Fibromyalgia:
Myth or Reality?

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Patients with fibromyalgia are referred to a pain clinic for a variety of reasons. Some clinics are known to have expertise in this area, some patients have long-standing chronic pain and the diagnosis and treatment has not been satisfactory to date, there may be problems with medication and narcotic use or some patients experience a loss of functional ability that has not responded to conventional treatment approaches.

CPS and fibromyalgia: The similarities

When we applied to patients with fibromyalgia the usual medico-psychosocial evaluation we use for patients with chronic pain syndrome (CPS), we noted many similarities to CPS, such as:

- the presence of pain for more than three months,
- pain reports that are greatly in excess of that expected from the physical exam and
- major changes in behaviour at home, work, leisure and in relationships as a result of the pain.

Depression, either overt or more hidden, was frequently present, as well as levels of anxiety exceeding what might be expected. There was a change in sleep pattern and sleep disturbance since the onset of the problem and patients frequently complained of constant fatigue, which was also seen in patients with CPS.

Lack of endurance is common in both problems and is probably related to deconditioning—avoiding physical activity in the belief that this would be protective—as well as the presence of depression. Numerous small changes in metabolic functioning of muscle have been found, also probably reflecting the deconditioning. The degree of invalidity is usually less than with CPS, where long periods of work absence and frequent reliance on such aids as canes,

Priscilla's Pain

- Priscilla, 53, complains of pain in the left scapula, arm and left leg for two years
- She is in a high-level stressful job in airline certification
- Her pain is burning and intense
- She no longer plays sports, lacks energy and has suffered from years of migraine
- Priscilla missed two and a half months of work last year

What's wrong with Priscilla? For the answer, go to page 90.

Fran's Five-Year Issue

- Fran is a 29-year-old teacher who is complaining of pain all over her body, especially in her low back and right arm and leg for five years
- She is fatigued and no longer plays sports
- She acknowledges depression and marital difficulties
- Fran is taking paroxetine naproxen and ramipril, but her sleep is still disturbed.
- She stopped working three months before coming to the clinic
- All her tests are normal

Go to page 92 for more on Fran.

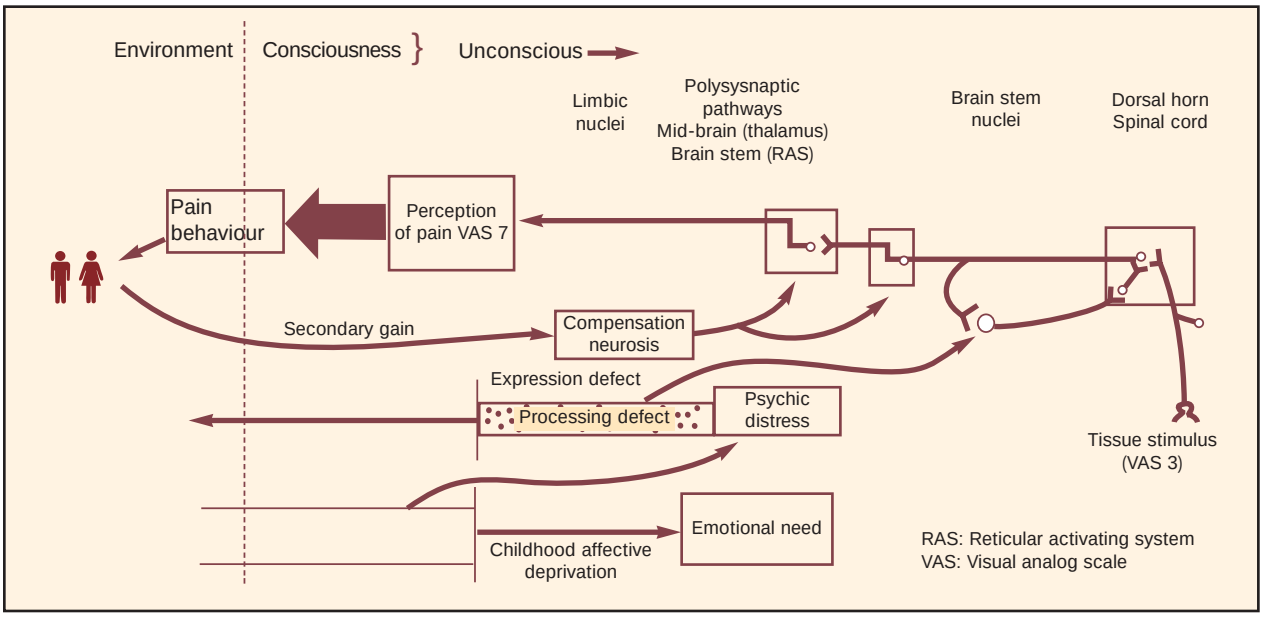

Figure 1. Fibromyalgia and the interaction between psyche and soma.

Is Priscilla Better?

