

### 13. Diseases of the Musculoskeletal and Connective Tissue

#### Reference

Itoh S, Itoh K, Katsumi Y. Effect of trigger point acupuncture treatment in older patients with chronic low back pain: randomized controlled trial. *Zen Nihon Shinkyu Gakkai Zasshi (Journal of the Japan Society of Acupuncture and Moxibustion)* 2009; 59(1): 13–21 (in Japanese with English abstract). Ichushi Web ID: 2009213798

#### 1. Objectives

To evaluate the efficacy of trigger point acupuncture treatment for chronic low back pain in elderly people.

#### 2. Design

Randomized controlled trial (RCT).

#### 3. Setting

Department of Orthopedic Surgery, the Meiji University of Integrative Medicine Hospital, Kyoto, Japan.

#### 4. Participants

Thirty-nine elderly outpatients with a six-month or greater history of chronic low back pain.

#### 5. Intervention

Arm 1: Trigger point group. Needles were inserted at  $9.4 \pm 2.3$  (mean  $\pm$  SD) locations per participant into the gluteus medius, lumbar quadratus, gluteus maximus, and iliopsoas muscles, and retained for 10 minutes. *De qi* (得氣) sensation and muscle contraction were not considered. Treatment was given once a week five times. Follow up continued until three months after treatment stopped (n=13).

Arm 2: Tender point group. Treatment was applied at tender points in the painful region. The examination to locate tender points took acupuncture points into account. Needles were inserted at  $9.7 \pm 2.3$  locations per participant at BL23 (腎兪), BL22 (三焦兪), BL25 (大腸兪), BL52 (志室), BL21 (胃兪), BL53 (胞兪), BL54 (秩辺), GB31 (風市), and EX-B7 (腰眼) acupuncture points to a depth of 10 to 20 mm and retained for 10 minutes. *De qi* sensation and muscle contraction were not considered. Treatment period and frequency were the same as in Arm 1 (n=13).

Arm 3: Sham group. Needles were inserted at  $9.0 \pm 2.2$  locations per participant at the same locations as in Arm 1. Treatment period and frequency were the same as in Arm 1 (n=13).

For a total of 5, 8, and 7 participants dropped out in Arms 1, 2, and 3, respectively.

#### 6. Main outcome measures

Low back and leg pain intensity rated on a visual analogue scale (VAS) before treatment, each treatment, and then one month and three months after treatment stopped. During the treatment period, post-treatment scores were the scores obtained before the subsequent treatment. Quality of life (QOL) scores using the Roland Morris Disability Questionnaire (RMDQ) were obtained before treatment started, after each of five treatments, and then one month and three months after treatment stopped.

#### 7. Main results

Low back and leg pain intensity changed significantly for Arm 1 compared to Arms 2 and 3 (Interaction,  $P < 0.05$ ). The decrease in pain intensity decreased from the first treatment (within-group comparison) ( $P < 0.01$ ) and persisted for three months after treatment stopped. Symptoms were not alleviated in either Arm 2 or 3.

No significant difference of QOL in three groups (group comparison). Scores improved greatly in Arm 1 (within-group comparison) but not in either Arm 2 or 3.

#### 8. Conclusions

VAS scores show that trigger point acupuncture is more effective than tender point treatment or sham treatment for chronic low back pain in elderly people. Pain is alleviated after one treatment. Trigger point acupuncture treatment of low back pain improves QOL.

#### 9. From acupuncture and moxibustion medicine perspective

Not mentioned.

#### 10. Safety assessment in the article

Not mentioned.

#### 11. Abstractor's comments

This study compared trigger points and tender points as locations for acupuncture stimulation. The study compared a trigger point group, a tender point group, and a sham group, but it is regrettable that all the participants could not be retained, since some participants dropped out during the follow up. There was a significant change in the trigger point group compared to the other two groups by the end of treatment period, and clear effects could be inferred from the results of the within-group comparison. It is commendable that consideration was given to locating points with a certain level of tenderness for tender point identification. However, the method used by the authors' to locate stimulation sites raises some concern. For the sham group it was locating trigger point acupuncture sites only, for the trigger point acupuncture group it entailed examining the hip joint range of motion and locating sites, while for the tender point group it was locating the tender points in the low back and legs only. It is recommended that the effectiveness of trigger point acupuncture be verified by comparing it to the sham treatment. The researchers suggest that trigger points correspond to the pain relief points, so it may be possible to further improve the results of tender point treatment taking the classical acupuncture points into account, if it is possible to use trigger points properly. Recruitment and retention of subjects is a vital element of clinical research. It is hoped that the authors resolve this problem and move ahead with further research.

#### 12. Abstractor and date

Furuya E, 19 November 2010.