



Fibromyalgia

Help patients achieve a better quality of life

BY MONIQUE CAMERLAIN, MD

Fibromyalgia is a chronic syndrome characterized by multiple symptoms such as widespread pain in tender points, fatigue, sleeplessness, and changes in mood and behaviour. Although the etiology is unknown, it's thought that abnormalities in the neuroendocrine system may be implicated. The disorder affects 3% of Canadians — about 80% of whom are women. The average age at which most patients present with symptoms is between 30 and 50 years. Low socio-economic status plays an important role in fibromyalgia, as it's more common in this population group. These individuals also report a higher incidence of traumatic life experiences — physical and sexual abuse — that could trigger an exacerbation. Despite growing awareness and understanding of this disorder, fibromyalgia remains a challenging condition to manage because of the non-specific nature of the syndrome and a lack of diagnostic testing available. Treatment of patients involves an overall management approach to ease symptoms and improve quality of life.

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Risk factors

- flu-like viral illness: usually unspecified; chronic fatigue syndrome; HIV infection; Lyme disease
- physical or emotional trauma
- certain medications (i.e. especially steroid withdrawal)

Theories for pathogenesis

Genetic

- patients with fibromyalgia have a greater frequency of S/S genotype of the promoter region of the serotonin transporter gene (5-HTT)

Autonomic and central nervous system

- orthostatic and cold intolerance, increased skin reactivity
- abnormal pain processing
- increased levels of substance P in spinal fluid
- reduced regional cerebral blood flow
- abnormal temporal summation of pain

Psychologic

- major depression is found in 20-30% of patients and anxiety disorder in 10-20%
- greater prevalence of lifetime and family history of depression than in controls
- odds ratio for sexual abuse is 6.9, CI is 2.0-24.6 for those with more than five tender points

Sleep disturbance

- alpha intrusion has been described on electroencephalogram with non-restorative sleep

Neuroendocrine abnormalities

- reduced concentration of growth hormone and prolactin, altered serotonergic pathways and altered response to central stress axis

Immunological manifestations

- action of cytokines

Signs and symptoms

Cardinal features (according to the American College of Rheumatology classification criteria)

- widespread pain for more than three months
- pain elicited by manual pressure at 11 or more of the 18 defined tender points

Characteristic features

- fatigue
- sleep disturbance
- stiffness
- paresthesias
- headache
- irritable bowel syndrome
- irritable bladder syndrome
- primary dysmenorrhea
- restless legs syndrome
- temporomandibular dysfunction
- myofascial syndrome
- depression
- anxiety

Investigation

- no diagnostic test is available for fibromyalgia
- consider screening patients for autoimmune or other systemic diseases
- avoid radiographs, magnetic resonance imaging, nerve conduction velocity or electromyographic procedures unless there's a specific indication

References:
Camerlain M. *Le Clinicien* 2003;18:75-86.
Russell J. New developments in the management of fibromyalgia syndrome. <http://www.medscape.com/viewarticle/445110?src=search>
Goldenberg DL et al. *JAMA* 2004;292:2388-95.
Gullacksen AC et al. *Pain Res Manage* 2004;9:145-53.

Treatment approach

First line

- patient education and reassurance
- exercise: low impact, working towards aerobic level
- treat mood disturbances with appropriate medications
- simple analgesics
- low-dose tricyclic antidepressants, e.g. amitriptyline
- muscle relaxant, e.g. cyclobenzaprine
- selective serotonin reuptake inhibitors, e.g. fluoxetine
- dual reuptake inhibitors, e.g. venlafaxine, milnacipran (not available in Canada), duloxetine (not available in Canada)

Second line

- structured exercise routine
- physical and rehabilitative medicine
- cognitive behavioural therapy and stress management
- pain management program
- trigger point injection, acupuncture
- analgesics, i.e. tramadol (not available in Canada)
- combination antidepressants, e.g. fluoxetine/amitriptyline
- anticonvulsants, e.g. gabapentin, pregabalin (not available in Canada)

Coping strategies

Help patients deal with the chronic pain by encouraging them through the following three adjustment phases:

- Phase one: increasing pain and disability, physical and mental exhaustion and acknowledgement of chronicity
- Phase two: understanding of "pain diagnosis," sorrow, loss, new understanding and improvement of coping skills
- Phase three: constructive use of past experiences, increased competence and control, and new vision of the future

Prognosis

- better in the community than in tertiary centres
- related more to perceived self-efficacy than to the degree of pain
- in one study, 25% of patients were in remission after two years
- in another study, 14 years after the diagnosis: 67% of patients felt better and 70% said that their symptoms interfered only slightly with daily living activities
- approximately 9% of patients lose their employment because of fibromyalgia