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Effectiveness of Acupuncture Treating Fibromyalgia

by

Kenny Lin

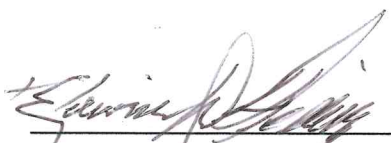
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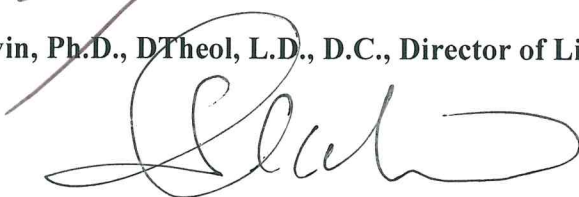
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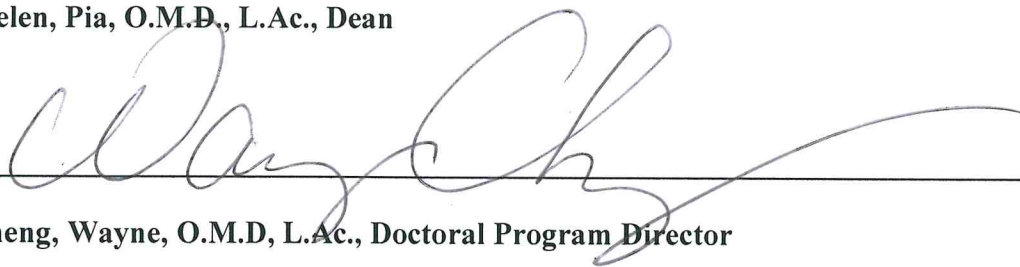
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ABSTRACT

Fibromyalgia (FM) is a condition of unknown cause. It is characterized by widespread musculoskeletal pain with symptoms including stiffness, fatigue, insomnia, depression and functional impairment. According to American College of Rheumatology criteria, an FM patient must have chronic widespread pain and at least 11 out of 18 tender points on examination. Affecting 2-4% of the population in industrialized countries, FM is the second most common rheumatologic disorder in the world. A wide range of treatment methods are currently in use such as medications, physical methods and manual treatments. Complementary and alternative medicine (CAM) is commonly used to treat FM patients. One of the most commonly used forms of CAM is acupuncture. According to the clinical research, by using the acupuncture to treat FM not only can help reducing the level of pain intensity, but it can also treat the symptoms of FM, such as insomnia, depression and anxiety, etc.

In order to show the efficacy of acupuncture treating the FM and how it can also increase the improvement of other symptoms, the literature of this research were obtained from

PubMed by using the keywords of fibromyalgia and acupuncture. The result from the search was total of 965 that were related to fibromyalgia. After going through a finer search by searching the word fibromyalgia and effectiveness of acupuncture with the comparison of some data, the search was narrowed down to 49 closely related articles, and total of 32 articles were used in this research study.

This research is to conduct a review to determine the effect of acupuncture as a technique to be used for pain relief and improve the quality of life in individuals with fibromyalgia.

The followings are the comparisons to be examined:

1. Using Sham-Acupuncture vs. Electro-Acupuncture. The result showed electro-acupuncture more effective.
2. Quality of Life. Electro-Acupuncture treatment had improved the Quality of Life.
3. The treatment on Fibromyalgia in this research is to help FM patients to prove the value of treatment.

Keywords: fibromyalgia, acupuncture, effectiveness.

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I. INTRODUCTION

Fibromyalgia Syndrome (FMS) is pronounced “fie-bro-my-al-jia”. The word “Fibromyalgia” is a combination of the Latin roots “fibro” (connective tissue fibers), “my” (muscle), “al” (pain), and “gia” (condition of). The word syndrome simply means a group of signs and symptoms that occurs together which characterize a particular abnormality.

The etiopathogeny of fibromyalgia syndrome (FMS) remains unknown, although current hypotheses center on anomalous peripheral nociception caused by wind-up, central sensitization, high levels of substance P and neurotrophins, and alterations to the hypothalamus-hypophysis-adrenal axis. According to the American College of Rheumatology criteria, an FM patient must have chronic widespread pain and at least 11 out of 18 tender points on the examination ^[1]. These musculoskeletal pain with symptoms including stiffness, fatigueness, depression, irritable bowel syndrome, sleep disturbance and functional impairment ^[2]. Affecting 2-4% of the populations in industrialized countries, FM is the second most common rheumatologic disorder in the world ^[3]. A wide range of treatment methods are currently in use such as analgesic and anti-inflammatory medications, anti-depressant medication, physical methods and manual treatments. Complementary and Alternative Medicine (CAM) is commonly used to treat FM patients. Ninety-one per cent (91%) FM patients used CAM and significantly more FM patients used CAM compared to patients of other rheumatologic diseases. One of the most commonly used forms of CAM is acupuncture (annual utilization percentages, from 4.8-6.7% of lifetime experiences to 19.4-26.7% in Japan) ^[4]. Although acupuncture has

