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Cochlear implantation as a method of rehabilitation of tinnitus

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Introduction

Tinnitus remains a problem for many people. Of these, 1-3% severe tinnitus

In 85% of cases, tinnitus is accompanied by hearing loss. Cochlear implantation is the most effective method of rehabilitation of deafness in the modern world

Aim: To evaluate tinnitus patients after cochlear implantation, depending on age, duration and etiology of deafness.

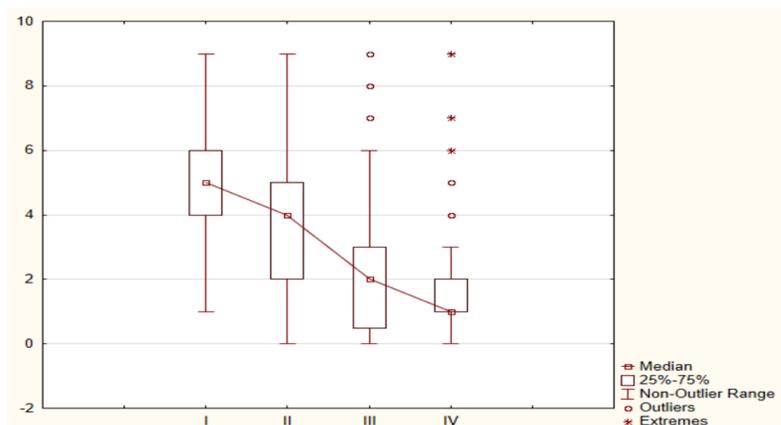
Methods

We examined 384 patients aged 14-72 (years) (237 women and 145 men) with profound sensorineural hearing loss and tinnitus complaints. Cochlear implantation was performed in all cases. Unilateral implantation was performed in 376 patients, bilateral in 8 patients. The severity in patients experiencing ears was assessed using a visual analogue scale before implantation, the first fitting sound processor, and 6 months after the initial fitting. We analyzed the dependence of severity of tinnitus patients age, duration and etiology of deafness prior to implantation.

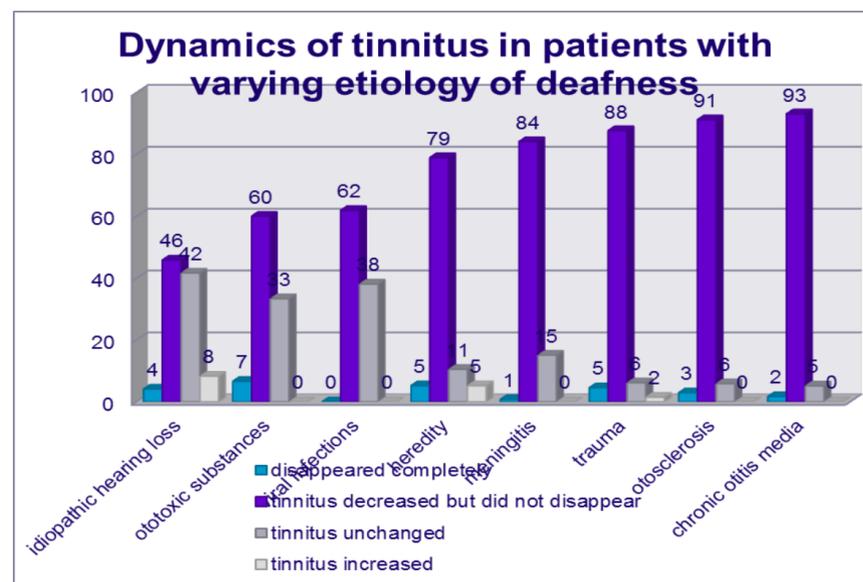
Results

At 6 months after the first fitting 2% of tinnitus disappeared, 81% of patients with tinnitus has decreased, but not disappear, and 16% of tinnitus patients remained unchanged, and 1% of patients tinnitus has increased. Tinnitus significantly decreased in the majority of patients of all ages, etiology and duration of deafness before the cochlear implantation.

Dynamics of tinnitus during 6 months



- I - Before implantation
- II - At 7 days after implantation
- III - At first fitting
- IV - At 6 months after first fitting



Conclusion

Conclusions: Thus, Cochlear implantation reduces the severity of tinnitus in patients with profound sensorineural hearing loss. In addition to the effect of habituation, reducing tinnitus may be due to acoustic masking and direct stimulation of the auditory nerve. This observation was confirmed by the cochlear implant as an effective treatment for patients with single-sided deafness and severe tinnitus.

Reference

1. Nosrati-Zarenoe R, Arlinger S, Hultcrantz E (2007) Idiopathic sudden sensorineural hearing loss: results drawn from the Swedish national database. Acta Otolaryngol 127:1168-1175
2. Tyler RS, Rubinstein J, Pan T, et al. Electrical stimulation of the cochlea to reduce tinnitus. Semin Hear 2008; 29:326-332.
3. Hall DA, La'inez MJ, Newman CW, et al. Treatment options for subjective tinnitus: self report from a sample of general practitioners and ENT physicians within Europe and the USA. BMC Health Serv Res 2011; 11:302.
4. Jastreboff PJ, Gray WC, Gold SL (1996) Neurophysiological approach to tinnitus patients. Am J Otol 17:236-240.
5. Folmer RL, Carroll JR (2006) Long-term effectiveness of ear-level devices for tinnitus. Otolaryngol Head Neck Surg 134:132-137.
6. Konig O, Schaette R, Kempter R, Gross M (2006) Course of hearing loss and occurrence of tinnitus. Hear Res 221:59-64.

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