

## Effect of Horticultural Therapy on Functional Improvement of the Upper Limb in Poststroke Patients

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### Objective

To delineate the effect of horticultural therapy (HT) on the recovery of upper extremity function in poststroke hemiplegic patients.

### Methods

A total of 16 poststroke hemiplegic patients who had unilateral upper extremity dysfunction were randomly allocated into two groups; 5 patients who received conventional occupational therapy without HT were the control group, and 11 patients who received additional HT as well as conventional occupational therapy were the treatment group. HT program consisted of 10 sessions for 2 weeks, and the session was 1 hour. To assess the upper extremity function, Jebson hand function test (JHFT) and Fugl-Meyer assessment (FMA) were performed 3 times at admission just before HT, just after HT, and one month after HT. In addition, Korean version of Modified Barthel Index (K-MBI), Functional Independence Measure (FIM), and Korean-National Institute of Health Stroke Scale (K-NIHSS), Korean version of Mini-Mental State Examination (K-MMSE) were also performed 3 times to detect functional and cognitive improvements.

### Results

The age, gender, hemiplegic side, type of stroke, and initial JHFT and FMA scores were not different between the control and treatment groups. JHFT, FMA scores at initial and follow-up periods, and their total gain scores were not also different between two groups. However the initial and gain scores of bathing subscore of K-MBI were significantly different from the control and treatment groups ( $3.0 \pm 1.22$  vs.  $1.54 \pm 0.93$  and  $0.6 \pm 0.55$  vs.  $2.36 \pm 1.36$  respectively). The other subscores and total score of K-MBI, FIM, K-NIHSS, K-MMSE, and FIM were not different between two groups.

### Conclusion

Although one subscore of K-MBI showed improvement, overall hand, cognitive, and functional status were not changed after additional HT to poststroke hemiplegic patients. Further studies with more patients and the long-term follow-up are necessary to confirm the effect of HT to poststroke hemiplegic patients.