

# Hydrotransmisyjna elektrostymulacja narządu słuchu w leczeniu szumów usznych

Tinnitus treatment by using electrical stimulation

*Marzena Mielczarek, Wiesław Konopka, Jurek Olszewski*

## Summary

**Introduction.** The aim of the study was to evaluate the influence of electrical stimulation on severe tinnitus. **Material and methods.** The study comprised 46 patients (66 ears) suffering from severe tinnitus, persistently or temporarily, 27 women and 19 men, ranging in age from 22 to 84 years, on average 55. The material was divided into two groups. Group I was treated using electrical stimulation, whereas group II was being applied additionally the kinesitherapy of the cervical part of the vertebral column. The average duration of tinnitus was similar in both groups and equals 4.5 years. All the patients were administered medicines, without expected result. Otolaryngological, audiological diagnostics was conducted as well as head and cervical computer tomography. The patients were asked to fill in the questionnaire concerning tinnitus. The electrical stimulation was performed using silver electrode which was dipped in saline solution in external auditory canal. Direct current was used, the intensity ranged from 0.15 mA to 1.15 mA. Fifteen electrical stimulations were entire treatment administered twice or three times a week. Before and after treatment the subjective evaluation of tinnitus was made. **Results.** The subjective improvement was noticed in 36 people (n 46 ears - 71%). Persistent tinnitus was registered in 30 ears and temporary in 30 ears, in 6 tinnitus disappeared completely. On the basis of audiometric tests improvement was noticed in 33 ears (55%). In group I in 17 ears (44%) - in 4 ears tinnitus disappeared, in 13 partial relief was noticed, 10 ears were without any change and in 12 ears the intensification of tinnitus was recognized. In group II in 16 ears improvement was observed, in 2 of them tinnitus disappeared, in 14 decreased. In 9 ears no change was obtained and in 2 intensification was noticed. **Conclusions.** Electrical stimulation can be an alternative therapy in severe tinnitus treatment. The administration of kinesitherapy of cervical column may have an additive effect on tinnitus treatment.