

Fibromyalgia Syndrome

Definition

Fibromyalgia (FM) is a disorder of chronic, widespread pain and tenderness.

Epidemiology

- ◆ Prevalence: 2-4% of adult (3-5% in ♀ and 0.5-1.6% in ♂)
- ◆ Age: Common 30-55 y. ↑ With age.
- ◆ F > 55y → ? Disease association (infection, tumor, arthritis)
- ◆ Sex: females to males = 8:1
- ◆ Race: No race predilection.

Etiology

Unclear: may be interaction of genetic, psychological, and environmental factors.

2010 ACR FM Diagnostic Criteria

A patient satisfies diagnostic criteria for FM if the following 3 conditions are met:

1. Widespread pain index (WPI) Score ≥ 7 over the past week. 19 anatomical locations (0-19) are checked.

Plus

Symptom severity (SS) scale score ≥ 5 (0-12) of these symptoms over the past week:

- ◆ Fatigue
- ◆ Waking unrefreshed
- ◆ Cognitive (difficulties with thinking and remembering) problems

Plus

Number of other numerous somatic symptoms.

2. Symptoms lasting at least 3 months at a similar level
3. No other health problem that would explain the pain and other symptoms

Widespread pain and tenderness

WPI: In how many areas has the patient had pain over the last week? Score will be between 0 and 19.

- ◆ Shoulder left, right
- ◆ Upper arm: left, right
- ◆ Lower arm: left, right
- ◆ Jaw: left, right
- ◆ Neck
- ◆ Hip (buttock, trochanter): left, right
- ◆ Upper leg: left, right
- ◆ Lower leg: left, right
- ◆ Upper back
- ◆ Lower back
- ◆ Chest
- ◆ Abdomen

SS scale score

Symptom Severity scale ≥ 5 (0-12)

A. Presence and severity (0-3) of Fatigue, Waking unrefreshed, Cognitive problems over the past week

B. General presence of somatic symptoms

0 = no symptoms

1 = few symptoms

2 = a moderate number of symptoms

3 = a great deal of symptoms

Somatic Symptoms

1. Morning stiffness and "gelling" (unclear etiology)

2. Headache, Migraine

3. Depression, anxiety

4. Irritable bowel syndrome in 40%

5. Irritable bladder syndrome: frequency, menstrual cramps

6. Subjective muscle weakness

7. Paresthesia (50%):

8. Subjective swelling of distal extremities but no swelling on examination

9. Aggravation of symptoms in cold and symptoms of Raynaud's phenomenon (10%)

10. Dry eyes and dry mouth (15%)

11. Temporomandibular joint dysfunction syndrome

12. Multiple chemical sensitivity syndrome

Types of FM

- I. 1ry FS: Unknown cause.
- II. 2ry FS: due to
 1. Peripheral –mediated FM: Due to
 - ← Musclemicrotrauma
 - ← Muscle deconditioning → susceptibility to microtrauma.
 2. Centrally mediated FM
 - a. Affective spectrum disorder e.g. Irritable bowel syndrome, Irritable bladder syndrome, depression, tension headache, migraine
 - b. Psychologically mediated disorders: Functional (somato form) disorders
 - c. Sleep deprivation
 - d. Obstructive sleep apnea (obesity, large adenoid, myxedema, myotonic dystrophy).
 3. Sympathetic Nervous System mediated FM
 4. Stress/neuroendocrine and autonomic dysregulation
 5. Chronic Fatigue Syndrome
 6. Cold induced FM
 7. Painful syndromes e.g RA, SLE, AS
 8. Infections (HCV, Lyme disease, HIV)
 9. Hypothyroidism Hyperparathyroidism

INVESTIGATION

1. Laboratory testing

Lab. tests in FMS are normal but performed to exclude disorders similar to FM and to investigate for possible associated conditions.

In all patients:

- ◆ CBC with differential leucocytic count
- ◆ ESR

- ◆ Ca⁺⁺, Mg, Alkaline phosphatase level
- ◆ Creatinine Liver function tests
- ◆ TSH level Urinalysis

Some patients

- ◆ 25-hydroxy vitamin D level
 - ◆ Vitamin B12 level
 - ◆ Iron studies
 - ◆ R.FANA (SS, RA, SLE) CPK
2. Plain x-ray (arthritis & other pathology)
 3. Sleep studies to evaluate for obstructive sleep apnea
 4. EEG: evidence of reduced non-rapid eye movements (REM) sleep with interruption by alpha wave.

Not necessary

-NCV, EMG

-CTMRI

-Muscle biopsy

Management

There is no cure for FM, but education, lifestyle changes, and proper medications can help the individual to regain control and achieve significant improvement.

1. Patient education

- ▶ Reassurance about the benign nature of the disease
- ▶ Change of life style e.g. stop smoking, weight reduction.
- ▶ Diet (e.g. promote good nutrition, vitamin supplementation, bone health, weight loss)
- ▶ Stress management
- ▶ Sleep therapy
- ▶ Return to work and activities.

2. Pharmacotherapy

a-Tricyclic antidepressants (TCAs)

- ▶ Low dose TCAs e.g Amitriptyline 10-25mg 1-3 hs before bed-time improves

sleep disturbance, pain and tender points.

- ▶ Mechanism: TCAs inhibit serotonin reuptake at synaptic junction → ↑ serotonin which improves stage IV sleep and has central analgesic effect

b. Analgesics (eg, Acetaminophen, NSAIDs)

c. Anticonvulsants (eg, pregabalin, gabapentin, tiagabine)

d. Skeletal muscle relaxants (eg, cyclobenzaprine)

3. Physical therapy

- ▶ Exercises: (gentle, gradual, continuous despite pain, target specific), Types:

- a- Gentle stretch of affected muscles.
- b- Strengthening ex.
- c- Aerobic exercise: non-impact e.g swimming, water aerobic, walking, bicycling, 30mins. 3 times/week.

Advantages:

- improves muscle condition (less muscle microtrauma)
- improves restorative sleep
- increase endogenous endorphins

Intensity

- Initially low (gentle), gradually increased as tolerated

Duration: Continuous despite pain

- ▶ Heat and massage
- ▶ TENS
- ▶ Acupuncture
- ▶ EMG biofeedback
- ▶ Relaxation technique.

4. Injections therapy: Dilute solution of procaine (+glucocorticoids) for a local very painful tender point.

5. Coping strategies: behavioral therapy, yoga

6. Psychologic therapy