

Abstract

Title: Effect of therapeutic physical program in patients with type 2 diabetes mellitus

Objectives: The aim of my work was to examine the effect of 12 weeks therapeutic physical program on distribution of plantar pressure, muscle strength in plantar flexion, ankle range of motion and physical ability by patients with type 2 diabetes mellitus and diabetic foot syndrome.

Methods: It was a quantitative research, randomized controlled trials. It was chosen 10 patients with type 2 diabetes mellitus and with diabetic foot syndrome. The patients were divided into 2 groups. In each group were four males and one female, aged from 54 to 73 years old. The first group included exercise patients and the second group nonexercise patients. The intervention took place 5 – 7 times a week and contained two types of training units. The first had 11 exercises, the second self mobilization of leg joint and walking. Basic anthropometric figures – height, weight, girth of waist and hipline (tailoring meter, weighing machine), ankle range of motion (goniometer), muscle strength in plantar flexion (dynamometer), pressure distribution in stand (MobileMat), physical ability (Senior Fitness Test) were measured and compared in two groups after 12 weeks. The results were evaluated statistically in tables.

Results: The exercising group had significant differences in muscle strength in plantar flexion and pressure distribution in stand in comparison with the control group after 12 weeks. The changes were not statistically significant in ankle range of motion and physical ability.

Key words: diabetic foot syndrome, physical intervention, biomechanics of foot