Abstract

The present thesis deals with the issue of balance disorders in patients with multiple sclerosis (MS) and the effect of individual balance training using biofeedback. It presents an overview of the current knowledge about MS – epidemiology, pathogenesis, diagnostics, types, symptoms and treatment methods. The thesis also describes principles of balance control of the human body, balance deficits in patients with MS and physiotherapeutic treatment. The aim of the experimental part was to evaluate the effect of the Homebalance® system on balance in MS patients and its comparison with conventionally used sensorimotor training. A total of 18 people took part in the research, 9 in the experimental group and 9 in the control group. Standardized tests and functional scales supplemented by standardized questionnaires on balance and gait were used to objectively assess balance. Measurements were performed before and after a series of therapies. After treatment, a significant improvement ($p \square 0,05$) was found in some tests and functional scales, but in none of subjective patient reported outcomes. Exercise using the Homebalance® system may be a suitable alternative to classical rehabilitation methods used for balance training in people with MS.

Keywords