been used for pain relief for a long time in China and around the world, studies on the efficacy of acupuncture on FM provided mixed results. Most studies which indicated beneficial effect of acupuncture treatment for FM were uncontrolled case series; only a few supported that acupuncture was effective.^[5] A recent systematic review found no evidence to show beneficial effects of acupuncture to treat FM compared with placebo. Although efficacy of acupuncture have been assessed with various controls such as no-treatment controls, non-penetration needling, minimal acupuncture and mock transcutaneous electrical nerve stimulation (TENS), most studies on the efficacy of acupuncture for FM were uncontrolled case series that utilized electro-acupuncture treatment, which make the setting of controls difficult because it involves perceptible current.^[6] One of the alternative ideas which enable evaluation of the efficacy of acupuncture acceptable may be utilization of standard medication as a control condition. The present study aims to determine the efficacy of acupuncture in the symptomatic treatment for FM in comparison to the commonly-used medications.

Levels of anxiety and depression among patients with musculoskeletal pain are known to be related to FMS; thus, the prevalence of patients with FMS and severe depression varies in different level of severity.^[7]

Fibromyalgia in TCM

Fibromyalgia in TCM is categorized as “ji bi” (muscle impediment). There are three other main specific patterns within this syndrome or “xu lao” (fatigue), “yu sheng” (depressive condition/depression) and “shi mian” (insomnia). Each of these patterns has as a slightly different symptom picture depending on the root of imbalance. In TCM, the

core of fibromyalgia syndrome is what we call “liver-spleen disharmony”. This pattern sits squarely in the center of all other patterns associated with fibromyalgia. As for the “meridians” aspect, these symptoms are actually referred to as “jing luo”, the major longitudinal distributions and collateral vessels otherwise known as the neurovascular system. Healthy flow and function of this system leads to health and vitality. There are 12 main pairs of meridians which are each related to different organs. Each meridian containing a yin organ and a yang organ. In this view, the liver and spleen are much more than just organs; they are a pattern of functioning in the body that include the physiological reach of the distribution that feeds it. In a Liver-Spleen disharmony this may mean that either the “liver” is too weak or too strong due to poor diet or repressed anger, and/or the “spleen” is weakened from over-worrying or ongoing and unrelenting stress.

The unique constitutional patterns and ongoing additional lifestyle burdens add up and manifest as abnormal neurotransmitter/receptor patterns in our brains. Our brains and our bodies interact just like yin and yang, each affecting the other. Research on fibromyalgia syndrome points to problematic insomnia and lack of restorative sleep, pain, anxiety, and depression—all related to a neurotransmitter/receptor dysfunction in the brain. The brain isn’t sending the right messages to our bodies.

A substantial literature exists supporting acupuncture’s variety of neuro-chemical and other physiological effects. It has been reported that acupuncture at traditional points produces dramatic effects in EEG, blood flow, and breathing rate as compared to non-traditional points. Various studies also linked acupuncture to the production of endogenous opiate peptides, such as beta-endorphin and met-enkephalins, which is

speculated to be a physiological mechanism behind the treatment's effects on withdrawal discomfort. Acupuncture has also been related to changes regarding other neurotransmitters, including ACTH and cortisol levels, serotonin, and 5-HT.^[8]

Acupuncture helps our bodies return to normal functioning. It is the gentle stimulation of different points on the body which creates a rebalancing effect in the brain. Each treatment addresses both the root, or underlying pattern, and the branch, or the annoying symptom or reason the patient came into the office. If both are not addressed, the results will either not be effective, or they will be short-lived and patients will need to keep returning for treatments.

Acupuncture has been used as a treatment option in China for over 2000 years and is increasingly accepted in the West, where its use has become considerably more common in recent decades, especially for pathologies producing high levels of pain, and thus it has been suggested as a remedy for FMS^[9].

In the understanding of traditional Chinese medicine, FMS results from an imbalance that blocks, obstructs or exhausts a person's internal energy (*Qi*) and the flow of blood, giving rise to the appearance of the symptoms that are characteristic of this syndrome^[10].

