Fibromyalgia

Classification

The prominent feature of FMS is chronic, widespread musculoskeletal pain, but it is usually accompanied by numerous other multisystemic dysfunctions. **Fibro** refers to the fibrous tissue, **myo** refers to the muscles and **algia** refers to pain. Fibromyalgia is assigned number M79.0 and is classified as nonarticular rheumatism in the World Health Organization's International Classification of Diseases (ICD). FMS is in the "generalized" category of the large group of softtissue pain syndromes, implying that a systemic process involves the musculoskeletal system globally. Compelling evidence of physiological and biochemical abnormalities identifies FMS as a distinct pathophysiological clinical disorder.

Etiology

Before the onset of FMS, most patients enjoyed an active, healthy lifestyle. There is consistent documentation that a physical trauma, particularly a whiplash or spinal injury, can trigger FMS in some patients. Other associated physical traumas include surgery, repetitive strain, childbirth, viral infections and chemical exposures. A genetic predisposition may be suggested in cases where more than one separated family member is afflicted. Some cases of FMS have a gradual onset with no obvious cause.

Prevalence

Epidemiological studies indicate between 2 and 10 percent of the general population, or between 600,000 and 3 million Canadians, have FMS. It is two to five times more prevalent than rheumatoid arthritis. A Canadian study suggests that 3.3% or one million of noninstitutionalized adult Canadians have FMS. A prevalence study of randomly selected schoolaged children suggests that 6.2% meet the criteria for FMS. It affects all age groups, including children, all racial/ethnic groups, and all socioeconomic strata. There is a higher prevalence in females. The generally more flexible, delicate skeletons, less massive muscles, and narrower spinal canals of females may make them more prone to

neck and spinal injuries. A whiplash injury study suggests those with persistent symptoms have a significantly narrower cervical spinal canal (particularly females) . Females produce more neurotransmitters that increase pain signals and fewer neurotransmitters that decrease pain signals than males. A PET study suggests that when endogenous tryptophan is depleted, there is only a 7-fold drop in the synthesis of serotonin in males but there is a dramatic 42-fold drop in the synthesis of serotonin in females. Both the direction and magnitude of the brain's response to pain differs in males and females, with females being more sensitive to pain.

Natural Course

An eightyear multicentre study suggests that generally once FMS has been established, patients do not improve symptomatically and there is a slight worsening of functional disability. A 15 year study indicates that all patients in the study still have FMS but there is some variation in symptom severity. Individual prognosis must remain a clinical estimate because the prognosis for an individual patient cannot be predicted accurately with certainty.

Definition

The two compulsory pain criteria (adopted from the American College of Rheumatology 1990 Criteria) are merged with Additional Clinical Symptoms and Signs to expand the classification of FMS into a Clinical Working Case Definition of FMS.

1. Compulsory HISTORY of widespread pain:

Pain is considered widespread when all of the following are present for at least three months:

- pain in both sides of the body
- pain above and below the waist (including low back pain)
- axial skeletal pain (cervical spine, anterior chest, thoracic spine or low back). Shoulder and

buttock involvement counts for either side of the body. “Low back” is lower segment.

2. Compulsory PAIN ON PALPATION at 11 or more of the following 18 tender point sites:

- **Occiput (2):** at the suboccipital muscle insertions
- **Low cervical (2):** at the anterior aspects of the intertransverse spaces (the spaces between the transverse processes) at C5 – C7
- **Trapezius (2):** at the midpoint of the upper border
- **Supraspinatus (2):** at origins, above the scapular spine near its medial border
- **Second rib (2):** just lateral to the second costochondral junctions, on the upper rib surfaces
- **Lateral epicondyle (2):** 2 cm distal to the epicondyles (in the brachioradialis muscle)
- **Gluteal (2):** in upper outer quadrants of buttocks in the anterior fold of muscle
- **Greater trochanter (2):** posterior to the trochanteric prominence
- **Knee (2):** at medial fat pad proximal to the joint line

3. Additional Clinical Symptoms and Signs:

In addition to the compulsory pain and tenderness required for research classification of FMS, many additional clinical symptoms and signs can contribute importantly to the patients’ burden of illness. Two or more of these symptoms are present in most FMS patients by the time they seek medical attention. On the other hand, it is uncommon for any individual FMS patient to have all of the associated symptoms or signs. As a result, the clinical presentation of FMS may vary somewhat, and the patterns of involvement may eventually lead to the recognition of FMS clinical subgroups. These additional clinical symptoms and signs are not required for research classification of FMS but they are still clinically important. For these reasons, the following clinical symptoms and signs are itemized and described in an attempt to expand the compulsory pain criteria into a Clinical Case Definition of FMS:

- **Neurological manifestations:** Neurological difficulties are often present such as hypertonic

and hypotonic muscles; musculoskeletal asymmetry and dysfunction involving muscles, ligaments and joints; atypical patterns of numbness and tingling; abnormal muscle twitch response, muscle cramps, muscle weakness, and fasciculations. Headaches, temporomandibular joint disorder, generalized weakness, perceptual disturbances, spatial instability, and sensory overload phenomena often occur.

- **Neurocognitive manifestations:** Neurocognitive difficulties usually are present. These include impaired concentration and shortterm memory consolidation, impaired speed of performance, inability to multitask, easy distractibility, and/or cognitive overload.

- **Fatigue:** There is persistent and reactive fatigue accompanied by reduced physical and mental stamina, which often interferes with a patient's ability to exercise.

- **Sleep disturbance:** Most FMS patients experience nonrefreshing sleep. This is usually accompanied by sleep disturbances including insomnia, frequent nocturnal awakenings, nocturnal myoclonus, and/or restless leg syndrome.

- **Autonomic and/or neuroendocrine manifestations:** These manifestations include cardiac arrhythmias, neurally medicated hypotension, vertigo, vasomotor instability, sicca syndrome, temperature instability, hot/cold intolerance, respiratory disturbances, intestinal and bladder motility disturbances with or without irritable bowel or bladder dysfunction, dysmenorrhea, loss of adaptability and tolerance for stress, emotional flattening, lability, and/or reactive depression.

- **Stiffness:** Generalized or even regional stiffness that is most severe upon awakening and typically lasts for hours usually occurs, as in active rheumatoid arthritis. Stiffness can return during periods of inactivity during the day.

SOURCE: [Canadian Consensus on FMS]