

A Case Study: Management of Fibromyalgia with Manual Therapy and Exercise Therapy

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Received: November 21, 2017; **Published:** January 25, 2018

Abstract

Fibromyalgia is a syndrome characterized by chronic, widespread musculoskeletal pain with tender points and stiffness in association with fatigue, poor sleep. It affects an estimated 3.7 million people in the United States especially women. Fibromyalgia is a diagnosis that has become more prevalent in recent years.

Patient usually receives pharmaceutical and non-pharmaceutical treatments to help manage the condition. Some of the non-pharmaceutical methods of managing fibromyalgia include physical therapy, massage, manual therapy and exercise therapy. It is the author's opinion that manual therapy and exercise is an effective method of managing fibromyalgia. In this article the author presents a case report of a patient with fibromyalgia who did respond positively to the treatment using manual therapy and exercises [1].

Keywords: *Fibromyalgia; Chronic Pain; Myofascial Pain; History; Exercises; Massage; Manual Therapy*

Introduction and Case Presentation

A 34 year old South Asian female came to our clinic for evaluation of the neck, back, shoulder, elbow, knees and leg pain. She describes the pain as deep, persistent soreness and body ache that is flu like. She has several missed days from work, sleep disturbance and depression due to the pain. Pain also interfered with her daily activities as well as preventing her from doing effective physical activities.

She was injured in an auto accident few years ago when she suffered an immediate whiplash injury, and back pain. She reports that the pain did not start out severe but over the years has become severe, widespread and persistent. She went to physical therapy for several months with only minimal benefit. The physical therapy treatment she received was for whiplash, sprain strain of neck and back but the condition did not resolve but rather got worse as the years go by. The pain was persistent despite physical therapy treatment, analgesics and muscle relaxants. She stopped going for treatment when her condition has not improve rather gotten worse. She complains of sleep disturbance. She could fall asleep but wakes up frequently due to pain disturbed sleep. She also complaint that the sleep disturbance is getting worse. She also reports that she was seeing a psychologist/psychiatric doctor for depression and anxiety, stopped because she did not see the benefit in going for the therapy. She has family history of depression and chronic pain. Social history is negative except that she skips meals but reports that she still gains weight. She does not exercise due to pain.

Her present complaint include wide spread and persistent pain in all 4 quadrants of the body, sleep disturbances, excessive fatigue, periodic migraine headache, stiffness and headaches, concentration problem/short term memory, clinical depression, difficulty getting pregnant. She also complaint of bilateral hip pain that is severe in nature, neck pain with radiation to the bilateral last two fingers, low back pain with radiation to bilateral ankle. She also has complaint of frequent swelling on the bilateral ankle and wrist. She had bilateral

knee pain and carpal tunnel syndrome (Pain, numbness, tingling sensation). She reports difficulty falling asleep, saying “No matter how long I sleep, I wake up very tired in the morning. There are some days that I don’t want to get out of bed”. She adds that her hands and feet feel swollen and numb. Her complaint of Exhaustion with simple ADL activities (such as shopping or cooking). Skips meals and still gain weight.

Aggravating Factors	Alleviating Factors
<ul style="list-style-type: none"> Stress Cold Weather Humidity ADL Aggravates Condition Sleep Difficulties Anxiety/Depression Work related duties 	<ul style="list-style-type: none"> Hot shower or bath Rest Massage

Table 1: Patient’s report of her aggravating/triggers and alleviating fact.

Physical Examination

<ul style="list-style-type: none"> P-68 B/P-126/72 Wt-168 Ht- 5’2” VAS- 10/10 Trigger points: Tenderness at 18/18 (trigger points noted over multiple points) Carpal tunnel +ve (Tinnel and Phalen) Orthopedic test: Radicular cervical and Lumbar +ve ROM CTL : generally↓ on all ranges with pain ROM UE and LE: generally ↓ on all ranges with pain Muscle test for UE and LE: 3/5 Edema: noted in bilateral knees, ankles and wrists Fibromyalgia Impact Questionnaire: 86 Fatigue Severity Scale: 61 Oswestry Low Back Pain Disability Questionnaire ODI: 80%

Table 2: Physical examination result.

