A Literature Review on Fibromyalgia with its Homoeopathic Management

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Introduction:-

Fibromyalgia [FM] is a syndrome characterized by persistent and widespread pain, often accompanied by overwhelming fatigue, sleep disturbance, impaired cognitive and physical function, and psychological distress.

It is classified in the International classification of Disease ICD-11 as chronic primary pain.[1]

FM is a non-inflammatory, non-autoimmune diffuse pain syndrome which typically includes widespread pain, cognitive difficulties (fibrofog), fatigue and poor sleep.[2]

In 1850, Froriep noted the presence of firm muscle areas in patients with "rheumatism," sensitive to light and touch.[3] Later; in 1940 Gowers coined "fibrositis" for individuals experiencing tenderness under gentle pressure, devoid of apparent local or systemic inflammation. In1990, American College of Rheumatology [ACR] formulated diagnostic criteria, which have been recently modified in 2016. ACR diagnostic criteria for fibromyalgia include two variables: Widespread pain index (WPI) and symptom severity score (SSS)[8,12]

i)WPI $\geq$ 7 and SSS $\geq$ 5 OR WPI 4-6 and SSS $\geq$ 9,

ii)Generalized pain: pain in 4/5 regions,

iii) Symptoms present $\geq$ 3months.

It is second most common rheumatic disorder. According to International association for the study of pain it is termed as nociplastic pain which is previously referred as centralized pain. Hallmark of FM is diffuse hyperalgesia and allodynia. [4]

FM is characterized by widespread pain and tenderness in the musculoskeletal system. Patients commonly report associated symptoms such as fatigue, unrefreshing sleep, cognitive dysfunction, anxiety and depression.

FM often coexist with other conditions like myalgic encephalomyelitis, temporomandibular disorder, chronic headache, irritable bowel syndrome, interstitial cystitis, painful bladder syndrome and other pelvic pain syndromes. These conditions implicate the central nervous system (CNS) as a key to maintaining the symptoms of FM and related conditions. FM is associated with substantial negative consequences for physical and social functioning.[5]

Epidemiology -

Prevalence of FM is estimated 2.7% globally. The prevalence is similar in different countries, cultures and ethnic groups. There is no evidence that FM has higher prevalence in industrialized countries and cultures.[6]

The study of FM prevalence has shown variations in gender ratios between clinical and population based studies. While in clinical studies often report a higher diagnosis rate in women, population-bases studies reveal a more balanced ratio. A recent European study showed a ratio of 1.7:1, whereas a U.S. study found a ratio of 6.8:1. Additionally, prevalence rate differ across regions, with North America reporting rates like 3.4% among women in Wichita, Kansas and 3.7% in New York city, while studies in Europe, Bangladesh, Pakistan, Italy, Turkey and Sweden show varying rates. Furthermore, prevalence rates tend to be higher in clinical settings compared to epidemiological studies.[7]

Risk Factors-

- **Gender and Age**- More women get FM then men. Studies report that 80-90% of individuals diagnosed with FM are women.[9] recent studies indicate increased risk in women being 1.5 to 2 times more likely to be affected than men.[6] A study found relation between sex hormones and pain severity in individuals with FM. Hormonal changes during menopause can make symptoms worse in women. FM can affect individuals of all ages, most commonly seen during middle adulthood. Risk of developing increases with age, peaking between 20 and 55 year old. [9]
- **Family History**- Individuals with family history are at an increased risk of developing the FM. Genes play an important role. A study found that FM is seen in first degree relatives. [9]
- **Comorbid Conditions**- FM frequently coexist with other medical conditions, reflecting complex and interconnected nature of syndrome. Various comorbidites are commonly linked such as rheumatic diseases, psychiatric disorders, chronic fatigue syndrome and sleep disorders.[9]
- It is postulated that widespread chronic pain in older patient is more likely to be attributed to osteoarthritis or other degenerative conditions instead of FM; however two conditions are known to coexist.[6]
- Obesity is often correlated with an increased risk and severity of FM.
- Low physical activity.
- Poor sleep
- Decreased job or life satisfaction.
- History of childhood, adolescent or adulthood abuse or traumatic events.[13]

Pathophysiology

The pathophysiologic hallmark of FM is Nociceptive pain (centralized pain) augmented by CNS pain processing.[4] It involves exaggerated pain response originating from CNS. FM has sensitivity to both painful and non painful stimuli, leading to symptoms like allodynia, hyperalgesia and temporal stimulation.