TCM Diagnosis:

Fibromyalgia is diagnosed by a history of widespread pain and the demonstration of at least 11 of the 18 tender point sites on digital palpation. However, not all patients with fibromyalgia meet these criteria. Some patients have fewer tender sites and more regional pain, and may be considered to have probable fibromyalgia.

Results of joint and muscle examination are normal in fibromyalgia patients, and there are no laboratory abnormalities.

Common Typical TCM Patterns for Fibromyalgia:

There are four common typical TCM patterns for fibromyalgia. However, one person may exhibit more than one pattern. The patterns are:

1. Liver Qi Stagnation - anxiety, emotional upset, headaches (including migraine headache), being easily angered, muscle stiffness in neck and shoulders, insomnia, waking frequently and having difficulty falling back to sleep, irritable bowel syndrome. All symptoms may be triggered by emotional stress.

Tongue: slightly dusky or slightly puffy

Pulse: wiry/bowstring or slippery

Treatment plan: smooth liver, move qi and blood

Chinese medicine: modifications based on xiao yao wan or shu gan wan

Acupuncture points: yin tang, LI 4, LV 3, GB 34, an mian, ren 17, ren 12, ST 25, SP 6, UB 18, 19, and 20

Ear points: shen men, liver, sympathetic

2. Qi and Blood Deficiency - specifically spleen qi deficiency and heart blood/liver blood deficiency, with such symptoms as chronic fatigue, exhaustion, dull headache, muscle weakness and numbness, insomnia, dream-disturbed sleep and waking up tired, palpitations and depression.

Tongue: pale, with thin white fur

Pulse: thready, weak and deep. This pattern eventually creates pattern #3 below.

Treatment plan: tonify qi and blood, calm the spirit.

Chinese medicine: modifications based on Ba Zhen Tang or Gui Pi Tang or Gan Mai Da Zao Tang.

Acupuncture points: LI 4, ST 36, ren 12, SP 6, 10, PC 6, HT 6, 7, Kid 3, and UB 17, 20

Ear points: adrenal, endocrine, heart, spleen

3. Qi Stagnation and Blood Stasis - aches and pains in the whole body, burning or gnawing pain with tingling sensations in extremities, headaches.

Tongue: purple, dusky.

Pulse: wiry or irregular.

Treatment plan: move the qi and blood, alleviate pain.

Chinese medicine: modifications based on Shen Tong Zhu Yu Tang or Tao Hong Si Wu Tang.

Acupuncture points: DU 20, LI 4, 10, ST 36, SP 9, 10, LV 3, PC 6, UB 17, 18

Ear points: shen men, adrenal, subcortex.

4. Kidney Deficiency (either Yin, Yang, Qi or Essence Deficiency) - there will be impotence or lack of libido for males and infertility issues for both males and females.

Other symptoms: sore lower back with restless leg syndrome, irritable bladder, dysmenorrhea, amenorrhea, premenstrual syndrome, hot flashes and night sweats.

Tongue: pale or dry, with cracks.

Pulse: thin, weak and deep.

Treatment plan: tonify qi, tonify essence and yang, and nourish yin.

Chinese medicine: modifications based on You /Zuo Gui Yin (wan), Jin Gui Sheng Qi wan, Jin Suo Gu Jing Wan.

Acupuncture points: ren 3, 4, 6, LI 11, LV 2, GB 39, Kid 3, 6, 7, SP6, and UB 23, 31

Ear points: adrenal, endocrine, kidney.

Fibromyalgia doesn't seem to affect the lung so often, as there are few lung symptoms associated with fibromyalgia such as chest tightness, or shortness of breath in a few cases.

[11]

Together, acupuncture, herbal medicine and Qi Gong provide a powerful treatment option for patients diagnosed with fibromyalgia. It is common for all three modalities to be employed simultaneously, but each may be used alone. Acupuncture may be best for treating the pain syndromes that accompany fibromyalgia; herbal medicine for treating the Wind, Cold, Damp Bi factors and underlying imbalances in the body; and Qi Gong for providing gentle exercise while treating contributory psychological or emotional factors.

Fibromyalgia & Acupuncture:

Bi and other pain syndromes account for more than one-half of acupuncture treatments in the United States each year. Fibromyalgia patients often use acupuncture as a means of pain control, once or twice a week, which can be an effective complementary treatment.