Priscilla takes oxycodone HCl controlled-release tablets, 10 mg, four times per day, and amitriptyline, which helps her sleep.

She stopped working and started a program of diminution and elimination of narcotics, a trigger points infiltration, a 10-week multidisciplinary program, then a progressive return to work and *thérapie en milieu de travail*, completed in 10 weeks.

At followup, Priscilla describes herself as excellent.

prostheses, lumbar supports, *etc.* is fairly common and the degree of dependency is quite severe.

We have found that patients with fibromyalgia tend to be less dependent and continue to function at home and at work, although they may have had intermittent periods of work absence. They appear to be more active and independent, except in unusually severe cases. Narcotic usage is not very prevalent in either situation, but seems to be less in patients with fibromyalgia.

CPS and fibromyalgia know no age limit. The distribution between men and women for CPS varies, depending upon the original cause. Certainly, there is a preponderance of men when the original injury is related to industrial and physical trauma, but the ratio of men to women overall appears to be about equal. On the other hand, fibromyalgia has a preponderance of about four to one for women. The frequency is about 3.3% of the population.

In the differential diagnosis, we must consider related conditions, like myofascial pain syndrome, the different forms of arthritis, radiculopathy and rare muscular conditions. An international meeting of rheumatologists proposed that there must be at least 11 of 18 named trigger points present to make the diagnosis. The problem with this criterion is that it takes no account of the psychosocial aspects, which I believe are necessary for diagnosis, and treats fibromyalgia as a uniquely physical phenomenon.

Mechanisms of fibromyalgia

CPS and fibromyalgia are the most clear and consistent examples of the interaction of psyche and soma, causing illness. Psychologic factors are important in all illnesses; this is generally recognized. We also speak of psychosomatic disorders, but, more and more, physical causes are found for these (*e.g.*, gastric ulcers and asthma). In fibromyalgia it is the interaction of the different elements that results in the condition. The illustration (Figure 1) shows how this interaction might work. It is important to understand that pain, or our final "perception" of pain, occurs in the limbic region of the brain

(known to be associated with emotion). It is this perception that determines our behaviour in response to the multiple stimuli. Figure 1 also proposes interactions backwards and forwards between the physical and emotional causes of pain in CPS and fibromyalgia. Certain factors will facilitate transmission of the noxious stimulus, resulting in the perception of more pain, while others will decrease this transmission.

It is considered that "valves," or "gates," indicated in Figure 1 by the square boxes, modify transmission of the nociceptive stimuli. Factors that open these valves and result in greater transmission of nociceptive stimuli to limbic structures, and hence greater perception of pain, are anxiety, depression, anger, guilt, barbiturates and benzodiazepines.

Factors that close valves and decrease the perception of pain are relaxation, distraction, music, antidepressants, diffuse noxious inhibitory control and stoicism. Control descending from the midbrain to the dorsal horn of the spinal cord, which inhibits transmission of the nocogenic stimuli, includes dorsal column stimulators, morphine and clonazepam. Factors that operate at the dorsal horn level include large fibre stimulation, tens, acupuncture and morphine.

Most recent reviews are consistent with Figure 1, although they vary considerably in the details. For example, some propose important hormonal influences and a role for endocrine factors. However, there seems to be an agreement that sleep disturbance with the absence of phase IV sleep is a very frequent finding, that depression occurs in at least 70% or 80% of patients and that there is some kind of muscle damage, seen in magnetic resonance imaging studies, perhaps from constant muscle tension or exercise-related injury.

Levels of anxiety and stress are nearly always elevated in patients with fibromyalgia and may be related to home or work. Personality characteristics we have noted are that patients are very hard working, work longer than usual hours, wish to please others, have difficulty setting limits and put the needs of others before their own. They seem to have difficulty recognizing—or, at least, expressing—feelings of anger, sadness and anxiety. However, these difficulties rarely reach the level of a psychiatric disorder except, perhaps, the rather ubiquitous depression and a tendency towards perfectionism. It is quite rare to make an actual psychiatric diagnosis in patients with fibromyalgia.

As part of their chronic pain, patients often seem to be aware of the need to change certain characteristics, but do not know how and are not able to directly ask for this kind of help. It is possible to think of CPS as a form of communication—a disordered one, perhaps—but, nonetheless, a communication of suffering and distress.

FAQ

What is the prognosis of patients with fibromyalgia?

Untreated, the prognosis seems quite poor and patients frequently end up in wheelchairs. However, the kind of multidisciplinary program described here has had an approximate 85% return-to-work rate in patients without much relapse. The availability of such programs, however, is another matter.

FAQ

Isn't fibromyalgia simply malingering?

"Malingering" implies the symptoms and the patients' complaints are made up to achieve some morally unjustified end. Sometimes, this question is, "isn't it all in their head" and, therefore, not "real." All who work with chronic pain accept the patient's complaint at face value and that their motivation is for relief of pain. What I have tried to emphasize is that the perception of pain arises from a continuum from a peripheral physical site to the site of perception, which is actually always "in our head," specifically the limbic nuclei. The challenge with chronic pain states, such as fibromyalgia, is to be able to comprehensively analyze all the elements that contribute to the perception of pain and the patient's complaint of pain.

