Fibromyalgia: Diagnosis, Evaluation, and Treatment

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Fibromyalgia

FMS is a chronic (>3 months), noninflammatory, nonautoimmune central afferent processing disorder leading to a diffuse pain syndrome

The prevalence of fibromyalgia in the general adult U.S. population is probably 3% to 4% (3.4% of women, 0.5% of men).

Females account for 70% to 90% of patients.

The average **age of onset** is approximately 20 to 55 years, but ranges from childhood to the elderly.

Clinical Findings

- Fibromyalgia is a common cause of chronic wide spread pain
- Physical examination and pathologic investigation reveal no evidence of articular, osseous, or soft tissue inflammation or degeneration
- Patients may have tender points in characteristic areas both above and below the waist

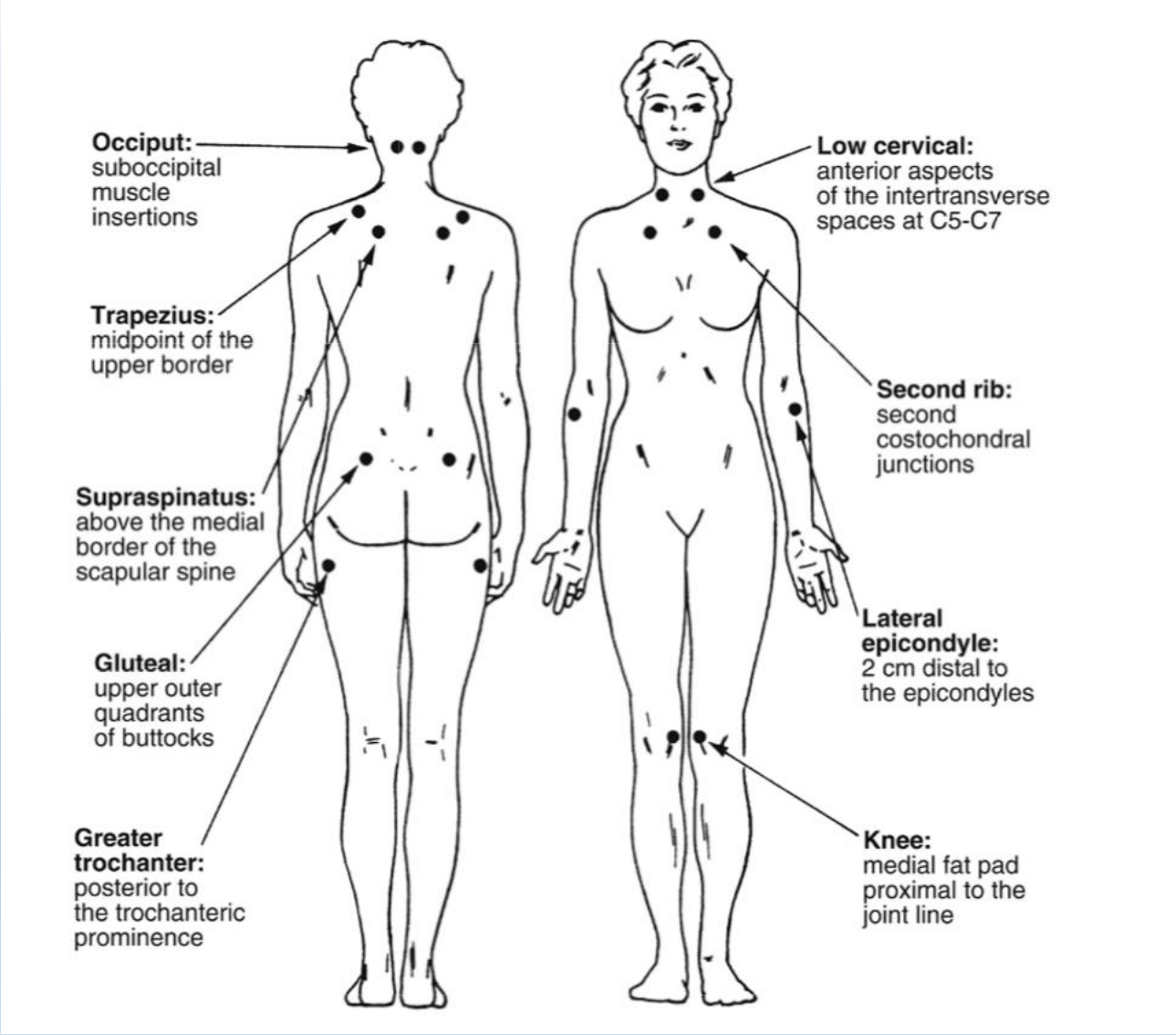
Other common symptoms in patients with FMS

- Fatigue (80%)
- Nonrestorative sleep (80%)
- Arthralgias/myalgias/stiffness (80%)
- Cognitive dysfunction (20% to 30%)
- Muscle spasms/paresthesias (20% to 30%)
- Depression/anxiety (50% to 70%)

ACR 1990 Classification Criteria for FMS

- chronic widespread pain for at least 3 months above and below the waist and on both sides of the body
- pain induced by palpation in at least 11 of 18 tender points
- no other cause for symptoms based on physical examination, laboratory tests, and radiographs.