As a type of Muscle Bi, fibromyalgia is treated with a combination of acupuncture and moxibustion. Three different kinds of points are used:

Local points in areas of tenderness and pain are needed. For example, pain in the trapezius and neck muscles might be needled with points such as GB 20 (Feng Chi) and UB 10 (Tian Zhu), while pain in the inner thighs might be needled with points such as Liver 8 (Qu Chuan), 9 (Yin Bao), and 10 (Zu Wu Li). Moxibustion and electrical stimulation, if appropriate, may be used. Diathermy (heat lamp) and Tui Na applied to specific acupuncture points or muscle groups may prove useful as well.

Specific acupuncture points associated with the type of Bi syndrome diagnosed are needed. Patients with a predominance of Wind Bi may have UB 17 (Ge Shu) and Sp 10 (Xue Hai) needled; with Cold Bi, points such as UB 23 (Shen Shu) and Ren 4 (Guan Yuan); and with Damp Bi, Stomach 36 (Zu San Li) and Sp 5 (Shang Qiu).

Other underlying factors contributing to the development of Bi are treated as well. Liver Qi stagnation might be treated by adding Liver 3 (Hun Men); Kidney and Spleen deficiency by adding Kidney 3 (Tai Xi) and Spleen 4 (Gong Sun); and Qi and Blood deficiency might indicate the use of Stomach 36 (Zu San Li) and Spleen 6 (San Yin Jiao). Small acupuncture needles, known as intradermal needles, may be left in painful sites for a few days.

Special Points for Fibromyalgia Pain:

Integrative medicine, in terms of acupuncture and Chinese medicine combined with Western medicine and other therapies, is very helpful in treating all kinds of pain related to fibromyalgia. As a neuropsychiatrist, I have been continuously working and studying at hospitals in China, as well as at my clinic in United States, for over 20 years. Based on my experiences, I now have a personal conclusion about some special acupuncture points, which are very useful and applicable in fibromyalgia.

Special Acupuncture Points:

Ashi points: Use any tender points that the patient has along with any of the following points listed below. There are a total of 18 tender point sites that may present in fibromyalgia, which are located in Figure 1. Note that the points are in groups of three, so they are referred to as "three points" along with the body area's name (for example, "the three arm points").

Headache (includes migraines): For frontal/temple headache, GB 14, tai yang and yin tang or er zhong (above yin tang, in line with GB14). For vertex headache: Du 20 and si shen cong. You can do a variation of si shen cong by putting the needles 1.5 cun out from Du 20 (si shen cong is 1 cun out from DU 20). Occipital headache: UB10, DU17 and GB20.

Neck pain: UB 11, GB 20 and bai lao.

Shoulder pain: LI 15, and two experienced points: point A, 2 cun anterior to LI 15 under the clavicle, and point B, 2 cun posterior to LI 15 on the back (half way between SJ 14 and LI 16).

Arm pain: LI 11, SJ 5 and LI 4.

Upper back pain: UB 11, UB 17, SI 12

Lower back pain: UB 23, UB 25 and UB 52

Leg pain: ST 36, SP 6, GB 30

Thigh pain: SP 10, SP 11/ST 31 and ST 32

For any tight muscle: release the muscle with three needles - one at each insertion and one in the middle of the muscle.

Acupuncture and Chinese medicine provide relief of symptoms by balancing yin and yang, and adjusting the circulation of the qi and blood. Local measures such as heat, therapeutic massage, cupping, moxibustion and gua sha in specific regions also help to reduce the pain. A regular plan, with long-term, consistent integrative treatment is necessary in patients with fibromyalgia.

The review shows that in people with fibromyalgia:

- Acupuncture is probably better than non-acupuncture treatment in reducing pain and stiffness and improving overall well-being and fatigue;
- Acupuncture with electrical stimulation is probably better than needling alone in reducing pain and stiffness, and improving overall well-being, sleep and fatigue;
- Acupuncture without electrical stimulation probably does not reduce pain or improve fatigue, overall well-being or sleep.

Fibromyalgia & Herbal Medicine:

Herbal medicine treatment for fibromyalgia uses specific herbs to address each of the

three levels of treatment, but focuses specifically on using herbs that address Bi. These herbs also provide symptomatic relief of pain and discomfort.

