

Mini Review

Tai Chi, Qigong and the Treatment of Ankylosing Spondylitis

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Received: 24 July, 2024

Accepted: 29 July, 2024

Published: 02 August, 2024



Abstract

Tai chi and qigong have been used as primary or supplementary treatments for a wide range of diseases and ailments for hundreds, or even thousands of years in China. These two treatment techniques have been incorporated into western medical practices with increasing frequency in recent decades to treat a wide range of ailments, including fatigue, cancer, hypertension, depression, COPD, stroke, balance, heart disease and osteoporosis, to name a few. The present study summarizes the results of a literature search intended to find studies where tai chi or qigong have been used to treat ankylosing spondylitis. Several studies were found to have used tai chi or qigong to successfully treat ankylosing spondylitis symptoms.

Keywords: Tai Chi; Qigong; Traditional Chinese Medicine; TCM; Ankylosing Spondylitis

Introduction

Tai chi and qigong [pronounced chee gong] are considered to be forms of alternative medicine in the West, although their use has been quite common in China and some other Asian countries for hundreds or even thousands of years. Their common features include movement, breath work and meditation. Their substantive differences are few when applied to the treatment of disease and various ailments. Tai chi involves a series of pre-arranged movements, much like a Japanese kata or Korean poomsae, but performed more slowly and gently. Tai chi is also a martial art, although many practitioners focus more on its health benefits. Qigong, on the other hand, may or may not involve a series of pre-arranged movements and is not a martial art. Qigong may be performed from either a seated or standing position. One common feature of both techniques is that they activate and strengthen the body's natural immune system. Because of this feature, both tai chi and qigong have been used effectively to treat a wide variety of diseases and ailments [1], including fatigue [2], cancer [3-5], hypertension [6-8], depression [9-10], COPD [11-12], stroke [13], balance [14], heart disease [15-16], and osteoporosis [17-18], to name a few. Incorporation of their use in Western medical practices has increased in recent decades as an increasing number of studies have shown that their use has been effective as supplementary medical procedures.

The Studies

A search of the PubMed [19] database for “ankylosing spondylitis” and “tai chi” got four “hits.” One study published a personal experience of T.C. Koh [20], who started practicing tai chi on the advice of a Chinese physician to treat his moderately severe ankylosing spondylitis. Prior to starting the practice of tai chi, he had been using conventional medical therapy for 15 years to treat his condition. After two and a half years of daily practice the patient felt healthier and stronger than before. Tai chi was found to minimize flexion deformity of the spine. Other benefits included limb coordination, improved skeletal muscular strength, chest movement and ability to relax, and balance.

A second study [21] found that the regular practice of tai chi was safe and effective for patients suffering from rheumatological diseases such as rheumatoid arthritis, ankylosing spondylitis, and fibromyalgia, as well as a wide range of other ailments and diseases, including stroke, Parkinson's disease, traumatic brain injury, cognitive dysfunction, multiple sclerosis, osteoarthritis, osteoporosis, low back pain and musculoskeletal disorder, among others.

Lan et al. [21] cited a study by Lee et al. [22] involving 40 patients with AS who practiced tai chi for 60 minutes twice a week for eight weeks, followed by an additional eight weeks of home practice. The tai chi group improved significantly compared to the control group in terms of flexibility and disease activity, with no adverse effects.

Luo et al. [23] reviewed the available evidence of the effect of exercise on the treatment of ankylosing spondylitis. They found that running, Pilates, stretching, yoga and tai chi provided significant relief from the symptoms of ankylosing spondylitis.

Next, a search was conducted to find studies that have been done for the treatment of ankylosing spondylitis using qigong. The search got three "hits," which included one completed study [24] and two studies that were in process [25-26]. For the completed study, a randomized control trial that included a 12-week baduanjin exercise program involving 46 patients was found to improve the symptoms of AS. Significant improvements were found for fatigue ($p = 0.03$), intensity ($p = 0.04$) and duration ($p = 0.01$) of morning stiffness [24].

Based on the available evidence and studies, it seems clear that incorporating tai chi and/or qigong into the treatment of AS can be beneficial.

References

1. Yang GY, Hunter J, Bu FL, Hao WL, Zhang H, Wayne PM, Liu JP. Determining the safety and effectiveness of Tai Chi: a critical overview of 210 systematic reviews of controlled clinical trials. *Syst Rev*. 2022 Dec 3;11(1): 260.
2. Xiang Y, Lu L, Chen X, Wen Z. Does Tai Chi relieve fatigue? A systematic review and meta-analysis of randomized controlled trials. *PLoS One*. 2017 Apr 5; 12(4): e0174872.
3. Cheung DST, Takemura N, Lam TC, Ho JCM, Deng W, Smith R, Yan Y, Lee AWM, Lin CC. Feasibility of Aerobic Exercise and Tai-Chi Interventions in Advanced Lung Cancer Patients: A Randomized Controlled Trial. *Integr Cancer Ther*. 2021 Jan-Dec; 20: 15347354211033352.
4. Song S, Yu J, Ruan Y, Liu X, Xiu L, Yue X. Ameliorative effects of Tai Chi on cancer-related fatigue: a meta-analysis of randomized controlled trials. *Support Care Cancer*. 2018 Jul; 26(7): 2091-2102.
5. Takemura N, Cheung DST, Fong DYT, Lee AWM, Lam TC, Ho JC, Kam TY, Chik JYK, Lin CC. Effectiveness of Aerobic Exercise and Tai Chi Interventions on Sleep Quality in Patients with Advanced Lung Cancer: A Randomized Clinical Trial. *JAMA Oncol*. 2024 Feb 1; 10(2): 176-184.
6. Mayer M. Qigong and hypertension: a critique of research. *J Altern Complement Med*. 1999 Aug; 5(4): 371-82.
7. Park JE, Kim JE, Jung S, Kim A, Park H, Hong S. The Effect of Dongeuil Qigong for Prehypertension and Mild Essential Hypertension. *Evid Based Complement Alternat Med*. 2017; 2017: 4274538.
8. Park JE, Hong S, Lee M, Park T, Kang K, Jung H, Shin KM, Liu Y, Shin M, Choi SM. Randomized, controlled trial of qigong for treatment of prehypertension and mild essential hypertension. *Altern Ther Health Med*. 2014 Jul-Aug; 20(4): 21-30.
9. Noetel M, Sanders T, Gallardo-Gómez D, Taylor P, Del Pozo Cruz B, van den Hoek D, Smith JJ, Mahoney J, Spathis J, Moresi M, Pagano R, Pagano L, Vasconcellos R, Arnott H, Varley B, Parker P, Biddle S,

