P100

AUDITORY IMPLANTS IN THE ELDERLY

Long term results after cochlear implantation in elderly patients

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Introduction

↑ SPEECH PERCEPTION

- Some authors: similar outcomes in elderly patients than with younger patients (Carlson 2010; Zwolan 2014; Wong 2015; Schwab 2015)
- Some authors: worse outcomes in elderly patients than younger patients (++ with background noise) (Friedland 2010; Lenarz 2012; Roberts 2013; Hilly 2016)
- Age of implantation may be relevant (worse if implanted >80-90 y.o.) (Roberts 2013; Bourn 2022)

SAFE AND EFFECTIVE

- Well-tolerated
- NOT ↑ complications in elderly than other ages (Hammond-Kenny 2021; AAO-HNSF 2024)

↑ QUALITY OF LIFE

- ↑ QoL is long-lasting and correlated with the ↑ in speech perception
- ↑ self-esteem, social interaction, activity
- ↓ tinnitus, social and psychosocial stress

(Olze 2012; Aimoni 20166; Manrique-Huarte 2016; Sonnet 2017; Cuda 2024; Mosnier 2015;)

↑ COGNITIVE PERFORMANCES

- ↑ Attention levels and executive functions
- Long-term prevention of progression to dementia or mild cognitive impairment (Mosnier 2018; Völter 2022; Hamerschmidt 2023)

COCHLEAR IMPLANTS (CI) IN ELDERLY PATIENTS

ARE THE RESULTS STABLE IN THE LONG TERM?

There are few studies available on CI performances in elderly patients during long-term follow-up

↑ SPEECH PERCEPTION	↑ QUALITY OF LIFE	↑ COGNITIVE PERFORMANCES	↑ COGNITIVE PERFORMANCES
stable at 4 year follow-up	**stable at 6 year follow-up**	**stable at 7 year follow-up**	**stable at 5 year follow-up**
(Herzog 2022)	(Issing 2024)	(Mosnier 2018)	(Völter 2022)

Goal of the study

This study retrospectively assesses the **long-term auditory results** of **elderly patients** who underwent cochlear implantation, evaluating **speech perception in quiet and with background noise** up to **10 YEARS POST-IMPLANTATION.**

Materials and Methods

Population

- **62 patients** (mean age=68.64 yrs)
- **CI after 60 y.o.**
- 2 age groups:
  - **GR.1: 60-69 y.o.** = **33 pts** (mean age 64.8±2.9)
  - **GR.2: >70 y.o.** = **29 pts** (mean age 73.7±3.3)

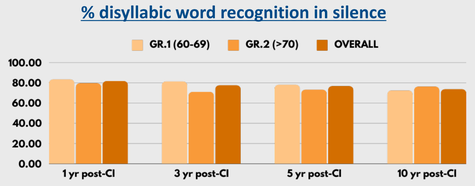
Methods

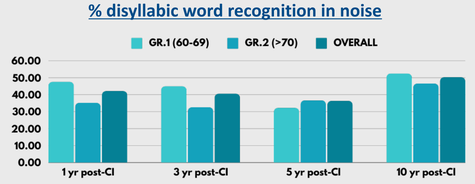
Dysillabic word recognition in silence and with background noise at **1,3,5,10 years post-CI**

Results

	% DISYLLABIC WORD RECOGNITION IN SILENCE			% DISYLLABIC WORD RECOGNITION IN NOISE		
	GR.1 (60-69)	GR.2 (>70)	OVERALL	GR.1 (60-69)	GR.2 (>70)	OVERALL
1 YEAR POST-CI	83.47	79.73	81.78	47.6	35.22	42.14
3 YEARS POST-CI	81.5	71.15	77.71	45	32.6	40.64
5 YEAR POST-CI	78.15	73.33	76.81	32.25	36.66	36.36
10 YEAR POST-CI	72.5	76.36	73.87	52.5	46.64	50.32

- **No statistically significant differences** were noted in speech perception in **silence** and in **noise** between the two groups **from one to ten years** post-procedure.
- **Interindividual variability**





Conclusions

CI in elderly patients is an **effective** procedure to restore hearing in case of severe-to-profound sensorineural hearing loss. We also demonstrated a **global stability of the results over time**, even if with a **variability** between patients, with excellent speech perception results even 10 years after the procedure.

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