

Literary Clinical Review: Effects of Acupuncture on Fibromyalgia

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Abstract—Fibromyalgia (FM) is a chronic and rheumatological disease that causes generalized pain by the body, being able to dispose of the person from any activity, even the simple act of sleeping, because of the pains become unbearable. Traditional Chinese Medicine (TCM), is one of the options for an indication of acupuncture used as an alternative for the treatment of fibromyalgia and the possibility of offering patient improvement in the quality of life. This research aims to corroborate through a bibliographic review of recent studies and evidence that designates the effectiveness of acupuncture for patients with fibromyalgia. The methods used for this review work were based on the methodology of the experimental factorial planning article: A brief review, published in the journal *International Journal of Advanced Engineering Research and Science (IJAERS)*. Due to the studies done, it was explicit that the treatment for fibromyalgia using acupuncture has great benefits because patients suffering from pain and use this technique as a treatment option make less use of medication, have less frequent crises and, as a result, more quality of life. It is concluded that acupuncture has physiological bases that prove its effectiveness in the treatment of fibromyalgia symptoms, thus becoming another relevant treatment option for patients with FM to increase their quality of life.

Index Terms—Ache, Acupuncture, Fibromyalgia, Treatment.

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I. INTRODUCTION

Fibromyalgia (FM) is a non-inflammatory syndrome that manifests itself in the musculoskeletal system through generalized chronic pain, often associating with other symptoms, such as chronic tiredness (fatigue), insomnia or nonrestorative sleep, and mood disorders such as anxiety and depression, difficulty concentrating and memory changes, recurrent headache, palpitations, paresthesias, and diarrhea. Fibromyalgia is a chronic and rheumatological disease, being able to dispose of the person from any activity, even the simple act of sleeping because the pains become unbearable [1, 2].

The first cases of fibromyalgia, according to studies from the mid-1970s, were evidenced where diagnostic criteria were reported through pain for more than three months throughout the body, and presence of hypalgic points designated "points although there are painful signs in the musculature, there is no evidence of deformities in the organs and joints [3].

II. CLINICAL MANIFESTATIONS

The main symptoms that characterize fibromyalgia are generalized pains and recurrences so that sometimes it is not even possible to list where it hurts, touch sensitivity, irritable bowel syndrome, restless legs sensation, abdominal pain, burning, tingling, difficulties in urinating, headache, tiredness, non-restorative sleep, mood variation, insomnia, lack of memory and concentration, morning muscle contractures, persistent fatigue throughout the day, pains that worsen with physical exertion and depressive conditions and anxious [4].

Traditional Chinese Medicine (MTC), is one of the options for an indication of acupuncture used as an alternative for the treatment of fibromyalgia and the possibility of offering the patient improvement in the quality of life [5, 6]. According to Dirceu de Lavor Sales, president of the Brazilian Medical College of Acupuncture, in an interview for the site www.bonde.com.br, the practice has shown great efficacy to alleviate the pains and limitations of patients suffering from fibromyalgia, chronic generalized pain throughout the body, which affects 2% of the population, eight of which are women for each man [7].

Any structures of the organism are originally in harmony by the performance of energies Yin (Negative) e Yang

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(Positive), according to acupuncture theory. In this way, if the energies Yin and Yang continue in sublime harmony, the organism will most likely be healthy. On the other hand, an imbalance will generate the disease. Due to its technique and methodologies, acupuncture tends to stimulate reflex points that have the specificity to regain balance, thus achieving therapeutic benefits [8].

III. ACUPUNCTURE MECHANISM OF ACTION

Acupuncture applications help patients with fibromyalgia in pain relief (with an important decrease in painful sensation), improved sleep, mood, and fatigue (through the action of acupuncture of release of endogenous opioids and neurotransmitters such as serotonin, endorphin). Stimulation

of these needle points can promote pain control and regain balance, reaching the expected results. Thus, many patients with chronic pain resort to treatment by this technique [9, 10, 11]. This research aims to corroborate through a bibliographic review of recent studies and evidence that designates the effectiveness of acupuncture for patients with fibromyalgia.

IV. MATERIALS AND METHODS

The methods used for this work were based on the methodology of the article Experimental Planning Factorial: A brief Review de (OLIVEIRA et al., 2018) [12], published in the journal International Journal of Advanced Engineering Research and Science (IJAERS).

