Abstract

The thesis deals with the evaluation of the impact of preoperative application of gentamicin on vestibular compensations of patients after vestibular schwannoma surgery. The trial involved 32 patients with diagnosed vestibular schwannoma and hospitalized with the indicated for neurosurgical resection at the University Hospital Motol. Ototoxic gentamicin was transtympanically applied to ten of these patients two months before their surgery. After the surgery, the patients underwent a rehabilitation program based on the visual biofeedback using the Homebalance system. To evaluate the vestibular compensation, the subjective visual vertical measurement, and the Dynamic Gait Index standardized walking test were used. In total, each patient performed three examinations: before the surgery, after the surgery, and before the end of hospitalization. Statistical analysis of the measured data showed the statistically significant increase in the tilt of subjective visual vertical and the decrease in the overall score of Dynamic Gait Index after surgery. Reduction in the subjective visual vertical tilt and the overall score of Dynamic Gait Index after rehabilitation has not been proven to be statistically significant. Any statistically significant difference was found between the group of patients treated by gentamicin and the untreated group of patients. The significant effect of gentamicin application on the vestibular compensation in the early postoperative period has not been proven.