Effects of Ai Chi on pain and function for an individual with fibromyalgia – a case report.

Janet Gangaway, PT, DPT, OCS, ATC, ATRIC

Abstract

This is a case study of a 58 year old woman who is a subject from a pilot study on the physiological effects of Ai Chi on the symptoms related to fibromyalgia. The study focuses on Fibromyalgia (FMS) which is a syndrome characterized by wide spread pain in all four quadrants of the body, chronic fatigue, emotional dysfunction, and cognitive difficulties. All of these symptoms are increased with stress which is a common occurrence in most people's daily lives. Even though this diagnosis is one of exclusion, it currently affects approximately 2 million Americans. It is potentially a very disabling condition for most people who live with it as there are few effective, non-pharmaceutical treatments available to help manage the symptoms. One possible treatment would be Ai Chi which is an aquatic therapy technique that uses diaphragmatic breathing and slow movements of the arms, legs, and torso in flowing patterns. By using this technique, it is hypothesized that there will be an improvement in pain, stiffness, anxiety, depression, and physical functioning in patients with fibromyalgia. The study also anticipated an improvement in balance and an increase in muscle endurance. These would be indicated by increased distance during a 6-minute walk test, improved postural sway measurements on the Accusway, and more positive responses to the surveys looking at pain and function.

The movement pattern of Ai Chi consists of 19 specific positions repeated to both sides with the study only including the first 16 positions. The study was to last for 20 weeks which were broken into a 4 week baseline period, an 8 week pool period, and an 8 week post treatment period. The subject was asked to fill out a visual analogue pain scale (VAS) every day for the full 20 weeks as well as participate in a weekly data collection session for application of the 6 minute walk test, postural sway measurement, and completion of the fibromyalgia impact questionnaire (FIQ). The subject was given 2 pool sessions per week for the 8 week pool period which were held in a warm pool up to shoulder height. Music with a script was introduced after the subject was fully taught the pattern. While the subject did experience many physical difficulties during the study, including a hiatal hernia, pleurisy, and breathing difficulties, she was able to complete most of the pool sessions without incident. However, it took 6 of the 8 weeks to get the patient through the full pattern due to breathing complications which potentially limits the benefits of the study.

Upon analysis of this subject's data, there was a significant improvement in FIQ scores indicating reduced impact on daily life activities. There was also a marked decrease in level of depression, pain severity, and anxiety. There were some indications of improved balance as well. The subject showed marked improvement in the 6-minute walking distance and reported feeling more "strength" in her legs. She also showed significant decrease in sensitivity of tender points. Her own personal opinion of the study included comments of improved breathing capacity and overall improved well being. While a single subject is not enough to draw any conclusive findings, it does point towards the benefits of using Ai Chi to help manage the symptoms of FMS. It is suggested, based on these findings, that the practice of this aquatic therapy technique be utilized on a consistent and weekly basis for maximal lasting benefits with sessions of 3 times per week if possible. Further research is needed on this technique to determine the most appropriate dosage.