

13. Diseases of the Musculoskeletal and Connective Tissue

Reference

Itoh K, Hirota S, Katsumi Y, et al. Trigger point acupuncture for treatment of knee osteoarthritis - a preliminary RCT for a pragmatic trial. *Acupuncture in Medicine* 2008; 26(1): 17–26. CENTRAL ID: CN-00638475

1. Objectives

To compare the effectiveness of trigger point acupuncture and standard point acupuncture for treating knee osteoarthritis in the elderly.

2. Design

Randomized controlled trial (RCT).

3. Setting

Department of Orthopedic Surgery, the Meiji University of Oriental Medicine (current Meiji University of Integrative Medicine) Hospital, Kyoto, Japan.

4. Participants

Thirty outpatients clinically and radiologically diagnosed with osteoarthritis of the knee according to the American College of Rheumatology criteria and with knee osteoarthritis pain for at least six months (3 males, 27 females; age 61–82).

5. Intervention

Arm 1: Trigger point acupuncture group. Stainless steel needles (0.2×50 mm) were inserted into the muscle to a depth of between 10 and 30 mm. The sparrow pecking technique was used to elicit local muscle twitch, and the needles were left in place for 10 minutes (n=10).

Arm 2: Standard point acupuncture group. Stainless steel needles (0.2×40 mm, Seirin Co., Ltd.) were inserted into the muscle to a depth of 10 mm. The sparrow pecking technique was applied, and the needles were left in place for 10 minutes once the patient felt dull pain or the acupuncture sensation (de qi). The acupuncture points were 梁丘 (ST34), ST35 (犢鼻), ST36 (足三里), SP9 (陰陵泉), SP10 (血海), and GB34 (陽陵泉) (n=10).

Arm 3: Sham acupuncture group. Stainless steel needles (0.2×50 mm, with the tips cut off) were used. The treatment was applied at trigger points with the acupuncturist simulating insertion and sparrow pecking (needles were not actually inserted). Eye masks were used (n=10).

Treatment was given once a week on five occasions for Arms 1 to 3.

6. Main outcome measures

- Pain intensity using a visual analogue scale (VAS) was assessed before the first treatment and then 1, 2, 3, 4, 5, 10, and 20 weeks after the first treatment (eight times).
- Western Ontario and McMaster Universities Osteoarthritis (WOMAC) Index was assessed before the first treatment and then 5, 10, and 20 weeks after the first treatment (four times).

7. Main results

The mean VAS score was significantly lower in Arm 1 and Arm 2 than in Arm 3 ($P<0.001$ and $P=0.006$, respectively). Comparison of area under the curve for the three groups showed that patients in Arm 1 had the lowest scores, confirming the significant difference in Arm 3 ($P=0.025$).

The mean WOMAC index was significantly lower in Arms 1 and 2 than in Arm 3 ($P<0.001$ and $P<0.001$, respectively). Comparison of area under the curve for the three groups showed that patients in Arm 1 had the lowest score, confirming the significant difference in Arm 3 ($P=0.031$).

8. Conclusions

Trigger point acupuncture is effective for knee osteoarthritis in elderly people.

9. From acupuncture and moxibustion medicine perspective

Trigger points appear to be due to the heightening of sensitivity of nociceptors by a variety of factors and, acupuncture stimulation of these points affect nociceptors. On the other hand, the paper mentions that stimulation of acupuncture points does not necessarily affect nociceptors that have heightened sensitivity.

10. Safety assessment in the article

Not mentioned.

11. Abstractor's comments

The study compared the effects of differing acupuncture treatments, including sham acupuncture, for elderly people with knee osteoarthritis. The measures and the outcomes are clear and coherent. The quality of this RCT is high: it included randomization and masking procedures, and reports the outcomes. However, examination of the trigger points in Arm 2 and examination of the acupuncture points in Arm 1 clearly differed. If some participants had prior experience of acupuncture, then masking might have been inadequate. The study's clinical significance is great. Further development of this research is anticipated.

12. Abstractor and date

Shimoichi Y, 11 September 2011.