Effect of the self-monitoring approach on physical activity in hospitalized patients with mild ischemic stroke: a randomized controlled trial

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[Purpose]

To evaluate the effect of the self-monitoring approach (SMA) on physical activity and self-efficacy for physical activity (SEPA) in hospitalized patients with mild ischemic stroke.

[Methods]

Hospitalized patients with mild ischemic stroke who could walk without assistance were recruited. Patients were randomly assigned to the SMA group or the control group. We measured the daily number of steps taken as the index of daily hospitalized physical activity using a Fitbit One (Fitbit Inc., San Francisco, CA) three-dimensional accelerometer. All patients underwent supervised rehabilitation program 5–6 times a week until discharge. Over the first 2 days (T1), patients did not receive accelerometer-based feedback. Then, to promote hospitalized physical activity, the subject’s in the SMA group self-monitor their hospitalized physical activity until discharge (T2). The SMA used in this study aimed to enhance self-efficacy. The control group participated in supervised rehabilitation program only. We also measured SEPA assessment tool at T1 and T2.

[Results]

The study sample included 22 patients, of which 10 patients (66.4 yrs, 70% men) comprised the SMA group and 12 patients (62.3 yrs, 50% men) comprised the control group. Although there were no significant differences in physical activity values between the SMA group and control group at T1 (3157.4 vs. 2193.5 steps/day, P=0.267), values of the SMA group at T2 were significantly higher than those of control group (5776.4 vs. 3027.8 steps/day, P=0.006). There were no significant differences in SEPA between the groups at T1 and T2.

[Discussion]

The SMA might effectively increase physical activity in hospitalized patients with mild ischemic stroke. Future study need to assess long-term follow up to determine whether the benefits of the SMA continue after discharge.