Walking training of patients with hemiparesis at an early stage after stroke: a comparison of walking training on a treadmill with body weight support and walking training on the ground.


Abstract

OBJECTIVE: To compare the effect of walking training on a treadmill with body weight support (BWS) and walking training on the ground at an early stage of rehabilitation in patients with hemiparesis after stroke.

DESIGN: Randomized controlled experimental study.

SETTING: Multicentre design; three departments of rehabilitation medicine.

SUBJECTS: Seventy-three consecutive first stroke patients admitted to a rehabilitation clinic were randomized into a treatment group and a control group.

INTERVENTIONS: The treatment group received walking training on a treadmill with BWS for 30 minutes, 5 days a week. The control group received walking training according to the Motor Relearning Programme (MRP) on the ground for 30 minutes 5 days a week, not including treadmill training. During the time in the rehabilitation department (about two months), all patients in the study also received professional stroke rehabilitation besides the walking training in the two groups.

MAIN OUTCOME MEASURES: Functional Independence Measure (FIM), walking velocity for 10 m, Functional Ambulation Classification (FAC), Fugl-Meyer Stroke Assessment and Berg's Balance Scale. The assessments were performed at admission, at discharge and at 10-month follow-up.

RESULTS: There were no statistically significant differences between the groups at discharge or at the 10-month follow-up with regard to FIM, walking velocity, FAC, Fugl-Meyer Stroke Assessment, and Berg's Balance Scale. Patients in both groups improved in these variables from admission to the 10-month follow-up.

CONCLUSIONS: Treadmill training with BWS at an early stage of rehabilitation after stroke is a comparable choice to walking training on the ground.