

Fibromyalgia & Movement Therapies

Mini Review

Fibromyalgia is a chronic disease of unknown origin, characterized by widespread musculoskeletal pain, sleep disturbances, fatigue, psychological involvement and multiple organ somatic symptoms.

This disease is considered a rather recent illness although it has existed since the dawn of time. Even though the term “fibromyalgia” was first created in 1976, for several centuries it had been called by the name of “muscular rheumatism”. The first controlled clinical study with validation of the tender points (painful spots located within the muscles fascia) was available in 1981. The first American College of Rheumatology criteria were published in 1990 and in the 1990s the neuron hormonal mechanisms of central sensitization were pointed out [1].

FM treatment requires a multidisciplinary team, made up of rheumatologists, physiatrists and psychiatrists. From pharmacological therapies to physiotherapies and psychotherapies, there are plenty of strategies to try. Generally, exercise is prescribed together with other remedies to optimize individual results. In this context, exercise treatment seems to be effective on all the different aspects of the disease. Exercise is important to get a better balance, improve strength, preserve bone mass and manage weight control provided that potential unpleasant consequences of hyperactivity, such as musculoskeletal problems (muscle and/or tendons strains) are avoided [2].

Aerobic and strength training reduce fatigue amount and pain intensity. The link between physical activity and brain responses to pain has recently emerged from a work by McLoughlin et al. [3] In their study the authors suggest that brain responses to pain characterize a dynamic process involved in perception and modulation and that physical activity may play a role in balancing these processes. For this reason, physically active FM patients appear to better maintain their ability to modulate pain in comparison to those who are less active [3].

An important aspect in FM patients is a very common low compliance rate and a relatively high rate of drop-out phenomena caused by common poor clinical responses and difficulties in patients’ proper motivations. For these reasons in the last years researchers have begun to experiment with a new range of exercise techniques different from the often tiresome conventional training models proposed for the maintenance of psychophysical well-being. About this matter mind-body types of activities coming from the Asian cultural world such as Tai Chi, Yoga and Qigong have been brought to attention.

Tai chi

A study of Taggart et al. showed the benefits of Tai chi with regard to musculoskeletal pain, depression and general quality of life [4]. More recently Wang et al. [5] conducted a single-blind, randomized trial of twice weekly sessions of Yang-style

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Tai chi attended for 12 weeks. 66 men and women affected by fibromyalgia were enrolled in the study. Each session included a warm-up and self-massage, followed by a review of principles, movements, breathing techniques and relaxation. During the treatment period patients were also asked to practice Tai chi at their home for at least 20 minutes every day. The study showed not only benefits exceeding the specified thresholds for clinically significant improvement in the Fibromyalgia Impact Questionnaire (FIQ) score, which represents a well validated multidimensional tool for the evaluation of fibromyalgia patients’ quality of life, but also the amelioration of pain control, sleep quality and depression mood, with sustained results at 24 weeks. No adverse events were reported in the study participants, indicating that Tai chi is surely a safe therapy for patients with fibromyalgia Figure 1.

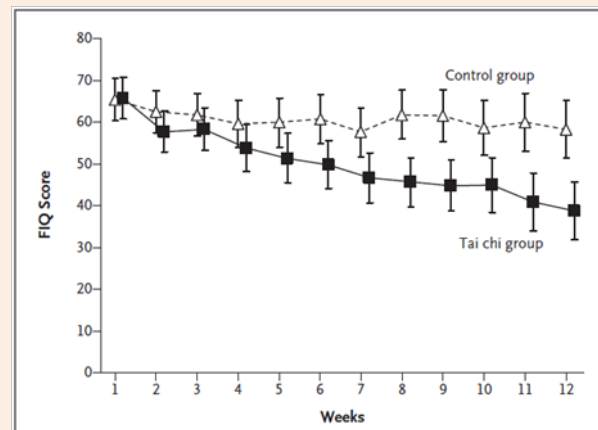


Figure 1: Fibromyalgia Impact Questionnaire (FIQ) Scores during the 12-Week Intervention Period, According to Treatment Group. FIQ scores, measured weekly over the 12-week intervention period, are shown for the tai chi group and the control group. The FIQ scores range from 0 to 100, with higher scores indicating more severe symptoms and lower scores indicating improvement in outcomes. The values shown are unadjusted means; the data points are slightly offset for clarity. I bars indicate 95% confidence intervals. [5].