<ul style="list-style-type: none"> Noting My Observation and clinical impression of the patient (Fibromyalgia) Examination of Patient for second opinion Referral of Patient for Radiological Examinations to rule out other conditions Referral of Patient for Lab tests to rule out other conditions Referral to Rheumatologist for Examination and possible treatment Examination, Radiology exam and tests to rule out conditions Need to co-manage the pt.
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Table 3: Information from referral letter sent to the patient’s Family Practitioner explaining my observation.

Differential diagnosis was to rule in or out fibromyalgia RA, AS, carpal tunnel, cervical DJD, cervical radiculopathy, lumbar DJD, lumbar radiculopathy, carpal tunnel syndrome, knee condition (OA), migraine HA.

Diagnosis

<p>American College of Rheumatology (ACR) criteria for the diagnosis of FM</p> <ul style="list-style-type: none"> • Chronic widespread pain <ul style="list-style-type: none"> ○ Pain for ≥ 3 months. ○ Pain above and below the waist. ○ Pain on left and right sides of body and axial skeleton. • Pain at ≥ 11 of 18 tender points when palpated with 4 kg of digital pressure. • ACR criteria are Sensitive (88.4 %) and Specific (81.1%).

Table 4: ACR criteria for diagnosis of FM [2].

Clinical Impression

Patient is a 34 year old South Asian female with ongoing pain lasting > 3 months after a traumatic event. Her symptoms are indicative of fibromyalgia which include widespread pains (both sides of body, above and below waist). She has excessive fatigue, sleep disturbance, stiffness, hypersensitivity that is non-dermatomal, and decline in cognitive abilities, including memory and thinking skills. Her symptoms affect ADLs including work related duties and physical activities.

Upon physical examination, tenderness was noted in 18 of 18 tender points based on the fibromyalgia diagnostic criteria [1]. Palpation indicates tenderness to palpation was found in bilateral trapezius, posterior neck, occiput, temporal, and supraorbital areas. Both active and passive range of motion was generally decreased on all ranges due to pain. Patient reports of depression and anxiety are also associated comorbidities with fibromyalgia [3]. Review of systems was significant for feelings of tiredness (fatigue), anxiety, depression, and sleep disturbances.

Tenderness was noted bilateral at all regions noted on ACR criteria bilateral, at the suboccipital muscle, low cervical, trapezius, supraspinatus, at the second costochondral junctions, lateral epicondyle, gluteal, greater trochanter and medial knees.