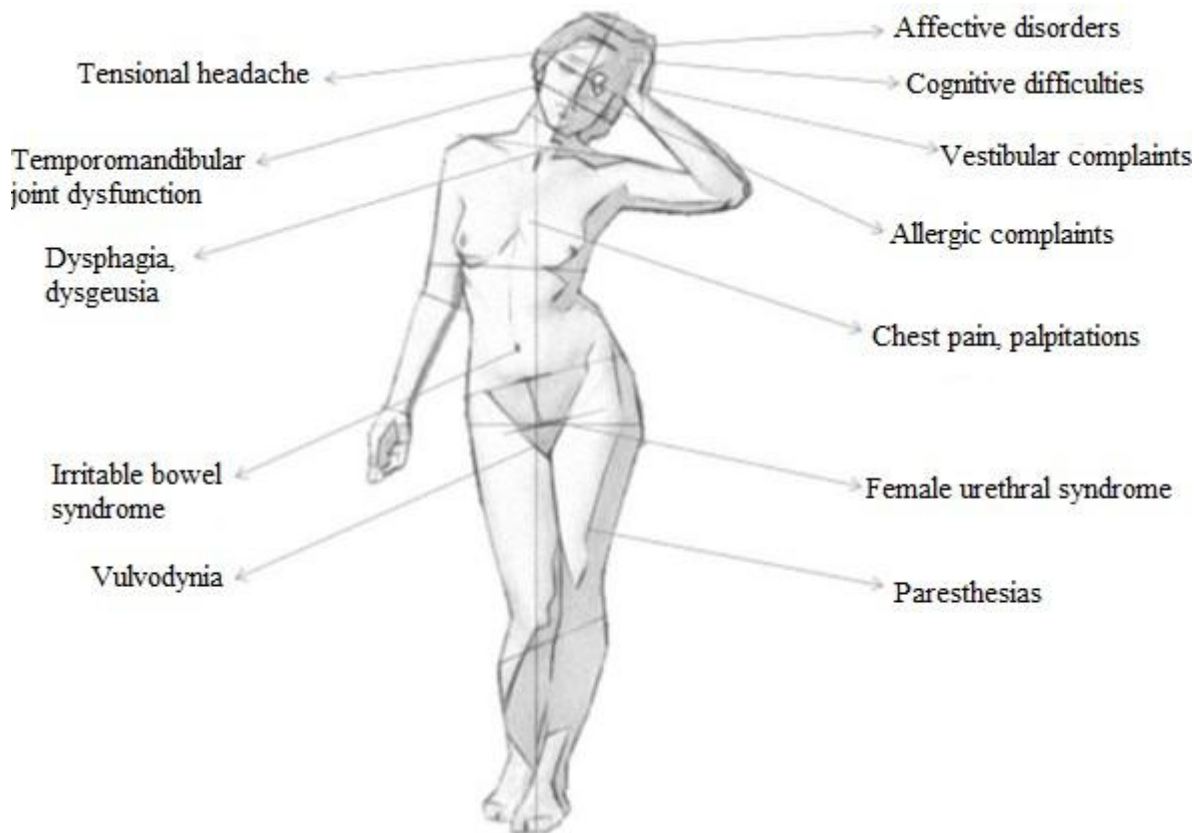


Fig. 1.Symptomatic areas of fibromyalgia (AZEVEDO, 2018).

To identify the articles on the subject, a search was carried out in the databases PubMed, Google Scholar, Virtual Health Library (VHL). Acupuncture is a needle bite therapy from Traditional Chinese Medicine (TCM). Numerous studies indicate better results in pain relief and recovery time when acupuncture is applied in the treatment of fibromyalgia patients. The search strategy on the subject consisted of the use of English keywords: 1. Ache, 2. Acupuncture, 3. Fibromyalgia e 4. Treatment. After consulting the databases and applying the search strategy, repeated studies were identified between the different searches. The inclusion criteria of the articles were: original and research articles that

conceptualize the research on the effectiveness of acupuncture in patients with fibromyalgia, in several types of research fields, covering research completed in the language Portuguese, English, and Spanish.

The excluded articles were grouped in the order: repeated, irrelevant, review, other publishing formats (notice, short communications, perspectives, letters), and other languages. In addition, manual searches were made in bibliographic references of review articles found with predetermined keywords.

V. RESULTS

After removing repeated articles between the different searches, the exclusion criteria were applied, as shown in Figure 2. Of the remaining 33 articles, 16 original research

articles were retrieved, related to the benefits of acupuncture for fibromyalgia patients. Articles were not recovered through manual search.