While peripheral factors may contribute to overall pain perceive greater level of pain than expected based solely on peripheral input. Moreover, central amplification plays a important role in conditions like FM, neurotransmitter dysregulation affects not only sensory perception but also mood, memory, fatigue and sleep. Various research methods, including quantitative sensory testing and neuroimaging have elucidated the involvement of central nervous system in FM Pathophysiology. Functional MRI studies have shown activation

of specific brain regions in response to non-noxious stimuli.[6]

Clinical Features-

1)Pain and tenderness

Widespread, chronic musculoskeletal pain throughout the body, particularly in the palms both above and below wrists and involves axial skeleton such as neck, back and chest.

Multifocal pain that cannot be explained based on damage or inflammation in those regions of the body. Diffuse pain- unresponsive to analgesics and NSAIDS.[13]

Pain is often difficult to pinpoint to a specific location and is deep, severe, persistent, may vary in intensity making it hard to ignore. Physiotherapy often makes FM pains worse.[13]

Diagnosis requires the presence of pain for most of the day on most of the days for at least 3 months, along with associated tenderness and heightened sensitivity to pressure.

In clinical settings, increased sensitivity may be observed through pain induced by the pressure of blood pressure cuff or skin roll tenderness.[5]

2) Neuropsychological symptoms

Fatigue- highly prevalent. Worse in Morning.[13]

Sleep Disturbances- difficulty in falling asleep, staying awake early morning awakening and unrefreshed sleep.

Cognitive Dysfunction- Difficulties related to attention, problem solving with word retrieval, short term memory loss

Anxiety

Depression

Mood disorder – prevalence is 80% in FM patients.[5]

3)Overlapping Syndrome

FM is considered as a part of group of conditions called chronic overlapping pain conditions (COPCs) characterized by its tendency to co-exist with other syndromes sharing similar underlying mechanisms.[5]

Review of systems covers symptoms such as headache, facial/jaw pain, regional myofacial discomfort and arthritis. Additionally, individuals may experience visceral pain affecting the gastrointestinal tract, bladder and pelvic region.[5]

4) Co-morbid conditions

FM often accompanies various chronic conditions like musculoskeletal, infectious, metabolic or psychiatric

disorders.

While FM affects ~2% of general population, it is prevalent in 10-30% of patients with rheumatic disorders, possibly due to amplifying pain pathways.

Likewise, chronic infections, metabolic or psychiatric illnesses can mimic FM or trigger its development.[5]

5) Psychosocial Considerations

Symptoms of FM often worse during stress period.

This may result from complex interplay between stress physiology, anxiety and pain processing pathways. Patients with FM often have a history of trauma or interpersonal violence.[5,13]

6) Functional impairment

It is vital to understand how FM symptoms affect daily functioning and responsibilities.

Improved function serves as a crucial indicator of management success, encompassing physical, mental and social aspects.[5]

Diagnosis

Diagnosis requires evaluation of patient's medical history, childhood or adulthood abuse history or any traumatic events, physical examination including musculoskeletal & neurologic and consideration of associated symptoms.

No specific diagnostic tests for FM.[15]

Laboratory tests are not necessary to diagnose FM but to rule out other conditions.

In 1990, American College of Rheumatology (ACR) diagnostic criteria has been used in clinical settings which include tender point examination. Revised versions of diagnostic criteria were published in 2010 and again in 2016. The revised criteria do not require a tender point examination to explain a diagnosis. These criteria assess widespread pain symptoms and associated symptoms of fatigue, mood disorder, poor sleep, and cognitive difficulties.[7, 11.]

2016 Fibromyalgia Diagnostic Criteria[7]

The fibromyalgia diagnosis can now be made irrespective of other diagnoses(you need not to rule out all other conditions that could explain the symptoms, if criteria 1-3 are all met)

1) Widespread Pain Index (WPI)

   In the past week, where have you had pain?

