

Fibromyalgia: Diagnosis and Clinical Features



Rhonda Shuckett, MD, FRCPC

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Fibromyalgia syndrome (FMS) is one of the most common presentations encountered by FPs and rheumatologists alike. Various comorbid syndromes keep company with fibromyalgia, challenging every specialist. FMS afflicts at least 2% of the general population with a predilection for females. FMS can affect up to 10% of women in the fifth to seventh decades. The concept of fibromyalgia has been fraught with controversy and some prominent rheumatologists even challenge its existence.¹ Yet, why then do patients so often present in a manner consistent with the criteria of FMS?

Fibromyalgia was previously termed fibrositis but FMS has prevailed because of the lack of inflammatory features. Some practitioners apply the term nonarticular rheumatism or generalized soft tissue pain rather than using the term FMS. Fibromyalgia is termed a syndrome rather than a disease due to the lack of objective tests to confirm tissue pathology.² When one ponders the intricacies and complexities of the body with internalized patterns of pain referral and pain regulation, it is not surprising that we cannot objectify syndromes like FMS with abnormal lab tests.

FMS can affect up to 10% of women in the fifth to seventh decades.

The objectives of this article are to outline the criteria and clinical features of FMS. The goal is to impact upon diagnosis of FMS patients, offering an approach to this challenging condition. It is crucial that we deal with such patients in accordance with our Hippocratic Oath to serve our patients' needs without imposing value judgements.

Criteria and clinical features of FMS

FMS is a syndrome of diffuse musculoskeletal pain distributed in all four quadrants of the body. An adapted form of the 1990 American College of Radiology criteria are outlined in Table 1.³ Pain in FMS is mainly in the muscle regions or tendon insertions rather than the joints. There is usually axial spine pain as well. The pain is chronic (> three months).

Patients with FMS often describe numbness of extremities in a non-dermatomic distribution. There is typically a non-restorative sleep disorder, whereby patients do not feel refreshed on awakening.⁴ Daytime fatigue is common. Patients may feel like they have been "hit by a truck" on awakening in the morning. They often describe cognitive challenges, the so-called "fibro fog." Sleep apnea can underlie FMS, particularly in male patients.

On examination, they have at least 11 out of 18 fibromyalgia painful tender points distributed in

Table 1

Criteria for the classification of fibromyalgia

1. History of widespread pain in all 4 quadrants of body for at least 3 months. Presence of pain axial spine
2. Pain in 11 out of 18 tender point sites on digital palpation with 4 kg pressure (enough to blanch the finger) tender points have to be distributed in all 4 quadrants of the body*

*For a tender point to be positive, it must actually be painful not just tender. Fibromyalgia is a diagnosis of exclusion.³

Table 2

Control points to check in Fibromyalgia symptoms (FMS)

- Centre of forehead
- Right and left distal radii above the wrist
- Right and left thenar eminences at bases of thumbs
- Right and left quad muscles above knees

The presence of painful control points does not detract from a diagnosis of FMS.

Table 3

Comorbid conditions associated with FMS

Condition	Specialty
Migraine headaches/dizziness	Neurology
Restless leg syndrome	Neurology
Temporomandibular dysfunction	Dentistry
Atypical chest pain	Cardiology
Irritable bowel syndrome	Gastroenterology
Interstitial cystitis	Urology
Vulvodynia, dyspareunia	Gynecology
Anxiety/ depression	Psychiatry

all four quadrants of the body (Fig 1). Painful FMS tender points do reflect some subjective interpretation by the patient and examiner. There are seven control points but presence of these does not detract from a diagnosis of FMS (Table 2).

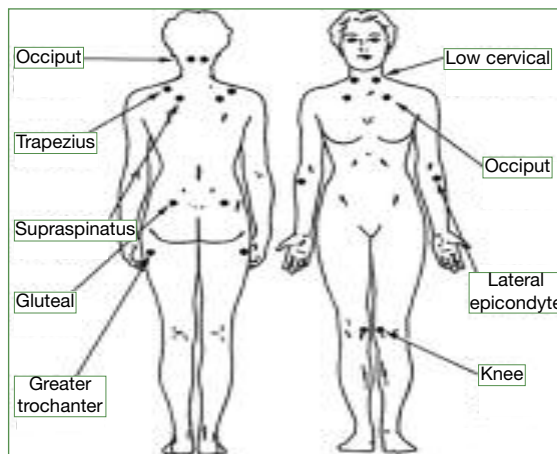


Figure 1. There are nine pairs of fibromyalgia tender points, six pairs in upper body and three pairs in lower body. These include bilaterally, the following pairs of points: Upper body: the anterior cervical points over scalene muscles, the occiputs, the trapezii, the medial scapulae, the second costochondral junctions, the lateral epicondyles of elbows. Lower body: the gluteal points over the upper outer buttocks, the greater trochanters and the medial fat pads of the knees.

Depression is a frequent concomitant problem, leading to the theory that FMS may be an affective spectrum disorder.⁵ Some patients report a history of major abuse which can predispose to FMS.^{6,7} FMS can seem to set in after injuries such as motor vehicle collisions but this area is controversial.⁸ Fibromyalgia fulfills many of the features of pain disorder under the umbrella of somatoform disorders.⁹

Fibromyalgia often keeps company with other conditions (Table 3). Chronic fatigue syndrome often coexists with FMS. When patients present with issues such as atypical chest pain it is important to rule out more serious pathology such as an underlying cardiac cause. In this way, FMS becomes a diagnosis of exclusion.

