

Apparativ-assistives Bewegungstraining der unteren Extremitäten in der geriatrischen Rehabilitation

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Abstract

While the birth rate in Germany stagnates on a low level since 30 years the average life expectancy rises permanently [29]. That results in the so-called demographic change which implicates a constant ageing of the population. This ageing process causes a shift in the morbidity spectrum of elderly people from acute to chronic and multiple diseases. Since mobility is a significant requirement for quality of life in the old age, the influence of additional movement training (MOTOmed® movement therapy) on the walking ability of geriatric patients should be examined by the present assignment.

Study design: 21 patients (age: 80.7 ± 4.76) were chosen out of a test group of 42 geriatric patients by randomization to train with a MOTOmed® movement therapy trainer. During the in-patient stay of three weeks they should do a daily training of 15 minutes with the therapy trainer additionally to the recommended rehabilitation interventions. The intensity should meet level 13 of the Borg scale (»slightly strenuous«). Above all the influence of the MOTOmed® therapy on the walking ability and the endurance was measured through the 10 m-Short Distance Speed-Test and the 2/6 Minutes-Endurance-Test. In addition to that a timed »Up and Go«-Test was operated. The patients of the control group (n=21, age: 79.1 ± 7.49) received the conventional group therapy and physiotherapy.

Result: The comparison of the test results before and after the intervention showed significant improvements in the walking ability in the group using the MOTOmed® [2/6 Minutes-Endurance-Test ($p=0.006$; $p=0.000$), Short Distance Speed-Test with fast pace ($p=0.012$), »Up and Go«-Test ($p=0.000$)]. The averaged increase of power during the training sessions of 3.46 W ($p=0,016$) deduces furthermore to a growth of strength with the test persons of the intervention group.

Perspective: In the rehabilitation of geriatric patients, the MOTOmed® movement therapy can contribute to keeping and increasing mobility and improving endurance; it therefore contributes to everyday life's independence and increases individual quality of life.

Key words: endurance, movement therapy, geriatric rehabilitation, walking ability, mobility

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