Left upper region (1)	Right upper region (2)	Axial Region (5)
☐ *jaw*	☐ *jaw*	☐ Neck

☐ L shoulder girdle ☐ L upper arm ☐ L lower arm	☐ R shoulder girdle ☐ R upper arm ☐ R lower arm	☐ Upper back ☐ Lower back ☐ *Chest* ☐ *Abdomen*
Left lower region (3) ☐ L hip ☐ L upper leg ☐ L lower leg	Right lower region (4) ☐ R hip ☐ R upper leg ☐ R lower leg	

Total:_____ WPI score(add up boxes checked,0-19)

_____Number of regions checked(excluding items in italics); use this for criterion

2) Symptom Severity Score (SSS)

For each of the following, for the past week, rate

	0= No problem	1=slight or mild problem, often mild or intermittent	2=moderate considerable problem, often present	3= severe, pervasive, continuous, life-disturbing
Fatigue	☐	☐	☐	☐
Waking unrefreshed	☐	☐	☐	☐
Cognitive Symptoms	☐	☐	☐	☐

In the past week, have you been bothered by any of the following?

	0 = No problem	1 = Problem
Headaches	☐	☐
Pain or cramps in lower abdomen	☐	☐
Depression	☐	☐

Total SSS:_____(0-12)

Summary:

☐ 1. Criterion 1 is met if you have either

WPI ≥ 7 and SSS ≥ 5 OR

WPI 4-6 and SSS ≥ 9

☐ 2. Generalized pain: met if you checked pain in 4/5 regions (not including items in italics)

☐ 3. Symptoms present ≥ 3 months

Management-

Drug regimens for the management of FM in modern medicine like Analgesics, Non steroidal anti-inflammatory drugs NSAID's, tricyclic antidepressants to reduce pain and improve sleep, anti-seizure medications to improve sleep, muscle relaxants like cyclobenzprine, these drugs are having many side effects like dry mouth, constipation, vomiting, dizziness, weight gain etc.[5,8]

Homoeopathic Management-

A study assessed the efficacy of individualized classical homoeopathy in treating fibromyalgia through a double-blind, randomized trial involving 62 participants. Those receiving homoeopathic treatment showed significant improvements in tender point count, tender point pain, quality of life, global health and trend towards reduced depression compared to placebo group. The study suggests that individualized homoeopathy is more effective than placebo for individuals with FM.[10]

Another study suggests Homoeopathic medicine Rhus toxicodendron 6c was effective for selected group of patients with fibrositis.[11]

- **Rhus toxicodendron-** It affects the fibrous tissue, ligaments and joints causing Rheumatic Symptoms; it is an infective agent producing typhoid like fevers. Symptoms appear on the left side or go from left to right. Pains are tearing, shooting, stitching < at night, cant rest; in any position. Parts feel sore, bruised and stiff. Pains as if the flesh was torn loose from bones. Dislocative sensation. Muscles twitch. Crawling Numbness; of parts paralyzed. Trembling. Burning, swelling, and lividity. Rheumatism in cold season. Postoperative complications. Hemiplegia, right sided; sensation as if gone to sleep. Infantile paralysis; from exposure to cold damp. Soreness of prominent projection bones.
  Modalities:- Worse- exposure to wet; cold; air; draft; beginning of motion, rest,
  Better: Continued motion, heat[14]

- **Arnica-** Muscles feel very sore, painful, bruised; all over. Parts become sore, after the pains, or after bleeding. Progressive emaciation. Great prostration; tired feeling. Crushing pain. Bed feels hard or full of lumps. Pains are paralytic; sudden, shifting pains from joint to joint. It acts best in plethoric, dark haired persons of rigid muscles, nervous sanguine nature. Twitching, in tendons, muscles.. Ill effects of fright, financial loss, anger, repentance; Exertion of any kind. Mind and uterine symptoms alternate. Complaints when over hurried.
  Modalities: - Worse- jarring, overexertion, sprains, touches. After sleep, Motion, Lying on left side.
  Better: Lying down[14]

