

ABSTRACT

Title: The influence of a specific movement therapy for bone density in female patients evaluated by bone DXA densitometry

Objectives: The aim was to demonstrate the positive impact of movement on bone mineral density in patients suffering from postmenopausal osteoporosis.

Summary: The main topic of this thesis is to evaluate potential benefits of an intensive program to the treatment of patients suffering from postmenopausal osteoporosis treated with the standard pharmacological therapy. The marker determined to evaluate the effect of change in bone density was DXA bone densitometry in the standard locations (lumbar spine, proximal femur). The evaluation of measurement results was performed after six-month program.

Methods: The experiment, which was the substantial part of this thesis, was based on the method of comparison of input and output values in experimental and control groups. Each group consisted of 15 patients. Measured parameters of bone density were deliberately affected by means of physical interventions in the experimental group of patients. The results were processed and evaluated by Microsoft Excel and SAS 9. 2 programs.

Results: Physical intervention is an essential part of therapy in patients suffering from postmenopausal osteoporosis. The experiment proved that a six-month intensive and specific physical activity had a positive impact on bone mineral density.

Key words: physical activity, bone mass density, osteoporosis