- Lonsdale C. Effect of exercise for depression: systematic review and network meta-analysis of randomised controlled trials. *BMJ*. 2024 Feb 14;384: e075847.
10. Wu PL, Lee M, Huang TT. Effectiveness of physical activity on patients with depression and Parkinson's disease: A systematic review. *PLoS One*. 2017 Jul 27; 12(7): e0181515.
 11. Li Z, Liu S, Wang L, Smith L. Mind-Body Exercise for Anxiety and Depression in COPD Patients: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Health*. 2019 Dec 18; 17(1): 22.
 12. Cai Q, Cai SB, Chen JK, Bai XH, Jing CX, Zhang X, Li JQ. Tai Chi for anxiety and depression symptoms in cancer, stroke, heart failure, and chronic obstructive pulmonary disease: A systematic review and meta-analysis. *Complement Ther Clin Pract*. 2022 Feb; 46: 101510.
 13. Zhao J, Chau JPC, Chan AWK, Meng Q, Choi KC, Xiang X, Zhao Y, He R, Li Q. Tailored Sitting Tai Chi Program for Subacute Stroke Survivors: A Randomized Controlled Trial. *Stroke*. 2022 Jul; 53(7): 2192-2203.
 14. Zhong D, Xiao Q, Xiao X, Li Y, Ye J, Xia L, Zhang C, Li J, Zheng H, Jin R. Tai Chi for improving balance and reducing falls: An overview of 14 systematic reviews. *Ann Phys Rehabil Med*. 2020 Nov; 63(6): 505-517.
 15. Gomes-Neto M, Durães AR, Conceição LSR, Saquetto MB, Alves IG, Smart NA, Carvalho VO. Some types of exercise interventions are more effective than others in people with coronary heart disease: systematic review and network meta-analysis. *J Physiother*. 2024 Apr; 70(2): 106-114.
 16. Chan CL, Wang CW, Ho RT, Ho AH, Ziea ET, Taam Wong VC, Ng SM. A systematic review of the effectiveness of qigong exercise in cardiac rehabilitation. *Am J Chin Med*. 2012; 40(2): 255-67.
 17. Li J, Guo J, Wang X, Zhang X, Zhang Y, Bu M, Yao X, She Y. Efficacy and safety of tai chi exercise on bone health: An umbrella review. *Osteoporos Int*. 2023 Nov; 34(11): 1853-1866.
 18. Kong LJ, Lauche R, Klose P, Bu JH, Yang XC, Guo CQ, Dobos G, Cheng YW. Tai Chi for Chronic Pain Conditions: A Systematic Review and Meta-analysis of Randomized Controlled Trials. *Sci Rep*. 2016 Apr 29; 6: 25325.
 19. PubMed. (2024); <https://pubmed.ncbi.nlm.nih.gov/>.
 20. Koh TC. Tai Chi and ankylosing spondylitis--a personal experience. *Am J Chin Med*. 1982; 10(1-4): 59-61.
 21. Lan C, Chen SY, Lai JS, Wong AM. Tai chi chuan in medicine and health promotion. *Evid Based Complement Alternat Med*. 2013; 2013: 502131.
 22. Lee EN, Kim YH, Chung WT, Lee MS. Tai chi for disease activity and flexibility in patients with ankylosing spondylitis--a controlled clinical trial. *Evid Based Complement Alternat Med*. 2008 Dec; 5(4): 457-62.
 23. Luo Y, Chen Y, Yan X, Zhang L, Shang Y, Seo JC. Effectiveness of exercise intervention in relieving symptoms of ankylosing spondylitis: A network meta-analysis. *PLoS One*. 2024 Jun 14; 19(6): e0302965.
 24. Xie Y, Guo F, Lu Y, Guo Y, Wei G, Lu L, Ji W, Qian X. A 12-week Baduanjin Qigong exercise improves symptoms of ankylosing spondylitis: A randomized controlled trial. *Complement Ther Clin Pract*. 2019 Aug; 36: 113-119.
 25. Liu W, Fan Y, Wan R, Zhao L, Lu H, Liao R, Zhuang Z, Guo X. Effects of traditional qigong exercise on ankylosing spondylitis: a protocol for systematic reviews and meta-analysis. *BMJ Open*. 2021 Apr 21; 11(4): e046188.
 26. Liu B, Fan Z, Wang Z, Li M, Lu T. The efficacy and safety of Health Qigong for ankylosing spondylitis: Protocol for a systematic review and meta-analysis. *Medicine (Baltimore)*. 2020 Jan; 99(3): e18734.