Differential diagnoses of FMS

It is important to rule out an inflammatory arthritis such as rheumatoid arthritis (RA). In RA, symptoms and signs are centered mainly in the joints. RA is typically associated with prolonged morning stiffness and worsened pain



Table 4
Practical guide to differential diagnosis of “pain all over”/FMS

Condition	Key clinical features	Labs
Rheumatoid arthritis (RA)	More in the joints, prolonged morning stiffness. Feels worse in morning. Often have evidence of synovitis and stress pain in the joints	ESR, CRP often increased RA factor, CCP may be positive, erosions on x-ray in established disease
Lupus	Features of joint pain similar to RA above. Ask about extra articular features such as photosensitivity rash, malar rash, mouth ulcers, dry eyes, dry mouth, Raynaud’s and hair loss	ANA is positive but it is key that ANA often positive in control pop’n
Ankylosing spondylitis	Pain more centered in spine. Prolonged morning stiffness and night pain. Decreased spinal segment mobility. Tenderness at entheses or ligament insertions	Sacroiliitis and other x-ray findings may be present
Polymyalgia rheumatica	Achy pain and stiffness in neck and shoulder girdle and hip girdle regions. Occurs in patients > 55-years-old. Responds dramatically to low dose prednisone.	ESR and CRP usually high
Referred pain from neck and low back	Can be very similar to FMS. Predominance of symptoms in the neck and/or back. However, should be noted that by definition, patients with FMS have spinal pain	Imaging studies of spine may be abnormal but this is non-specific
Myofascial pain syndrome	More localized “trigger points” typically around the neck/shoulder girdle	Normal
Repetitive strain syndrome	Regional pain usually in one upper extremity	Normal

There are many other systemic causes of “pain all over” and these include endocrine and metabolic and more rarely malignant disorders.
 ESR: Erythrocyte sedimentation rate
 CRP: C-reactive protein
 CCP: Cyclic citrullinated peptide
 ANA: Antinuclear antibody

in the morning. Still, sometimes the differentiation of inflammatory arthritis vs. FMS can be rather nebulous.

Hypothyroidism should always be screened for with a TSH in cases of suspected fibromyalgia. Furthermore, in elderly patients, pain all over can reflect polymyalgia rheumatica so a erythrocyte sedimentation rate (ESR) is indicated. The criteria for FMS stress the exclusion of other diseases. Lab tests such as the ESR tend to

be relatively normal in FMS. Some routine biochemistry tests such as liver enzymes, serum calcium and creatinine along with a complete blood count, differential and sedimentation rate and/or C-reactive protein level are generally worth doing in the work-up of FMS.

A thorough rheumatology review of systems should be undertaken to assess for features of lupus before ordering the poor predictive value antinuclear antibody (ANA) test. This review of

systems enquiry should include questions about skin rashes, photosensitivity, dry eyes or mouth, mouth ulcers, hair loss, Raynaud's phenomenon and other such potential features of lupus. Fibromyalgia can coexist with RA and lupus.

Sometimes pain may be referred from the axial spine as a mechanism for painful tender or trigger points. Mechanical neck pain can refer to upper body FMS points and lumbar pain can refer to lower body FMS points which ties in with the concept of referred pain. Dr. Hugh Smythe, the father of fibromyalgia, recently wrote a stimulating article on the patterns of referred pain as mapped in the homunculi of the brain.¹⁰ This article encourages us to be more open-minded in our appreciation of mechanisms of pain in conditions such as FMS.

There are many more causes of pain all over including metastatic bone cancer, paraneoplastic syndrome and conditions such as hyperparathyroidism and osteomalacia but an exhaustive list of these is not included here and the more common and practical differential diagnoses are included in this discussion and in Table 4. A more exhaustive review of causes of "pain all over" has been described in an article by Puttick.¹¹

Myofascial pain syndrome (MPS), as depicted in a seminal book by Travell and Simons, is a more regional distribution of tender spots and taut muscle bands termed "trigger points."¹² MPS is closely linked to the referral patterns of pain. MPS is more regionalized in contrast to the generalized FMS with its "tender points."

In women, seronegative spondyloarthropathy such as ankylosing spondylitis can be confused with FMS.¹³ Night-time spinal pain with morning stiffness should lead to consideration of a trial NSAIDs.

Dr. Shuckett is a Clinical Associate Professor, Division of Rheumatology, Department of Medicine, University of British Columbia, Vancouver, British Columbia.

A psychosocial history is important in assessing FMS patients. Depression, anxiety and history of abuse and post-traumatic stress disorder can be closely linked with FMS.

Conclusion

This article has elucidated, in brief, some of the clinical features of FMS. There are typical features of presentation of FMS. The most common differential diagnoses have been presented. It is hoped that this article will assist healthcare workers in the diagnosis of this common, controversial and challenging syndrome. A confident, sound approach to diagnosis should help ensure satisfaction of the patient and the physician in recognizing this syndrome.

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