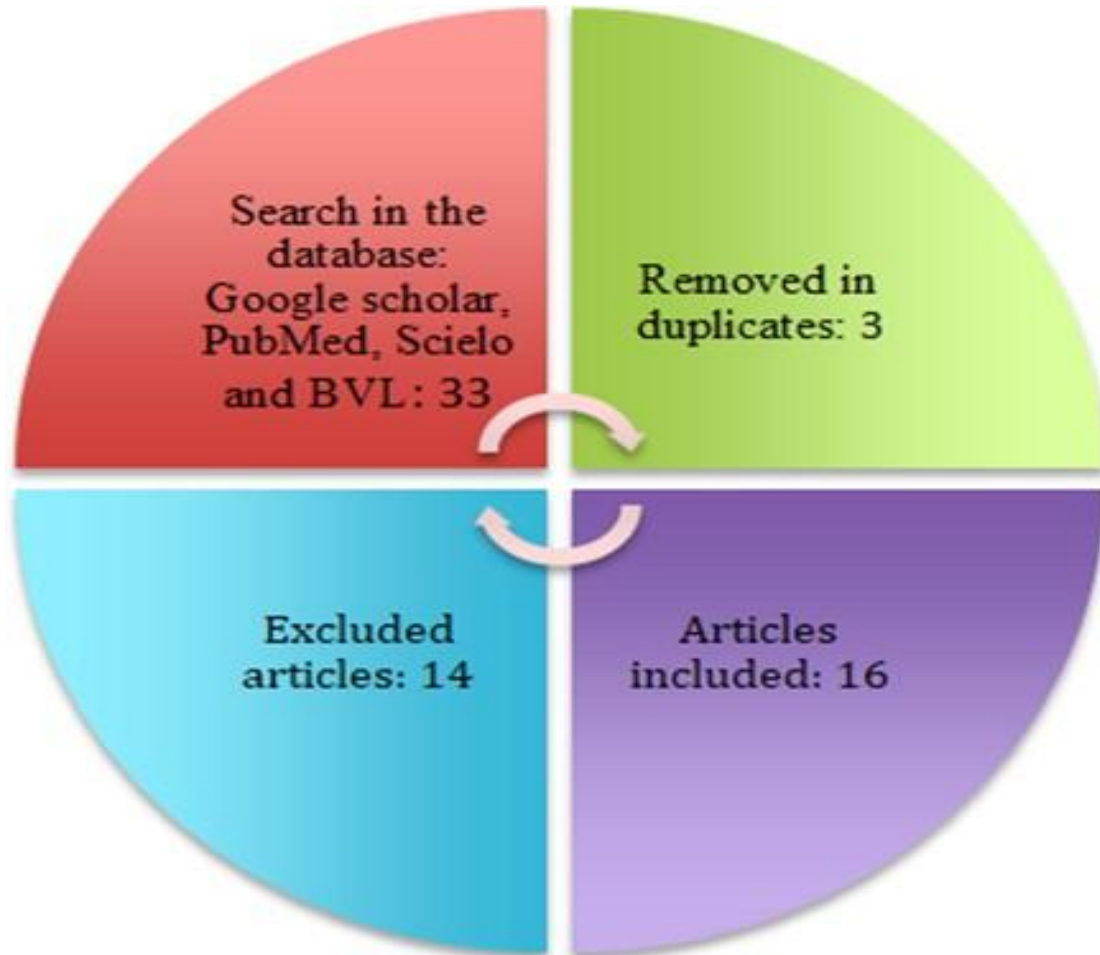


Fig. 2. Flowchart of identification and selection of articles. (Prepared by the authors, 2020).

The articles of use in this review, after exclusion criteria, were related and correlated homologously with fibromyalgia, a rheumatological pathology with higher incidences in women, considering their treatment with acupuncture, therapy of the Traditional Chinese Medicine for Symptom Relief.

VI. RESULTS AND DISCUSSION

Due to the studies done, it was explicit that the treatment for fibromyalgia using acupuncture has great benefits because

patients suffering from pain and use this technique as a treatment option make less use of medication, have crises and, as a result, more quality of life. Therefore, undoubtedly, acupuncture has high efficiency in energy rebalancing and, in the reduction of chronic fibromyalgia pain in the human body. Although this pathology does not have a cure, this method contributes to pain relief, improvement in sleep quality and patient life comfort so that it can live with the disease.

Table 1. Shows a systematic review. Articles whose characteristics were related to acupuncture effects as a form of absolute or adjuvant treatment for people with fibromyalgia were selected.