An efficient approach to individualizing herbal prescriptions is to use herbs that stop pain but also expel the pathogenic factors responsible for Bi. For example, while all of the following herbs help relieve pain, each focuses on a different type of Bi: Sang Zhi (Ramulus Mori) for Wind Bi, Wei Ling Xian (Radix Clematidis Sinensis) for Cold Bi, and Mu Gua (Fructus Chaenomelis) for Damp Bi. Because Wind, Cold, and Damp are intertwined in these Bi conditions, all three are treated through herbal combinations. Dosages and herbs are chosen on the basis of predominant symptoms. Specific herbs for Bi syndrome also affect different areas of the body and can be used to make the formula more efficient. Examples are Qiang Huo (Rhizoma et Radix Notopterygii) for the upper part of the body, particularly the neck, shoulders, and upper back; and Du Huo (Radix Angelicae Pubescentis) for the lower back and legs. Herbs to treat Wind, Cold, or Damp in the body also may be added to the formulas.

Finally, herbs that affect any predisposing factors may be used as well, such as the following:

Chai Hu (Radix Bupleuri) for Liver Qi Stagnation

Dang Gui (Radix Angelicae Sinensis) for Blood Deficiency

Huang Qi (Radix Astragali) for Qi Deficiency

This comprehensive approach takes into account the complex and individual nature of the syndrome in each patient.

Fibromyalgia & Qi Gong:

Qi Gong exercises offer treatment potential for patients diagnosed with fibromyalgia.

Because TCM relates stress, depression, anxiety, and other emotional states to the Zang Organs, exercises such as the organ healing sounds may be used to strengthen the Zang Organs, help correct imbalances in the body, and maintain emotional balance. Qi Gong exercises such as the Eight Brocade Exercises and Tai Qi Quan encourage gentle physical movement and stretching, thus reducing pain, eliminating obstruction in channels and maintaining movement. Mindful Qi Gong massage helps relieve pain and increases the flow of Qi. ^[12]

II. MATERIAL AND METHODS

The database used in this research was through SBU library to get into the PubMed and searched the keywords “fibromyalgia + acupuncture”. There were total of 965 related articles found. Then another keywords were added with “systematic review” to narrow down the search. There was a total of 74 related articles found. Adding another keyword of “efficacy”, and there was total of 49 related articles found. After carefully reviewed over the 49 articles, only 32 articles were used in this study.

The inclusion of the 32 articles are the comparisons between the sham-acupuncture vs. the electro-acupuncture, the comparison between the quality of life after receiving the actual acupuncture, acupuncture points used in different Chinese diagnosis, and treating different body parts with different acupuncture points.

The exclusion from the articles that were found are the Chinese medicine treating FM, western medicine, such as pharmacology and injections treating FM, and other articles that were indirectly relating to fibromyalgia but also relating to Rheumatoid Arthritis, Degenerative Disc Disease and Osteoarthritis. In this research study is strictly focusing on using electro-acupuncture to treat FM and to see if it is effective on treating FM.

After reviewing 965 articles, most of them were systematic reviews on either treating for rheumatoid, chronic pain syndromes, sciatic nerve pain or other types of syndromes, which are not closely related to fibromyalgia. Those non-related articles were to be excluded from the database. Then about 165 articles were found to be more closely related to this research, and 32 articles were included to be the ones that may be closer to

the chosen related title. In result, only 32 articles that were chosen. The 32 articles criteria including comparing the effectiveness in between having the acupuncture and sham acupuncture, or using the electrical acupuncture and manual acupuncture, trigger points treating fibromyalgia and how they are effective on improving their pain intensity, depression, anxiety, emotion, insomnia, energy level and wellbeing.

(Please describe the inclusion and exclusion criteria in a more clear way.)

III. RESULTS

Effectiveness of acupuncture on VAS score:

This study is to show the result by comparing group A and group B in their VAS score after using acupuncture to treat patients with Fibromyalgia. Each comparison will have different number of patients (randomly chosen with fibromyalgia) receiving either sham acupuncture or real acupuncture. Group A consists of groups of different number of patients who will receive sham acupuncture. Group B consists of groups of different number of patients who will receive real acupuncture treatments. Each patient will be measured on their pain intensity before the treatment, and after 5 weeks and after 10 weeks after the treatments in VAS (0-100mm) between the sham acupuncture groups and real acupuncture groups. Each patient will receive two treatments per week for the total of 10 weeks period. Each treatment session is 30 minutes in length.

