

Summary:

The aim of our study was diagnosis and rehabilitation of vestibular loss in patients with vestibular schwannoma. In the first part we focused on analysis of a group of patients before resection of vestibular schwannoma, mainly on evaluation of gain of posturography and on optimisation of diagnostic algorithm of vestibular pathology. Throughout the second experiment, we studied if rehabilitation of postural gait with visual biofeedback will speed up vestibular compensation in patients after resection of vestibular schwannoma.

The group consisted of 44 patients, who underwent surgical removal of vestibular schwannoma. Before surgery each patient underwent clinical vestibular examination, electronystagmographic recordings and posturography. In the second part of the study 17 patients from previous group were chosen. These patients underwent rehabilitation and rehabilitation with biofeedback.

For evaluation was used independent samples T-test and cross-tabulation. A great number of variables were reduced by factor analysis. For statistical analysis of the group with rehabilitation was used nonparametric Wilcoxon signed rank test.

Statistical analysis revealed that the most typical parameter for vestibular pathology is the time of the step quick turn test, which is a part of posturography. We proved that individual rehabilitation with visual biofeedback during the acute postoperative period can accelerate improvement of vestibulo-spinal reflex

Our study proved importance of posturography for proper diagnosis of vestibular pathology in patients with vestibular schwannoma. Furthermore the results showed that adaptation of postural stability is accelerated in patients, who rehabilitated with visual biofeedback in early postoperative period.

Key words: vestibular schwannoma, electronystagmography, posturography, postural stability, vestibular rehabilitation, visual feedback