

## 18. Symptoms and Signs

### Reference

Furuya E, Kaneko Y, Uehara A, et al. The effects of press tack needle treatment and massage on elbow flexion and extension repetitions\*. *Zen Nihon Shinkyu Gakkai Zasshi (Journal of the Japan Society of Acupuncture and Moxibustion)* 2008; 58(3): 487 (in Japanese). Ichushi Web ID 2008280629

#### 1. Objectives

To evaluate the efficacy of press tack needle treatment and massage on elbow flexor low-load isotonic repetitions.

#### 2. Design

Crossover randomized controlled trial (RCT-cross over).

#### 3. Setting

Not described, Japan.

#### 4. Participants

Fifty healthy adult males.

#### 5. Intervention

Arm 1: press tack needle treatment (number of subjects not indicated).

Arm 2: sham treatment group (number of subjects not indicated).

Arm 3: massage treatment (number of subjects not indicated).

Arm 4: control (number of subjects not indicated).

#### 6. Main outcome measures

Maximal strength, number of repetitions, Visual Analog Scale (VAS) score for pain intensity.

#### 7. Main results

There was no significant difference in maximal strength among groups. The number of exercise 2 elbow flexion and extension repetitions was significantly higher in arm 1 than arm 2 ( $103.2 \pm 48.2$  vs  $80.9 \pm 34.9$ ;  $P < 0.01$ ). The numbers were similar in arm 3 ( $75.5 \pm 31.0$ ) and arm 4 ( $71.8 \pm 41.6$ ). There was no significant difference in VAS score between arm 1 and arm 2. It was significantly decreased ( $P < 0.01$ ) in arm 1 compared to arm 4.

#### 8. Conclusions

Press tack needle treatment facilitates performance of higher numbers of exercise repetitions, suggesting its potential in muscle training and rehabilitation.

#### 9. Safety assessment in the article

Not mentioned.

#### 10. Abstractor's comments

This study is interesting as it suggests that the use of neck and shoulder press tack needles increase exercise endurance and that brachial biceps massage reduces pain during elbow flexion and extension. This trial appears to have compared and verified the effectiveness of press tack needles in Arms 1 and 2, and the effectiveness of massage in Arms 3 and 4 by cross-over experiments; however, a clear description of the study design including the numbers of subjects in the intervention groups and the control group is needed. This may, however, be a limitation of structured abstracts. The effect of massage on endurance capacity was not ascertained in this trial, and thus remains an issue for future studies. More specifically, employing petrissage with gripping—which should have a greater effect on muscle circulation—as an intervention rather than minimal pressure effleurage, may have allowed for more accurate verification of the effects of massage. I hope that a future study focuses on massage, including the ideal interventions and stimuli.

#### 11. Abstractor and date

Fujii R, 21 December 2010, 28 February 2011.