- **Cimicifuga-** This remedy has a wide action on nerves and muscles. It causes depression of mind with low spirits; and exhaustion along with over sensitiveness especially for pain. Plump, delicate, sensitive, nervous, chilly women who complain of aching pain in back, neck, here and there; many of the complaints are dependent upon utero-ovarian irritation. General sick feeling; with exhaustion. Alternate mental and rheumatic symptoms. Pains are violent, aching, shooting, wander here and there, shock like; with cries, faints etc.go upwards or side to side - up the neck; about the throat; from ovary to ovary. Belly of the muscles feel bruised, sore, heavy, aching. Trembling, twitching in various organs or of part lain on. Sore and tender along the tract of pain. Myalgia. Lumbago.
  Modalities:- Worse: Menstruation; suppressed, Night. Change of weather.
  Better: Warm wraps. Open air. Pressure, Eating, Continued motion, Grasping things.[14]

- **Bryonia-** It develops a marked action on all serous membranes Aversion to least motion, even to distant parts, is due to its action on nerves and muscles. Mucous membranes become dry; hence discharges are scanty and adherent. Complaints develop slowly, but forcibly. Pains are bursting, stitching or heavy sore; going backwards. Effects are very painful; on coughing holds sides, chest, and head. Joints are painful. Every spot in the body is painful to pressure. Dropsical swelling gradually increases as the day progresses and disappear during the night. Physical weakness; on slightest exertion; all pervading apathy. It is adapted to nervous dry, slender people. Vicarious bleeding.
  Modalities:- Worse: Motion least, raising up, and stooping, coughing, exertion. Dry cold or heat. Becoming hot; in hot room; Hot weather, Drinking; while hot.
  Better: Pressure, lying down on painful. Cool open air.[14]

- **Ruta-**This remedy has a special affinity for fibrous tissue. Pains are bruised, sore, aching with restlessness. Feeling of intense painful weariness. Gnawing-burning pains, neuralgia. Rheumatism. . Ill effects of bruises, fractures; carrying heavy weights. Lameness after sprains. Bones brittle. Lain on parts become sore; even in bed. Feeling of intense lassitude, weakness and despair.

Modalities:- Worse: Overexertion, injury; sprains, cold air; damp, lying, sitting,
Better: Lying on back, Warmth, Motion, Rubbing.[14]

- **Kali carbonicum-** Weakness of the muscles; of heart; of the back; of limbs; weakness of intellect. Fibrous tissues; ligaments of joints; of uterus, of lumbar back are particularly affected-producing relaxation;joints give way; back feels as if broken; the patient feels compelled to lie down or lean on something**.** Sharp, stitching; stabbing or catching pains are felt in various parts of the body, joints; chest; muscles. Throbbing pains; numbness or coldness of single parts; abdomen, fingers. Parts lain on are painful or go to sleep. Twitching of the muscles; rigidity and atony of the muscles
  Modalities:- Worse: Cold air, draft; after overheating; Lying on painful or left side, Stooping, Change of weather, Touch, Motion.
  Better: Warmth, Sitting with elbows on knees, Open air, Motion.[14]

- **Kalmia-** It affects the nerves, heart, and circulation. Pains are neuralgic, with tingling, numbness, trembling or paralytic weakness. Pains shift rapidly, shooting outward along the nerves; with much nausea and slow pulse. Aching bruised stiff feeling. Dull tearing, crushing pain, moving downwards. Deltoid rheumatism-right. Pains affect large part of the limb. Weakness, numbness, pricking and sense of coldness in limbs.
  Modalities:-Worse: motion, Lying on left side. Bending forward, Heat; of sun.
  Better: Eating, Cloudy weather, Continued motion.[14]

- **Gelsemium-** Its action upon the muscles and motor nerves. In muscles it causes overpowering aching, tiredness, heaviness, weakness and soreness especially felt in the muscles of the extremities. General state of paresis, bodily and mental. Complete relaxation and prostration. Wants to lie down quietly; half reclined; wants to be held, Dullness; dizziness, drowsiness; eye or visual effects, tremors; and polyuria. Inco-ordination of muscles, which do not obey the will. Ill effects of fright, fear, depressing emotions, anger, bad news, unpleasant surprise. Masturbation, traumatic shock.
  Modalities:- Worse: emotions, Surprise, Heat of sun; summer, When thinking of his ailments.[14]
  Better: Profuse urination; sweating.

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