

**O-0015****Influence of standing on the slant board with the ankles dorsiflexed on walking function in post-stroke hemiparetic patients**Nakayama Yasuhide<sup>1)</sup>, Iijima Setsu<sup>2)</sup>, Kakuda Wataru<sup>3)</sup>, Abo Masahiro<sup>3)</sup><sup>1)</sup>Department of Rehabilitation Medicine, Daisan Hospital, The Jikei University School of Medicine,<sup>2)</sup>Rehabilitation Services Bureau, National Rehabilitation Center for Persons with Disability,<sup>3)</sup>Department of Rehabilitation Medicine, The Jikei University School of Medicine**key words** Motor learning • Stroke • Gait disturbance

**【Purpose】** A slant board has been applied as one of the therapeutic devices for patients with spastic lower hemiparesis. We previously reported that standing on the slant board can produce a forward shift of center of pressure in healthy adults and hemiparetic patients. However, no data regarding the influence of the training using a slant board on walking function in post-stroke hemiparetic patients is available. **【Methods】** Six post-stroke hemiparetic patients with gait disturbance were studied (mean age:  $58.7 \pm 6.0$  years). The patients were instructed to perform our proposed home-based training using a slant board for 30 days at their living place. The patients were scheduled to perform two sets of 3-min training using the board three times a day as a home-based training. They try to keep standing position with both ankle joints flexed in the dorsiflexion direction for 3 minutes. The angle of the slant was set at 20 degrees for all patients. Brunnstrom Recovery Stage, Barthel Index, range of motion in the ankle joint, modified Ashworth scale of calf muscle, sensory impairments with Numeral Rating Scale, maximum walking Speed (MWS), number of steps and Timed "Up and Go" test (TUG) were serially evaluated at the beginning and end of the 30-day protocol. **【Results】** All patients completed the 30-day protocol without any adverse events. With the protocol, MWS significantly increased ( $p < 0.05$ ). The number of steps significantly decreased after the protocol ( $p < 0.05$ ). In addition, significant shortening of TUG performance time was found after the protocol ( $p < 0.05$ ). **【Discussion】** We speculate that the improvement in walking function found in studied patients was due to forward shift of a center of gravity, which can be an important part of motor learning for gait. The efficacy of the training should be confirmed in a further study of large number of patients and three-dimension analysis.