficient or with Hearing aids well compensated hearing on the opposite side

- 63 in Halberstadt implanted patients with functionally sufficient or with Hearing aids well compensated hearing on the opposite side until 2014

- 34 in Halberstadt implanted patients with normal hearing on the opposite side (no frequency between 500 and 2000Hz 30dB HL or more) on the opposite side until 2014

- 22 of them supplied with Cochlear system and equipped with CP910 / 920 processor
Results

- 3 known non users
- Long duration of deafness, low benefit, two of the patients were very motivated during rehabilitation, both showed no real “listening” experience, more "electric" feeling
Results Data logging

- Wearing period on average 11 hours (!) (m 11.5 h; f 10.4h)
- In Quiet - 5.9h
- Speech in quiet ~ 1h, speech in noise ~ 2h
- No noticeable gender difference
- Most patients use 1 program
- On average, the device is used in three cycles
Conspicuous patients in data logging

- 3 conspicuous patients in data logging, which otherwise would not have noticed in rehab
- 1 limited user (<2 hours)
- 2 users < 6 hours
Conspicuous patients in data logging

- f, 58y., short duration of deafness, CI left ear 03/14
- subjectively "no help for listening side by the CI-side" in everyday situations
Conspicuous patients in data logging

- m, 69y., acute deafness after trauma, short duration of deafness, CI right side 06/14
- subjectively "no real improvement by the CI"
- 45% monosyllables at 65 dB (in quiet)
An additional problem…

Source: EAR.MAIL Blog SCIC Cochlear Implant Programm website 09/2012
Summary

- Data have to be discussed very carefully with the patients
- Patients should be selected carefully for CI in SSD
- CI centers should keep track of their non-users
- There are probably more limited users then we would think
- The issue “non-user” should be clearly discussed with patient before CI
- We must assume that the number of non-users increases after finishing rehabilitation
Thank you for your attention!