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What Happened to Fran?

Fran started her treatment in April and, in June, she reported being improved.

She went back to work in September.

Fran only has pain at night when she wakes from a dream.

Her marital situation has improved.

FAQ

Is fibromyalgia hormone-dependent?

There is some evidence that hormones have some influence on the muscle membrane in fibromyalgia and there is also evidence that estrogen influences perception of all pains at the spinal cord level.

FAQ

What are the indications for narcotics in fibromyalgia?

Apart from acute short-term management there are no indications for narcotics in the long-term management of this condition. It is to be remembered that tolerance to narcotics develops rapidly and side-effects increase with increased dose.

Fibromyalgia treatment

Figure 1 offers a treatment plan. First, it is important to establish the presence and importance of physical and emotional components. This is quite easily accomplished in the history-taking, asking such questions as, "How does the pain affect your sleep, sexual relations, *etc*.?" Direct questioning about psychologic factors is usually unproductive and often alienates patients.

One should inquire about trigger points, deconditioning and joint stiffness, increased muscle tone and lack of flexibility. Other questions to ask are: What have been your behavioural responses to pain and interventions in the past? What is your degree of awareness and expression of feelings? What have been your lifelong work patterns and early childhood experiences related to these factors?

Once these factors are identified, it is important to offer a program that satisfactorily covers the continuum of soma and psyche and to talk in terms of rehabilitation and return to function, rather than of cure. It is essential to establish a realistic goal and to offer hope and evidence that this goal can be attained; for example, of patients on worker's compensation, absent from work for two years, 63% are able to return to work and 90% are still working at least ten months later.

Practically all patients with fibromyalgia can become fully functional. It is important to stress that this refers to having a balanced life—the aspects of work and play must be properly balanced. Reasonable hours of work (not more than 40 hours per week), learning to set limits and proper pacing, such as taking breaks and using relaxation techniques, are essential. Specific therapy directed at improving awareness of emotions and at helping patients learn how to effectively express these emotions is a fundamental part of treatment.

Patients with fibromyalgia have a reflex to work hard and give service to others. Changing this life-long pattern and reflex is not easy and takes time. The program needs to last at least 10 to 12 weeks long to achieve these changes. If the patient is not working, a progressive return to work and a *thérapie en milieu de travail* is a vital component after the initial phase of treatment.

To improve flexibility, muscle strength and conditioning requires a certain intensity. A frequency of not less than two—preferably three—times per week is essential. Instruction in movement and dance, in conjunction with relaxation techniques, helps with this and starts to make a link between the physical and psychologic components of this problem. A slow, but steadily increasing, rate of physical activity is essential to avoid re-injury and, at the same time, permit the development of a much more accurate body image.

Restoration of phase IV sleep is essential to decrease pain and to improve physical conditioning—low doses of tricyclic antidepressants are excellent for this. Although many antidepressants and anti-anxiety medications have been used for this condition, tricyclics continue to be the mainstay of treatment. Non-steroidal anti-inflammatory drugs (NSAIDs) are very useful for their anti-inflammatory effect. Narcotics should only be used where there is no chance for restoration of function and pain relief and its side-effect of dependency is less worrisome.

Over the course of treatment, the patient's depression is alleviated and their energy improves. Sleep and muscle fibre restoration occurs, permitting an increase in the patient's range of activities and, thus, a better body image. There is improved flexibility, muscle strength and endurance while, at the same time, healthy behaviour replaces illness behaviour, as new ways of behaving are learned and new ways of dealing with relationships and emotions are acquired.

Fibromyalgia prevention

Having dealt with the multiple underlying causes and their interactions, the chances of relapse are greatly decreased because, through treatment, patients are more aware of the physical and psychologic problems that may arise and that may have been acquired. In other words, patients take charge of their body and intervene to prevent redevelopment of the condition. They are more able to ask for help and to depend on others for that help. They have a greater awareness of their emotions and have learnt to deal with them more directly, with less suppression and accumulation of stress. Improving relationships helps self-esteem and depression and reduces stress factors. Developing other personal interests offers satisfaction and an alternative to endless work.

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Myth or reality?...

With increased knowledge and clinical experience, fibromyalgia seems to be more of a reality than a myth. A comprehensive, integrated medico-psychosocial approach to diagnosis and a treatment program based on these principles allows for a better understanding of these patients and their effective treatment.

FAQ

What is the role of trigger point injections?

The idea of trigger point injections is that they will stop the cycle of pain, muscle tension, anxiety, *etc.* Their effectiveness, however, are has never been established in a controlled, double-blind trial. The reason for this is partly because chronic pain states are so multidimensional that it would require an enormous number of patients to be able to establish a trial.