P121

AUDITORY IMPLANTS

Determination of the role of AutoRT thresholds in setting up SONNET 2 and RONDO 3 speech processors in a pediatric cochlear implant system

Inoyatova F.I., Najmutdinova N.Sh., Madjitova D.Sh., Makhmudov M.U.

Abstract

Today, cochlear implantation is the only gold standard for the treatment of severe hearing loss in children. The key to successful rehabilitation of implanted children is optimal speech processor tuning, which is based on subjective and objective techniques such as telemetry, ESRT, AutoART, ART and ECAP. The use of AutoART thresholds in speech processor tuning is essential to achieve optimal speech processor tuning in children. However, it should be remembered that registration of AutoART thresholds cannot always be the only indicator for predicting speech development in children.

Objectifs

To determine the importance of the role of AutoART thresholds in the cochlear implant system during the setting up a speech processor in children.

Méthodes et Matériels

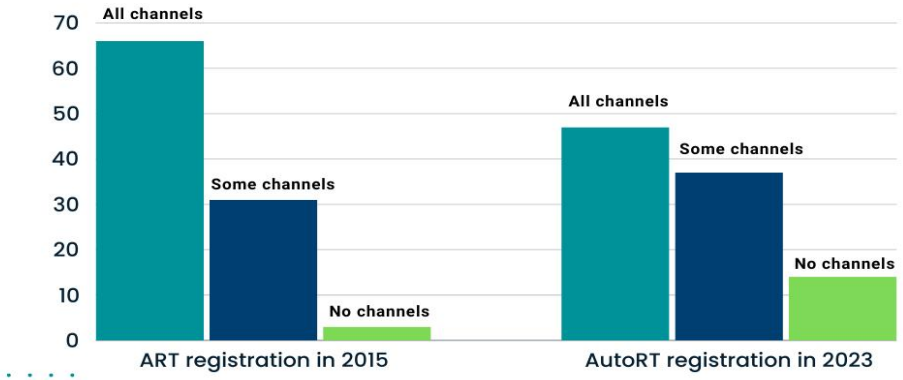
The study involved 113 patients aged 11 to 14 years, the mean age of which was 12.7±1.4 years, of whom 51 (46%) were boys and 62 (54%) girls. All patients were implanted with CONCERTO Mi1000 cochlear implant and speech processor model OPUS 2 in Republic specialized scientific and practical medical center of Pediatrics in the Department of ENT Diseases Tashkent (Uzbekistan) in 2015. In 2023, the speech processor was replaced with the Rondo 3 speech processor.

Résultats

In 2015, ART was used in the process of setting up the speech processor. In 75 patients (66%) ART was registered on all 12 channels, in 41 patients (31%) it was partially unregistered on some channels (3-5 on average), and in 3 patients (6%) it was not registered on any channel. In 2023, the new technology AutoART with discharge 35 qu was used in the replacement of the speech processor. In 54 patients (47%) AutoART was registered on all 12 channels, in 41 patients (37%) - partially not registered on some channels (3-5 on average), and in 18 patients (16%) - not registered on any channel.

At the same time, these patients (n=18) had intelligible and well-developed speech without AutoART registration Importantly, in 18 patients with no AutoART registration, ART was registered on all 12 channels in 2015.

This table shows the data as a percentage of ART/AutoART registration in all channels, in some channels and in no channels



Conclusion

The use of AutoART thresholds in speech processor tuning is important for achieving optimal speech processor tuning in children. However, it should be remembered that registration of AutoART thresholds may not always be the only indicator for predicting speech development in children.