

Japanese Acupuncture - Current Research

Japanese Traditional Medicine Text (21)

Industrial Health Field

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A. Industrial Health

1. Current Status of Clinical Studies in Japan and Overseas

A search in PubMed for papers related to industrial health and acupuncture yielded 44 results as of November 2010, and indicated the existence of a small accumulation of studies. Randomized controlled trials (RCT; 4 cases) have begun to appear from around 1993, which mostly assessed rotator cuff tendinitis and apoplexy in terms of visual analog scale (VAS), Short Form 36 (SF-36), and activities of daily living (ADL), against a control group of sham acupuncture, exercise, physical therapy and occupational therapy.

A study by Szczurko et al.¹⁾ examined and compared rotator cuff tendinitis in postal workers in a prospective RCT, by randomly dividing the subjects into an acupuncture treatment group and physical therapy group. Work-related musculoskeletal disorders have one of the highest incidence rates in the field of industrial health, and are a major cause of sick leaves²⁾. Compounded with the increase in medical expenses under health insurance, establishing measures for their prevention is an important issue not only for enhancing workers' health and quality of working life (QWL), but also for preventing work loss and maintaining high productivity²⁾. An economically effective means is therefore sought to address such sick leaves and increases in medical expenses. Acupuncture treatment could be one such means, as it is less expensive compared to conventional health care in terms of facilities and consumables. However, studies have hardly been made on the economic assessment of acupuncture treatment in the industrial health field.

2. Present State and Future Prospects of Clinical Studies in Japan

(a) Studies in the industrial health field in Japan

There are few full-fledged studies of the industrial health field in Japan, but a paper on "The Possibilities of Acupuncture in the Workplace"³⁾ was presented at the Industrial Health and Alternative Medicine symposium sponsored by the Japan Society for Occupational Health in 2003. In it, a study by Sawazaki⁴⁾ et al. is introduced in reference to the economic assessment of acupuncture treatment in the industrial health field.

In the study, acupuncture treatment was provided to 117 blue collar workers from a certain workplace who complained of pain in their neck and shoulders, lower back, or knee. The pain lessened by half in some 80% to 90% of the subjects, and the Profile of Mood States (POMS) before and after treatment also showed a significant decrease in total score. Furthermore, the numbers of subjects and the number of days that the subjects visited a medical institution due to a musculoskeletal disorder halved during the period they received acupuncture treatment, and the medical expense they paid under health insurance decreased to roughly one-third. The same examination was conducted at another similar workplace, but there was no conspicuous difference regarding the factors related to musculoskeletal disorders. In a study⁵⁾ of lumbago patients, a significant decrease was seen in their pain, POMS, and medical expenses under health insurance. These studies suggest that acupuncture treatment is effective against work-related musculoskeletal disorders in the industrial health field. Moreover, the improvement of POMS indicates the possibility of increasing QWL and productivity, and is thought to be widely economical, combined with the decrease in medical expenses.

Workers' work postures and actions are diverse. Work-related musculoskeletal disorders are a serious issue in both industrialized and

industrializing countries alike⁶⁾, and individualized approaches must be made to each work action in the workplace. In related studies, acupuncture treatment is applied based on M-Test^{7), 8)}. M-Test is thought to be useful as an individualized method for preventing work-related musculoskeletal disorders, as it indexes each individual's physical symptoms according to action. The M-Test is discussed in detail under "C. Special Diagnostic Techniques" in Chapter 4.

(b) Prospects of future studies (economic assessment)

1) Subjects

It is not easy to determine who shall be included among the subjects, but it is necessary to find new subjects from diverse occupations.

2) Design

Prospective studies by RCT are thought to be best at present, but as such studies are costly and take time, public investment is necessary to also ensure neutral assessment. The study by Sawazaki et al. is a case-controlled retrospective study of medical expenses under health insurance within the design of a before-and-after trial. Realistically speaking, it is most easy to set a control group, but various biases must be considered. It is ideal to conduct an economic assessment based on a perfect design, but from a practical perspective, it is also necessary to accumulate partial assessment data.

3) Assessment (Result)

In the study by Sawazaki et al., there was a decrease in medical expenses under health insurance, after applying treatment. The assessment of medical expenses may produce different conclusions depending on from whose standpoint it is analyzed, also in consideration of expenses paid by the patient and the patient's family. As the standpoints of evaluators are diverse, it is preferable to conduct an assessment from a broad social standpoint as much as

possible, to ensure neutrality.

4) Analysis method

In recent years, it is considered important to have knowledge of healthcare quality, such as subjective health-related QOL and satisfaction. Therefore, proper analysis of cost effectiveness and cost utility based on patients' subjective views is expected in the future.

3. Conclusion

Studies in the field of industrial health will be needed in the future, as a means for demonstrating the roles of acupuncture treatment in society. Toward this end, a steady improvement in the quality of studies and investments in studies in this field are desired.

References

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