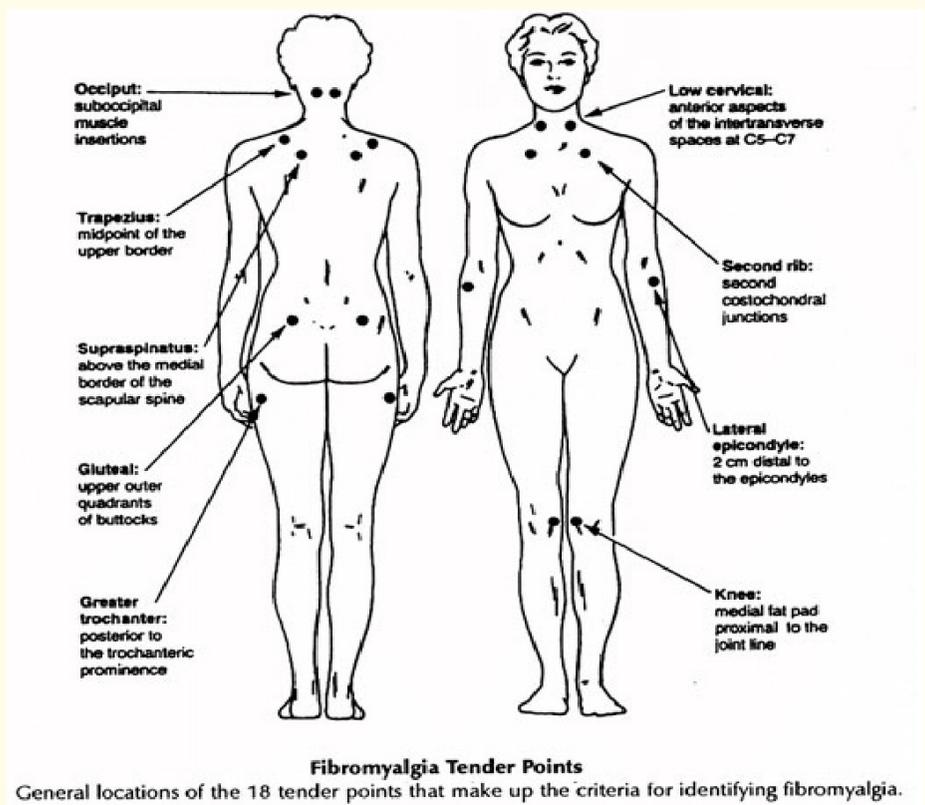


Figure 1: ACR tender point's location [4], (Image Source: Fibro spot).

After the assessment my clinical impression of the patient did include: fibromyalgia with myalgia, OA of Knee, cervical disc disease, lumbar disc disease, carpal tunnel, and hip pain.

Treatment

The goal of the treatment was to decrease pain, decrease fatigue, improve muscle and joint function, return the patient to activity of normal living. Other treatment goals include stress management, depression management and trigger factors management. Treatment includes approaches in managing pain and improving overall function for individuals with fibromyalgia. Our therapy approach included all of the following: exercise therapy, manual therapy and patient education. We found patient education to be first and most successful approach in order to properly educate our patient on the importance of strength and mobility training, pain management, and decreasing overall fatigue.

Overall, this case represents a successful use of manual therapy and exercise therapy to treat a fibromyalgia patient. This case highlights the need for proper evaluation, education and treatment. It is worth noting that patient was seeing other health care practitioners with unsuccessful results prior to coming to our facility. Also patient had given up on any hope of getting any relief from her symptoms before coming to our facility for evaluation and treatment.

This article illustrates that manual therapy and exercises are both effective method of managing fibromyalgia including but not limited to pain relief. Education is an important approach in successful outcome as this helps to counsel and manage realistic expectations that will come from the therapy. In addition to manual therapy treatment and exercise therapy, patient received moist heat, electrical muscle stimulation. Initial trial was for 1 month at 3x week, each treatment session lasted for 1 hr. Patient did report significant improvement in pain score. She also reported that she sleeps better following treatment. Patient decided to follow recommendation to follow up with her psychiatric doctor. After 3 months patient was able to return to work and treatment frequency was reduced to 1x per week except when there is flare-ups.

Her exercise prescription was 3x/week @ 30 minutes. Patient was encouraged to participate on aerobic exercise: walking, bike, stretching and strengthening, breathing exercise to help manage stress and anxiety or fatigue [5]. Light aerobic exercise and strength/resistance training is highly recommended for the management of patients with chronic pain, like those with FMS. Exercise increase stamina while minimizing symptoms associated with FMS. Aerobic activity has been shown to improve psychological symptoms, and sleep disturbances [6]. Exercise also improves patient's cellular metabolism and respiratory capacity [7].

Manual therapy benefit include improving pain intensity, widespread pressure pain sensitivity, improve sleep quality and depressive symptoms. The goal is to stimulate the soft tissue, relieve tense muscles, improve joint function, and alleviate any pain associated with the injury.

Other important aspects of our therapy approach included patient education and pain management techniques. Patient was educated on what fibromyalgia, diagnosis and treatment protocols. She was educated on exercises and breathing techniques. We educated our patient on appropriate times to use the breathing techniques, how to manage fatigue, and the importance of staying active.

Outcome

Upon follow-up, our patient reported a marked reduction in pain as well as improvement in function. She stated that overall; she had a 70% improvement in her pain. She was happy with the improvement and has returned back to work full time and is taking part time classes at a school. Patient was also happy to report that she was pregnant and expecting. Following treatment our patient showed improvements in ROM, strength, pain, and fatigue as demonstrated by the following objective measurements at 6 months. Following treatment patient showed improvement on ROM, Reduction of pain. Improvement immediately but more evidence following 3 months of starting treatment. She went back to work and Went back to continue sing Psychiatric doctor. She started exercising, got pregnant, had the child and is pregnant for the second child now.

