



Adolescents with cochlear implants before the age of five

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•INTRODUCTION

•In the last 15 years we have had a significant increment of cochlear implants (CI) users. This has allowed us to register different events along the progress of patients with CI in auditory, language, social, academic and emotional skills.

•In the follow up of CI users, we have detected different behaviors in those adolescents who received the CI in their early years of life.

•Lots of them present changes in tolerance to the electrical stimulation.

•HYPOTESIS: Pre-lingually deaf adolescents with CI before the age of five experience changes in loudness with the electrical stimulation nearly adolescence.

• OBJECTIVES:

- 1- Determine C levels since the tune-up until the present in electrode 20-15-10-5-3-1
- 2-Describe symptoms

Materials and methods

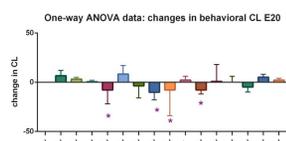
•Retrospective study

• 12 pre-lingually deaf adolescent who have received CI before the age of five.

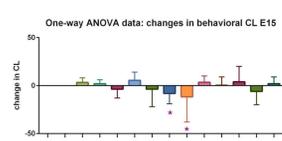
•All of them have been implanted at the Centro de Implantes Cocleares Profesor Diamante -Buenos Aires- Argentina.

• The statistical analysis of the changes in comfort levels was done with Graph Pad Prism6.

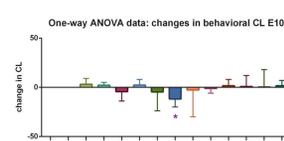
•RESULTS: Girls-have the greatest drop at 12y



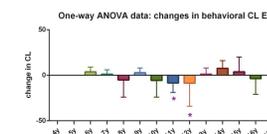
ANOVA summary	
F	1.469
P value	0.1692
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.3452



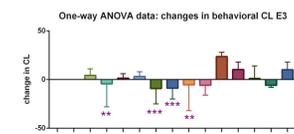
ANOVA summary	
F	1.355
P value	0.2256
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.2791



ANOVA summary	
F	1.091
P value	0.3609
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.2182

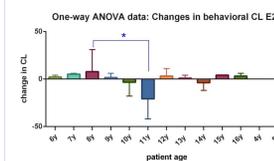


ANOVA summary	
F	1.285
P value	0.2658
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.2473

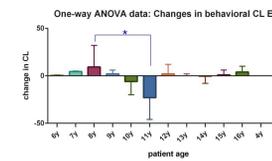


ANOVA summary	
F	2.565
P value	0.0445
P value summary	**
Are differences among means statistically significant? (P < 0.05)	Yes
R square	0.4641

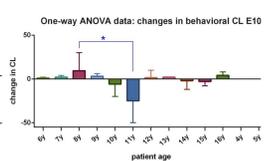
•Boys-have the greatest drop at 11y



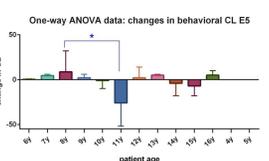
ANOVA summary	
F	0.6559
P value	0.7450
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.3354



ANOVA summary	
F	0.6658
P value	0.7373
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.3387



ANOVA summary	
F	0.7716
P value	0.6498
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.3743



ANOVA summary	
F	0.7480
P value	0.6744
P value summary	ns
Are differences among means statistically significant? (P < 0.05)	No
R square	0.3646

• SYMPTOMS

Abrupt intolerance to loud sounds

- Headaches
- Decrease in volume and speech recognition
- Refusal to use
- Tinnitus
- Dizziness

CONCLUSION

•Adolescents with CI present a great variety of abilities and limitations that must be contemplated individually within an average context for that group.

• The present study shows us the frequent manifestation of progressive intolerance to the electrical stimulation once puberty has been reached by children implanted earlier in life. It is important to note that despite the changes in T and C levels, impedances and t-NRT have remained stable.

•For this reason we consider it of great importance to carry out strict audiological follow-up in this group of patients and to warn them about possible changes in loudness.

•In summary for girls older than 7y to 12y and boys older than 10y up to 15y, 6 month appointments must be scheduled to ensure optimal access to low-level sounds and comfortable loudness.

•On this way, adolescents will achieve remarkable success without complaints to loud sounds.