OBJECTIVE: To assess the balance function of hemiplegic stroke patients and to investigate whether visual feedback rhythmic weight-shift training following acute stroke can decrease falls among patients with hemiplegic stroke.

DESIGN: A prospective study, using a Balance Master.

SETTING: Hospital-based rehabilitation units.

SUBJECTS: Fifty-two hemiplegic stroke patients (28 in the training group and 24 in the control group).

INTERVENTIONS: Conventional stroke rehabilitation programme plus visual feedback rhythmic weight-shift training. Training effect was evaluated by assessing the static and dynamic balance performance as well as comparing the occurrence of falls in the training and control groups at six-month follow-up.

MAIN MEASURES: Occurrence of falls; static balance in different sensory conditions; and dynamic balance performance, including on-axis velocity and directional control during rhythmic weight-shift.

RESULTS: Significant improvement in dynamic balance performance was found in hemiplegic patients in the training group. The improvement was sustained for six months. With regard to static balance function, no significant improvement was found. At six-month follow-up, 5 of 28 patients (17.8%) in the training group had fallen, compared with 10 of 24 patients (41.7%) in the control group. The occurrence of falls decreased, although not statistically significantly (p=0.059).

CONCLUSIONS: Visual feedback rhythmic weight-shift training may improve dynamic balance function for hemiplegic stroke patients. The effects of training may be sustained for six months. The occurrence of falls decreased in the training group, but not statistically significantly.

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