- VAS- 4/10
- Trigger points: 12/18
- Carpal tunnel +ve (Tinnel and Phalen)
- Orthopedic test: Radicular cervical and Lumbar +ve
- ROM CTL : generally↓ on all ranges with pain
- ROM UE and LE: generally ↓ on all ranges with pain
- Muscle test for UE and LE: 3/5
- Tenderness: trigger points noted over multiple points (10 of 18 predesigned sites)
- Edema: noted in bilateral knees, ankles and wrists
- Fibromyalgia Impact Questionnaire: 60(clinical significance as evidenced by MDIC) [6]
- Fatigue Severity Scale: 36
- Oswestry Low Back Pain Disability Questionnaire ODI: 54% (clinical significance as evidenced by MDIC)

Table 5: Physical Examination after 6 months of treatment.

Discussion

Fibromyalgia as a multisystem disorder with multiple pathways creating dysfunction. Chronic pain impacts the daily activity, productivity, and quality of life of the afflicted individual. These effects have severe consequences such as financially and emotionally. Those suffering from chronic pain have been shown to have a higher risk of developing major depression. Alleviating chronic pain for FM patient’s helps minimize the risk for depression.

FM patients do better with comprehensive care: manual therapy and exercises including stretches. With empowerment through medical supervision, patients can improve their physical ability to function and quality of life.

Our patient had several risk factors for the diagnosis of fibromyalgia noted below. This patient also has several comorbidities associated with fibromyalgia including sleep disturbances depression, and anxiety.

- Physical trauma (Post-Traumatic stress disorder)
- Genetic: Relatives are at higher risk 8.5 times [6]. Her mother has chronic pain
- Gender: Female is 7x more likely to be dx than men 2 - 3 She is female
- Trauma: Infection or stress, Physical trauma – She was involved in MVA
- Sleep disorders: She has sleeping disorder
- Arthritis: She has arthritis
- Comorbidities (sleep disturbances, depression, and anxiety, arthritis conditions)

Table 6: Patient’s risk Factors [8,9].

Bibliography

1. Sonya Agaezi. "A case study: Management of Fibromyalgia with Manual therapy and exercise therapy". 5th International Conference and exhibition on Pain Management. London, UK (2017).
2. Wolfe F, *et al.* "The American College of Rheumatology 1990 Criteria for the Classification of Fibromyalgia. Report of the Multicenter Criteria Committee". *Arthritis and Rheumatology* 33.2 (1990): 160-172.
3. Goodman CC and Snyder TEK. "Differential Diagnosis for Physical Therapists: Screening for Referral". 5th edition. St. Louis, MO: Elsevier Saunders (2013).
4. <https://fibrospot.wordpress.com/2008/08/23/tender-points-trigger-points-fibro-spots/>
5. Meeus M, *et al.* "The effect of relaxation therapy on autonomic functioning, symptoms and daily functioning, in patients with chronic fatigue syndrome or fibromyalgia: a systematic review". *Clinical Rehabilitation* 29.3 (2015): 221-233.
6. Brosseau L, *et al.* "Ottawa Panel evidence-based clinical practice guidelines for aerobic fitness exercises in the management of fibromyalgia: part 1". *Physical Therapy* 88.7 (2008): 857-871.
7. Wolfe F and Cathey MA. "The epidemiology of tender points: a prospective study of 1520 patients". *Journal of Rheumatology* 12.6 (1985): 1164-1168.
8. Arnold LM, *et al.* "Family study of Fibromyalgia". *Arthritis and Rheumatology* 50.3 (2004): 944-952.
9. Arnold LM, *et al.* "A double-blind, multicenter trial comparing duloxetine with placebo in the treatment of fibromyalgia patients with or without major depressive disorder". *Arthritis and Rheumatology* 50.9 (2004): 2974-2984.

Volume 4 Issue 2 February 2018

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