Location of the 18 (nine pairs) specific tender points



PATHOGENESIS

- During much of the 20th century, FM was thought to be a muscle disease. However, controlled trials found no evidence for significant pathologic or biochemical muscle abnormalities
- Lately ongoing research suggests that Fibromyalgia (FM) is considered to be a disorder of pain regulation, classified often under the term central and peripheral sensitization

Other conditions that are now felt to be central pain sensitivity syndromes that are frequently seen in patients with FMS

- Tension/migraine headache (50% to 60%)
- Irritable bowel syndrome (40%)
- Restless leg/periodic limb movement syndrome (15%)
- Urinary frequency/urgency
- Primary dysmenorrhea/chronic pelvic pain/urethral syndrome
- Temporomandibular joint (TMJ) disorders
- Hypersensitivity and multiple chemical sensitivity syndrome (odors, bright lights, loud noises, medications)

What are the recognized triggers for FMS?

- Early life trauma: sexual or physical abuse
- Acute trauma especially involving the trunk (cervical whiplash)
- Infections: Epstein–Barr virus (EBV), parvovirus, Lyme, hepatitis C, West Nile virus
- Sleep apnea
- Chronic ongoing joint inflammation (secondary FMS)
- Catastrophic events: posttraumatic stress disorder following war and other major events
- Chronic psychological distress

2010, new diagnostic criteria proposed for FMS

- Widespread pain index (WPI) ≥ 7 and symptom severity (SS) scale score ≥ 5 or
- WPI = 3 to 6 and SS scale score ≥ 9
- Symptoms present for at least 3 months
- No other disorder to explain symptoms

2010 ACR preliminary diagnostic criteria

- The 2010 ACR preliminary diagnostic criteria for FM provide an alternative approach to diagnosis and classification, which does not require a tender point examination, but does provide a scale for measurement of the severity of symptoms that are characteristic of FM. These criteria also recognize the importance of cognitive problems and somatic symptoms in patients with FM that were not considered in the 1990 ACR classification criteria.

Components of therapy for FMS

Although the etiology and pathophysiology of FMS remain unknown and many of the therapeutic interventions have been inadequately studied, a logical multidisciplinary approach to the treatment of this disorder is possible and necessary if meaningful results are expected.

- Patient education
- Analgesia
- Correction of sleep disturbance
- Aerobic exercise
- Physical therapy
- Treatment of associated disorders
- Cognitive behavioral therapy and/or supportive counselling for pain modification

FDA-approved therapy for FMS

Dual reuptake inhibitors (SNRI): increase serotonin and norepinephrine at synapses in the descending analgesia pathways.

- - Duloxetine (Cymbalta): start 20 to 30 mg in am with food. Titrate monthly to 60 mg daily or effect.
- - Milnacipran (Savella): start 12.5 mg in am with food. Increase by 12.5 mg every week to effect or maximum dose 50 mg twice daily.

Anticonvulsant (α2–δ ligands): bind to ligand on voltage-gated calcium channels letting less calcium in which decreases release of excitatory neurotransmitters (glutamate, substance P).

- - Pregabalin (Lyrica): start 50 mg with food before bed and increase weekly to at least 150 mg (maximum dose 225 mg) at bedtime (qhs) before adding a morning dose. The maximum dose is 225 mg twice daily.

Other medications that have shown effectiveness

- SNRIs: Venlaxafine (Effexor)
- TCAs: Amitriptyline at a dosage of 10 to 25 mg 1 to 3 hours before bedtime.
- Cyclobenzaprine (Flexeril) is a weak TCA-like drug that can also be used at doses of 10 to 40 mg at night.
- Anticonvulsants: Gabapentin (Neurontin) can be used as a less expensive substitute for pregabalin.
- Analgesia: Tramadol (Ultram) has been shown to relieve pain in patients with FMS. The analgesic effect of tramadol is most likely a result of its SNRI effect and not attributable to its weak binding to the mu opioid receptor. In fact opioids are not effective in FMS and should be avoided.

What medications have not been shown to be effective?

- Opioids, corticosteroids, NSAIDs, benzodiazepine and nonbenzodiazepine hypnotics, guaifenesin, S-adenosylmethionine (SAMe), melatonin, magnesium, and dehydroepiandrosterone (DHEA) are not effective

Thank you !

Questions ?