

# Elektrostymulacja jako alternatywna metoda leczenia szumów usznych

Electrical stimulation as an alternative method of tinnitus treatment

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**Introduction.** The aim of the study was to evaluate the influence of the selective electrical stimulation of the hearing organ on tinnitus in people with sensorineural hearing loss. **Material and methods.** The study comprised 248 tinnitus patients treated by using electrical stimulation. The material was divided into two groups, regarding the method of stimulation. In group I - 168 people, transtympanal electrical stimulation of the promontory was applied, whereas in group II - 80 people, hydrotransmissive technique was used. ENT examination, audiological and radiological diagnostics, as well as the evaluation of the audiometric parameters of tinnitus was performed. The patients were asked to fill in the questionnaire concerning tinnitus. In 80 patients hydrotransmissive electrical stimulation was conducted using the own prototype device, in 168 patients - transtympanal stimulation, after local anaesthesia with Xylocain gel. **Results.** On the whole, in group of 248 patients, subjective improvement (decrease in the severity of tinnitus) was noticed in 130 people (52.4%), comprising 32 cases (13%) of total relief. In 93 patients (37.5%) tinnitus remained unchanged, and in 25 (10.1%) the deterioration was observed. The comparison of the results of two electrical stimulation methods, showed the superiority of hydrotransmissive one (improvement in 58.75% of patients), however, the number of cases of total relief was greater in the case of transtympanal method (15.5%). Considering subjective evaluation, as well as audiometric (the intensity and the frequency parameters, MML) the hydrotransmissive method appeared to be more effective (improvement in 53.75%) comparing to transtympanal stimulation (improvement in 44.6%). **Conclusions.** On the basis of studies conducted in the Clinic and the long history of the electrical stimulation administration in tinnitus treatment, it can be stated that this method may be applied in cases, in which other therapeutical methods failed.