Table 1: Effectiveness of Acupuncture on VAS Scores:

Author	Group	N	Pre VAS mm	5 week VAS mm	10 week VAS mm	Percentage
Wang ^[13]	A	16	75.5	73.5	52.0	67.0%
	B	22	77.8	47.4	36.3	53.8%
Swierzewski ^[14]	A	53	82.3	71.9	60.2	71.5%
	B	57	83.8	68.4	34.8	62.3%
Orbach H ^[15]	A	40	78.4	68.2	53.8	66.8%
	B	40	76.3	59.3	31.3	55.6%
Ishizaki ^[16]	A	62	81.3	62.6	58.2	67.4%
	B	58	79.2	54.6	38.9	57.6%
Berman ^[17]	A	55	78.8	69.8	59.9	69.5%
	B	55	80.2	64.2	31.2	58.5%

- Group A with Sham-Acupuncture.

- Group B with Electro-Acupuncture.

The group A patients who received the sham acupuncture will be lying face down, where patients cannot see the actual insertion of the needles, but simulated. This is a technique, validated previously in which after sterilization of the surrounding skin, a momentary pressure is exerted using a plastic guide tube through the center of which a blunt steel rod is pressuring the skin, producing the sensation that a puncture has been made at each of the following points. Each patient should remain face down for the 30 minutes of the treatment session, so that the placebo technique remains concealed. All of the group A patients were treated on the low back points.

The group B patients who received the real acupuncture will be using single-use sterile needles of diverse lengths. The treatment will be performed after sterilizing the skin on the areas where the needles will be inserted and with the patient lying face down. Each sterile needle will be inserted into the assigned points. Following insertion, each needle will be connected to the electrical wire which connected to the electrical unit and the electrical stimulation of the acupuncture point will be given to all of the inserted needles. The treatment session is given to each patient for 30 minutes. Following the treatment session, the needles will be withdrawn.

By looking on the comparison from the Table 1, on the Group A patients who received the Sham acupuncture, after the fifth week of treatments, their VAS score only dropped slightly. And even after the 10 weeks of treatments, the Group A patients' VAS score decreased a bit more, but not a drastic change.

Whereas, on the Group B patients who received the Real acupuncture treatments, after the fifth week of treatments, their VAS score had decreased noticeably, by the average about 21 mm in VAS. By the 10th week, their VAS score had a drastic change, by the average about 40 mm in VAS. The average percentages for all of the Group Bs are higher than all of the Group As. Evidently, this shows the patients who received the electro-acupuncture in Group Bs have the great effectiveness on treating their fibromyalgia pain on their low back.

Quality of Life (QoL) Score Improvement

Before the patients received their acupuncture treatments, they took a Fibromyalgia Impact Questionnaire Evaluation. All of them scored high before the treatments. The result for both group A patients received the sham-acupuncture and group B patients received the electro-acupuncture, both have different changes in their score after their electro-acupuncture treatments. The Quality of Life which includes their symptoms of low in energy, insomnia, depression, stress level, anxiety, appetite, social life, sexual libido, self-doubt, and nightmare. While the Fibromyalgia Impact Questionnaire (FIQ) score decreased after electro-acupuncture treatments. The FIQ scores are measured in 100 point scale. Patients in both group A and B received their treatments as twice a week.

The VAS and FIQ measures were completed by the patients immediately before each treatment and analyzed immediately before the first treatment (pre), five and ten weeks after the first treatment.

Table 2: Fibromyalgia Impact Questionnaire Scores

Author	Group	N	Pre	5 week	10 week	Percentage
Singh BB ^[18]	A	16	64	66	52	60.6%
	B	22	67	47	32	48.7%
Lewis ^[19]	A	53	74	67	63	68.0%
	B	57	85	61	38	61.3%
Harris RE ^[20]	A	40	81	74	68	74.3%
	B	40	78	51	41	56.7%
Leibing E ^[21]	A	62	79	67	63	69.7%
	B	58	84	64	39	62.4%
Zubieta JK ^[22]	A	55	84	76	67	75.7%
	B	55	86	58	48	64.0%

- Group A with Sham-Acupuncture.
- Group B with Electro-Acupuncture.

The Table 2 shows the average percentages for the Group Bs are lower than the Group As. Evidently, this shows the patients who received the electro-acupuncture in Group Bs have the great effectiveness on treating their fibromyalgia pain on their low back.

Acupuncture Points Used on Different TCM Diagnosis:

Table 3: The following studies of the FM on the various TCM diagnosis using different acupuncture points.