Yoga

Yoga is an ancient Asian movement therapy centered on the link between body and mind, relaxation and enhancement of quality of life. Nowadays its practice is increasing in healthy populations worldwide. Considering that Yoga practice is mild and not strenuous, its popularity is increasing year by year also in patients suffering from chronic pain syndromes. In a study published by Carson JW et al. 53 female FM patients were randomized to an 8-weeks Yoga program or to standard care. The 22 patients enrolled in the Yoga group attended two-hour sessions weekly and were encouraged to practice at home at least five times per week. At the end of the program they showed improvements on multiple measures of FM symptoms and functioning including fatigue, mood and pain [6]. Other scientific contributions have stated the efficacy of Yoga practice on sleep disturbances and stress reduction as well [7,8].

Qigong

It is a Chinese mind-body method which proposes breathing exercises together with static and dynamic activities and meditation techniques. People who practice Qigong claim that it boosts the energy flow in their bodies [9]. Considering the elevated number of people in the world currently practicing Qigong to treat their physical condition and psychological well-being, this mind-body activity has been recently proposed as a valuable option for fibromyalgia patients.

In a first work by Austin et al. [10] the authors tested the short and long term benefits of an 8 week-mind-body trial of Qigong combined with meditation. 128 subjects suffering from fibromyalgia syndrome were randomly assigned to sessions of mind-body training or to meetings with an educational support group (the latter as a control group). Fibromyalgia Impact Questionnaire, Total Myalgic Score, Pain, and Depression were assessed at baseline and at 8, 16, and 24 weeks. The results showed that the patients in both groups underwent a statistically significant sustained improvement for all the outcome measures. However, there was no difference in the proportion of changes between the two groups and the conclusion was that there was no evidence of any superiority of the multimodal mind-body treatment versus the educational and standard option.

The efficacy of Qigong in the treatment of fibromyalgia was well documented in 2014 in a review by Sawynok & Lynch [11]. In their work the authors summarized some controlled trials together with other additional concerns discussing relevant methodological issues.

The analysis of the trials showed that there is a relationship between therapy outcomes and the amount of Qigong practiced. In fact, the studies which utilized an inadequate amount of practice reported poorer results compared to those with a more regular activity, so practice time resulted to be the key issue. The daily practice of Qigong for 6 or 8 weeks led to an improvement in all fibromyalgia principal core domains, in particular those related to pain reduction, sleep improvement and physical and mental function. These benefits were sustained for up to 4 - 6 months.

Also an extended Qigong practice as that depicted in another trial by Sawynok et al. [12] demonstrated a marked reduction of FM symptoms in a community setting with noticeable health benefits which seems to confirm the role of Qigong as an important tool in fibromyalgia treatment strategy [12].

In conclusion, the management of FM is a difficult challenge and only a multimodal approach can produce better results. In this context the role of exercise has been well recognized in the last years as an important cornerstone treatment. It regards the improvement in global health through pain reduction and better mood. Exercise options have recently comprised also mind body movements therapies such as Tai chi, Yoga and Qigong. These activities fit well with difficulties experienced by fibromyalgia patients in compliance and adherence to vigorous and even moderate-intensity regimes because of increased fibromyalgia symptoms. From this point of view a gradual intensity progression for conditioning individuals with fibromyalgia toward "moderate" intensity is recommended. Research on physical activity for fibromyalgia management continues to accumulate and for this reason the physicians should consider this evidence when designing and recommending tailored exercise programs for this population of patients.

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