

Abstract

The thesis investigates problems of walking and balance disorders in patients with multiple sclerosis and the effect of group Pilates lessons. The theoretical part provides an overview of the current knowledge about the disease – etiology, pathogenesis, diagnostics, types and symptoms of multiple sclerosis (MS) and the possibilities of therapy. The Pilates method, its history and principles of exercise are described. The aim of the practical part was to evaluate the effect of the Pilates program on walking and balance in MS patients. The group included 32 patients, 21 in the experimental group and 11 in the control group. The experimental group participated on the 10 - week Pilates program. Standardized gait and balance functional test were used for objective assessment; patient outcome measurements were used for subjective evaluation of exercise effect. More detailed gait parameters were obtained using the GAITRite instrument. Measurements were performed before and after therapy. Significant change - improvement ($p < 0.05$) was observed in some values of balance parameters, walking parameters and even in some subjective questionnaires. Therefore, we suggest, that group exercise lessons supervised by experienced instructor may be beneficial exercise therapy for people with MS and mild disability.

Keywords

Multiple sclerosis, gait and balance impairment, Pilates, exercise