Author	LV Qi Stagnation	Qi/Blood Def.	Qi Stag./ Blood Stasis	Kd Yin/Yang/Qi Def.
Gordon ^[23]	LV 3, LI 4, GB 34, Ren 12, UB 18, UB 19, yintang, and anmian.	ST 36, SP 3, SP 9, LI 4, KD 3, HT 6, UB 17, UB 20, SP 10.	DU 20, LV 3, LI 4, UB 17, UB 18, SP 10, PC 6, LI 10, SP 4, LU 7, UB 11, ST 37, ST 39 and SP 21	Ren 3, 4, 6, KD 3, 6, 7, Sp 6, UB 23, 31, and GB 39.
Meredith ^[24]	LV 3, LI 4.	SP6, ST36, LU9, HT5, UB20, 21, SP10.	SP9, GB34, ST36, LU9, UB20, 21, HT5, DU6.	KD6, DU4, ST36, SP6, GB20, KD3, KD7, GB20, UB 23, 52.

Swierzewski ^[25]	LV3.	ST36, SP6.	LV3, SP9,10.	ST36, Ren 3, SP6, UB23.
Wang ^[26]	yin tang, LI 4, LV 3, GB 34, an mian, ren 17, ren 12, ST 25, SP 6, UB 18, 19, 20.	LI 4, ST 36, ren 12, SP 6, 10, PC 6, HT 6, 7, Kid 3, and UB 17, 20.	DU 20, LI 4, 10, ST 36, SP 9, 10, LV 3, PC 6, UB 17, 18.	ren 3, 4, 6, LI 11, LV 2, GB 39, Kid 3, 6, 7, SP6, and UB 23, 31.

Table 3 shows some different researchers used different acupuncture points on different TCM diagnosis. There are some common used points on the same diagnosis.

Using Different Acupuncture Points to Treat different Body Part of FM Patients:

Table 4: Treating pain on different body parts with different acupuncture points:

Author	Headache	Neck	Upper Back	Low back
Languhorst ^[27]	Du 20 (si shen cong is 1 cun out from DU 20). Occipital headache: UB10, DU17 and GB20.	UB 11, GB 20 and bai lao.	UB 11, UB 17, SI 12, GB21.	UB 23, UB 25, UB40, UB 52.
Grant ^[28]	GB20, Baihui, LV3, LI4.	GB20, SI3, SI15, UB10.	GB20, GB21, DU16, UB10.	DU 8, 26, SI3, YaoTongXue, UB40, UB37.
Martin-Sanchez ^[29]	UB1, ST8, DU20, Si Shen chon.	LuoZhen, SI3, GB39, UB10, GB20.	GB20, UB40, SI3, Ashi points.	DU3, UB23, 52, 32, GB 34, UB40.
Huijuan ^[30]	LV3, LI4, GB41, LI11.	GB20, 21; GB36, SP9.	GB20, 21, UB11, 15, SI11, Ashi pt.	UB23, UB40, DU 3, 4, KD 3.
Rebecca ^[31]	UB62, SI3, Yin Tang, ST44, GB20.	DU16, SI15, GB20, GB36, SP9.	SI15, SI14, SI4, UB14,16.	UB 22, 23, 25, 58, 59, 60, 62, GB 30, 34.
Eva ^[32]	DU22, GB20, GB5, SJ23.	LI4, LV3, GB36, GB20, 21.	GB20, UB40, UB12, 13,14, SI11.	UB 23, 22, 25, 37, UB 40, SI3.

Fibromyalgia may have pain in different body parts. These researchers have used different acupuncture points on treating different body parts. There are some common used points that the researchers used to treat the same body part.

Table 5: Commonly used Acupuncture Points Treating Headache:

Author	DU20	GB20	LV3	LI4	YinTang	LI11	DU22	GB5	ST8
Languhorst ^[27]	√	√							
Grant ^[28]		√	√	√					
Martin-Sanchez ^[29]	√								√
Huijuan ^[30]			√	√		√			
Rebecca ^[31]		√			√				
Eva ^[32]		√					√	√	

- The most common points used: GB20.

Table 6: Commonly used Acupuncture Points Treating Neck:

Author	GB20	GB21	LV3	GB36	UB10	SP9	SI3	GB39	UB11
Languhorst ^[27]	√								√
Grant ^[28]	√				√		√		
Martin-Sanchez ^[29]	√				√		√	√	
Huijuan ^[30]	√	√		√		√	√		
Rebecca ^[31]	√			√		√			
Eva ^[32]	√	√	√						

- The most common point used: GB20.

Table 7: Commonly used Acupuncture Points Treating Upper Back:

Author	GB20	GB21	UB12	UB11	SI11	UB14	UB13	SI3	Ashi Pt
Langhorst ^[27]		√		√					
Grant ^[28]	√	√							
Martin-Sanchez ^[29]	√	√						√	√
Huijuan ^[30]	√	√		√					√
Rebecca ^[31]						√			
Eva ^[32]	√		√		√		√		

- The most common points used: GB20, GB21.

