

## 9. Cardiovascular Diseases

### Reference

Kwon OG, Jang WS, Woo CH, et al. The efficacy of adjusting leg length inequality by Chuna manual treatment for post stroke hemiplegia. *Hanbang-Jaehwal-Uihakgwa-Hakhoeji (Journal of Oriental Rehabilitation Medicine)* 2009; 19(2): 187–202 (in Korean with English abstract).

### 1. Objectives

To evaluate the effectiveness of the Chuna manual treatment for hemiplegia after stroke.

### 2. Design

Randomized controlled trial (RCT).

### 3. Setting

Two Oriental hospitals (Oriental Medical Hospital of Daegu Haany University at Daegu and Gumi), Republic of Korea.

### 4. Participants

Stroke patients with hemiplegia more than two weeks after onset and stable vital signs (n=39).

### 5. Intervention

Arm 1: Conservative therapy + Chuna manual treatment (n=20).

Arm 2: Conservative therapy only (n=19).

### 6. Main outcome measures

Activities of daily living (ADL), Modified Barthel Index (MBI), Berg Balance Scale (BBS), and evaluation of lower extremity motor function using the Fugl-Meyer Assessment (FMA).

### 7. Main results

1) In Arm 1, treatment significantly improved ADL and function as measured by MBI ( $4.80 \pm 5.12$ ,  $P=0.045$ ), BBS ( $3.50 \pm 2.59$ ,  $P=0.003$ ), and FMA ( $2.40 \pm 2.60$ ,  $P=0.020$ ) scores. The improvement was more marked in Arm 1 than in Arm 2.

2) In patients with sub-acute disease, treatment significantly improved function as measured by BBS score ( $4.00 \pm 2.83$ ,  $P=0.002$ ), but improvements in the treatment and control groups were not significantly different ( $P=0.159$ ).

3) In patients with chronic disease, treatment significantly improved function as measured by BBS ( $2.75 \pm 2.12$ ,  $P=0.011$ ) and FMA ( $1.63 \pm 2.39$ ,  $P=0.039$ ) scores, but this improvement was similar in both groups.

### 8. Conclusions

Chuna manual treatment may improve ADL, balance, and lower extremity function. Chuna manual treatment appears to be more effective for chronic disease.

### 9. Safety assessment in the article

Not mentioned.

### 10. Abstractor's comments

This study evaluated the effectiveness of Chuna manual treatment in the rehabilitation of patients after stroke. But the small number of subjects and the effectiveness of the conservative therapy are limitations of the study. Furthermore, the evaluation of leg length is a subjective measure with low accuracy. Therefore, it is suggested that a large scale clinical trial is needed.

### 11. Abstractor and date

Go HY, 18 July 2010.