

Abstract

The thesis deals with the issues of balance disorders in patients after vestibular schwannoma surgery. The aim of this thesis is to evaluate the effect of targeted rehabilitation with biofeedback on balance disorders and subjective visual vertical compensation. During the period of one year, a group of 20 vestibular schwannoma patients were examined and treated in University Hospital Motol. The compensation of vestibuloocular reflex was assessed by a tilt of subjective visual vertical. The level of vestibulospinal compensation was determined according to score of the Activities-Specific Balance Confidence Scale. Patients were examined before the surgery, after the surgery and after the rehabilitation. The Homebalance system, developed by Support center for application outputs and spin-off companies at the 1st Faculty of Medicine, Charles University in Prague, branch office in Kladno, was used for the therapy with visual biofeedback. Another aim of this thesis was to monitor the effect of vestibular prehabitation with ototoxic gentamicin application two months before surgery. The statistical analysis of data proved in the case of subjective visual vertical tilt a significant increase of deviation after surgery and a decrease after rehabilitation. According to the ABC questionnaire the confidence of balance got significantly worse after surgery and got better after rehabilitation. There was no statistically significant difference in compensation between the patients cured with gentamicin and those who were not cured with it.