Table 8: Commonly used Acupuncture Points Treating Upper Back:

Author	UB22	UB23	UB25	UB40	SI3	GB34	UB52	KD3	UB58
Langhorst ^[27]		√	√	√			√		
Grant ^[28]				√					
58Martin-Sanchez ^[29]		√		√		√	√		
Huijuan ^[30]		√						√	
Rebecca ^[31]	√	√	√			√			√
Eva ^[32]	√	√	√	√	√				

- The most common used points: UB23.

IV. DISCUSSION

The present study demonstrated a statistically significant difference between the groups with electro-acupuncture and groups with sham-acupuncture five weeks after the first treatment. Moreover, the additionally performed acupuncture treatment after the fifth week with the electro-acupuncture group resulted in the further reduction of the FM symptoms. These results suggest that acupuncture treatment is capable of giving additional improvement to the standard medication in the treatment of FM.

The importance of randomized controlled trials (RCT) to study the placebo effect of acupuncture was debated. Acupuncture RCTs with various control methods such as no-treatment controls, non-penetration needling, minimal acupuncture and mock transcutaneous electrical nerve stimulation (TENS) have been carried out. However, positive results were often obtained in studies with a non-acupuncture control, whereas negative results tended to be from those with sham acupuncture or mock TENS.

Moreover, most studies on the efficacy of acupuncture to treat FM were uncontrolled case series with electro acupuncture treatment. As electro acupuncture involves perceptible current, sham acupuncture as control may not work for electro acupuncture. In fact, the acupuncture to usual treatment for FM was beneficial for pain and QoL. This study also demonstrated that utilization of standard treatment as a control may be an ideal method to evaluate efficacy of acupuncture on FM. One of the limitations of the present study is relatively small sample size. Larger scale studies are required in the future.

In this study, the comparisons between having the patients doing the sham-acupuncture and accepting the actual electro-acupuncture, the results have shown the patients who received the actual electro-acupuncture treatments have reduces their pain intensity in VAS(mm), and improved their quality of life by increasing their QOL scores. This shows by using acupuncture treatment is effective on treating Fibromyalgia.

I have seen many patients in my own practice who have suffered from FM for several years. These patients presented themselves with great level of pain on multiple body parts, depression, and most of them are overweight or even obese.

With these patients, I use the electro-acupuncture to treat their pain and treat their other symptoms with just the manual acupuncture depending on their diagnosis which is causing the fibromyalgia, such as spleen qi deficiency, qi and blood deficiency, kidney yin and yang deficiency, etc.

I use 10 of my randomly picked FM patients to treat. Each patient's treatment session is 30 minutes using electro-acupuncture and infrared heating lamp. After 6 treatments I evaluate these 10 patients. 6 patients decreased their pain intensity by 30%. 3 patients decreased their pain by 20%, and 1 patient decreased their pain intensity by 10%. I did another evaluation after the 12th treatments, and 7 patients decreased their pain intensity by 60%, 2 patients decreased their pain intensity by 50%, and 1 patient decreased by 40%. Most of these patients either stopped taking their prescribed pain medication or just taking it as needed basis.

So I conclude that by using the electro-acupuncture to treat for my FM patients are effective.

V. CONCLUSION

The present study suggests that acupuncture treatment is effective to relieve pain for Fibromyalgia patients. Not only does it help to relieve the pain, but evidently it also helps with the symptoms which accompany by the fibromyalgia such as the quality of life. Whereas the patient in the group who received the sham-acupuncture, their result in their pain intensity and in their quality of life and fibromyalgia impact questionnaire score did not improve as much as those patients who have received their real electro-acupuncture treatments. This also shows those who continues with their acupuncture treatment on their fibromyalgia symptoms, most likely it may continue to decrease and maintain the pain intensity and live in a much better quality of life without the dependency of the drugs. These fibromyalgia patients who used the alternative medicine such as acupuncture and/or Chinese medicine can help with their quality of life, increasing their energy level, staying alert and be at their most functional ability that they can without the contamination of the chemically made of drugs.

VI. REFERENCE

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ABBREVIATIONS

RCT: randomized clinical trial;

FM: Fibromyalgia;

QoL: Quality of Life;

VAS: visual analogue scale;

FIQ: Fibromyalgia Impact Questionnaire;

CAM: Complementary and alternative medicine;

ACR: American College of Rheumatology;

TENS: transcutaneous electrical nerve stimulation.