Author/Year	Goal	Methodology	Results	Conclusion
[1] (Beck & Oliveira, 2018)	Thus, this study aims to identify in the literature	The present study consisted of a systematic review related to the use of	Thus, it was observed in the literature that acupuncture has benefit in the pain treatment of	Acupuncture, therefore, has been indicated in the national and international

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	studies related to the use of acupuncture in the pain treatment of fibromyalgia.	acupuncture in the pain treatment of fibromyalgia.	fibromyalgia, associated or not with another type of treatment, and it is also evident that regardless of the number of sessions used, the effect is positive not only in the treatment of pain but in several other symptoms, improving the general condition of the patient.	literature as an alternative technique for the pain treatment of Fibromyalgia and associated symptoms showing effective results in its symptomatology.
[13] (TAKIGUCHI et al., 2008)	This random clinical trial aimed to verify the efficacy of acupuncture in improving pain, sleep equality of life of fibromyalgia patients.	Among 20 women with a mean age of 44 years, diagnosed with fibromyalgia according to criteria do Colégio American Rheumatology, the study 12, randomly distributed in two groups: A (GA, n=5), which received acupuncture according to traditional Chinese medicine; and B (GB, n=7), which had the insertion of needles in the base points of occipital, trapezoid, supraspinous and lateral epicondyle.	In GA, there was a statistically significant improvement in sleep; and in GB, pain, pain threshold in tender points, sleep and QIF items pain, morning tiredness, anxiety and depression ($p < 0.05$).	Acupuncture was shown to be effective in improving pain, sleep, and quality of life in both groups, but with marked improvement in the group that received acupuncture in the tender points.
[14] (OLIVEIRA; SOUSA; GODOY, 2014)	The aim of this study was to evaluate the effect of acupuncture on electrodermal activity, quality of life and pain reduction in fibromyalgia individuals.	These are a series of cases with female patients and aged between 35 and 58 years. Three outcomes were evaluated: pain intensity, using the Visual Analog Scale (VAS); quality of life, investigated by the Fibromyalgia Impact Questionnaire (QIF); and electrodermal activity, verified by Ryodoraku.	As a result, a percentage reduction in pain was observed between 34% and 63% in VAS, improvement in 7 of the 10 items of the QIF and an increase in the mean electropermeability of Ryodoraku, from 34.95 ± 11.12 to 46 ± 11.66 .	The primary outcome of the study was that treatment with acupuncture reduced pain intensity in all participants.
[15] (DA SILVA PASSOS; BOAS; PRATES, 2016)	Thus, this study aims to evaluate the	This is a bibliometric analysis, where a	Acupuncture has significantly positive effects on quality of life,	After reviewing the selected articles, it was possible to observe that

	<p>effects of acupuncture on fibromyalgia from a literature review.</p>	<p>survey of scientific articles was carried out in the VHL database. The search was conducted using the Keywords: Fibromyalgia, Acupuncture, and the search was carried out in September 2016. We selected 18 studies since they addressed the etiology and treatment of fibromyalgia, including acupuncture.</p>	<p>sleep, stiffness, anxiety, depression, and pain of fibromyalgia patients, and these effects also manifest themselves systemically, through improved pain from other points other than those who have been treated.</p>	<p>acupuncture was effective in the treatment of individuals with fibromyalgia, obtaining an improvement in aspects related to the quality of life, pain, sleep, and anxiety.</p>
<p>[16] (DA SILVA, 2017)</p>	<p>In this case study, we had as main objectives: to analyze through the questionnaire the impact of fibromyalgia on patients, observe a possible relationship with serotonin and the improvement in quality of life, and also demonstrate the importance and the benefits of acupuncture in improving the quality of life of patients with fibromyalgia comparing pre and post acupuncture.</p>	<p>We studied 2 patients with fibromyalgia, who underwent serum serotonin dosage, the application of the fibromyalgia impact questionnaire and 10 acupuncture sessions. Serotonin dosages and questionnaire applications were performed 3 teams, 1 day before the 10 acupuncture sessions, 1 day after the 10 acupuncture sessions and 30 days after the end of the 10 acupuncture sessions.</p>	<p>A significant reduction in serum serotonin and fibromyalgia impact questionnaire score were observed after acupuncture sessions, but in the pre-test and 30 days after both were increased. The student's t-test was used for statistical analysis and the significance level adopted was 5% ($p < 0.05$).</p>	<p>It can be concluded that, although the number of patients is small, acupuncture was effective in the short-term treatment of fibromyalgia, where an improvement in the quality of life of the two fibromyalgia patients under study was achieved, and this improvement may be related to serum serotonin reduction.</p>

VII. CONCLUSION

It is concluded that acupuncture has physiological bases that prove its effectiveness in the intervention of fibromyalgia symptoms, thus becoming a relevant treatment option for the FM carrier to increase their quality of life, becoming efficient in the decreased pathological manifestations, offering relief from pain, improved sleep and emotional control, as well as an increase in the daily comfort of patients.

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