

13. Diseases of the Musculoskeletal and Connective Tissue

Reference

Ochi H, Katsumi Y, Ikeuchi T, et al. A study of acupuncture for knee osteoarthritis — The importance of combined use with therapeutic exercise*. *Meiji Shinkyu Igaku (The Bulletin of Meiji University of Oriental Medicine)* 1995; 17: 7–14 (in Japanese).

1. Objectives

To evaluate the effectiveness of acupuncture combined with therapeutic exercise for knee osteoarthritis.

2. Design

Randomized controlled trial (RCT).

3. Setting

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

4. Participants

Forty-eight patients diagnosed with knee osteoarthritis (age range 53–77 years).

5. Intervention

Arm 1: Acupuncture+silver spike point (SSP) electro-therapy group (n=18, mean age 62 years).

Arm 2: Acupuncture+SSP+therapeutic exercise group (n=20, mean age 63 years).

Arm 3: Therapeutic exercise group (n=10, mean age 67 years).

Acupuncture: stainless steel disposable needles (0.18 mm×40 mm) were used to apply the sparrow pecking technique at 9 points in the thigh region and the GB31 (風市), ST36 (足三里), GB34 (陽陵泉), and SP9 (陰陵泉) acupuncture points once or twice a week before applying SSP therapy (compression wave stimulation for 10 minutes between the knees and the thigh). Therapeutic exercise: Participants exercised mostly to strengthen the femoral quadriceps muscles, at least three times a day at home. The treatment period was one month.

Dropouts are mentioned, but the details are not reported in the original article.

6. Main outcome measures

Japanese Orthopaedic Association score (JOA score) and muscle strength.

7. Main results

JOA score tended to increase between the start of treatment and one month later in Arms 1 and 2 but not Arm 3. The differences between Arm 1 and Arm 3 ($P<0.01$) and between Arm 2 and Arm 3 ($P<0.05$) were significant. Follow up revealed a strong anesthetic effect in patients who continued to exercise. Scores for knee extension muscle strength showed significant increases in Arms 2 ($P<0.01$) and 3 ($P<0.05$).

8. Conclusions

Combined use of acupuncture, SSP therapy, and therapeutic exercise is an effective conservative therapy for knee osteoarthritis.

9. From acupuncture and moxibustion medicine perspective

Not mentioned.

10. Safety assessment in the article

Not mentioned.

11. Abstractor's comments

This interesting study investigated the effects of combining acupuncture and SSP therapy with therapeutic exercise for knee OA. It revealed the significance of therapeutic exercise. SSP therapy is a form of transcutaneous electric nerve stimulation that uses spike-shaped surface electrodes. The authors have greatly improved the quality of the statistical analysis used in the present study from what it was in their previous work, but regrettably, they did not clearly describe their method of random allocation, and although dropouts are mentioned, this is not reflected in the analytical results. Further, the authors use the comprehensive JOA score as an outcome measure, yet analysis of the elements within that score, namely pain, functioning, joint range of motion, and swelling, would be worthwhile. This is a very valuable study in that it establishes a therapeutic method based on real clinical practice. Hopefully, the authors will conduct larger scale, more rigorously designed RCTs.

12. Abstractor and date

Kawakita K, 3 February 2012.