

## **Abstract**

This thesis deals with the evaluation of the vestibulo-ocular reflex in patients indicated for neurosurgical resection of vestibular schwannoma, executed at the Motol University Hospital. To evaluate the function of the vestibulo-ocular reflex, three types of clinical examinations were used. In periods before the surgery, early after the surgery and before leaving the hospital we monitored the patients' ability to perceive subjective visual vertical, which reflects tonic function of otolith organs. Before the surgery we also tested relative dynamic visual acuity during passive isolated head movements in the transversal plane, whose impairment is related to dysfunction of lateral semicircular canals. Furthermore, we obtained patients' preoperative values achieved in caloric reflex test. In the early postoperative period, bordered by the first day after the vestibular schwannoma surgery and the last day of the hospitalization, patients underwent specialized vestibular rehabilitation. Based on statistical analysis of acquired data, we found out that in some patients there was a lesion of the vestibulo-ocular reflex already before the surgery and moreover, there was a correlation between dysfunction of translational and rotational parts of the vestibulo-ocular reflex. Although variance of subjective visual vertical tilt during hospitalization was evident, differences between any two defined periods have not been proven to be statistically significant. Thus, a positive effect of early vestibular rehabilitation on vestibular compensation rate in a term of leaving the hospital has not been confirmed. An influence of preoperative condition of vestibular apparatus on velocity of adaptation of the vestibulo-ocular reflex has not been proven as well.