

FIBROMYALGIA SYNDROME: QUEST FOR A TREATMENT OPTION

Fibromyalgia syndrome (FMS) is a chronic musculoskeletal disorder and is currently defined as the presence of both chronic widespread pain (CWP) and tenderness at multiple anatomical sites. Additional characteristics of the disorder include, among others, fatigue, insomnia or nonrefreshing sleep, diffuse stiffness, and other organic and psychological features. Confirmation of clinical diagnosis emphasizes on the presence of tenderness in 11 out of 18 anatomical points. About 20% of individuals with CWP suffer from FMS and they are likely to have higher levels of psychological distress¹. It occurs predominantly in women and affects approximately 2-4% of people in industrialized societies². There is no clear clinical diagnosis for the other 80% of individuals with less than 11/18 tender points, but it is likely that both FMS patients and the latter people have pain that is not due to inflammation or damage of peripheral structures, although both the central hypothesis like sleep disturbance, psychological affection, hypothalamushypophysis-adrenal axis disorder, neuromediator dysregulation, and the peripheral theory like anatomical and/or functional muscle disturbance have been the issues to explain the aetiopathogenesis of FMS³. Therefore, it may be said that FMS still represents an enigma to modern medicine and the aetiopathogenesis is yet to be firmly established⁴. But current day research into FMS led the present day medical fraternity to assume that neurobiological, psychological and behavioural factors can equally cause chronic pain like FMS¹.

Recent evidences from neuroscience research suggest that the adult brain is capable of substantial plastic change in areas like primary somatosensory cortex that were formerly thought to be modifiable only during early experience. These findings have implications for our understanding of chronic pain. Functional reorganization in both the somatosensory and the motor system was observed in neuropathic and musculoskeletal pain. In the case of fibromyalgia

the reorganizational changes are thought to be increased with the development of chronicity. These central alterations may be viewed as pain memories that influence the processing of both painful and nonpainful input to the somatosensory system as well as its effects on the motor system. Cortical plasticity related to chronic pain and consequent maladaptive memory formation can be modified by behavioural interventions that provide feedback to the brain areas that were altered by somatosensory pain memories⁵. Pain amplification that occurs in FMS may be due to increased sensitivity of the pain system².

The most accepted hypothesis regarding its aetiology takes multiple factors like genetic, neurological, muscular and psychological components into consideration. However, about psychogenic aetiology there is yet to be a consensus and therefore diverging hypotheses are proposed. Specific personality traits, traumatic life events, psychodynamic interpretation of depressive conflict are among important psychogenic propositions. Many suggested its inclusion under somatoform disorders⁶. Evidence suggests that psychological factors definitely influence the course of treatment. Behavioural aspects like avoidance behaviour with subsequent physical impairment, attitudes towards subjective theories of illness and therapeutic options play an important role in developing chronicity. Similarly, social factors like effects on work, interpersonal conditioning, and coping strategies may have equal effects in the process⁶.

A randomized intervention study to identify the prognostic factors in the course of fibromyalgia syndrome found that depressed mood at baseline was a significant predictor of sustainability of pain. Therefore, it was suggested that depressed mood should be considered a predictive factor in treatment response⁷. An investigation to determine whether individuals with fibromyalgia who are more physically active differ in various psychosocial characteristics from those who are less active, and

whether those who function better on a daily basis also differ in these characteristics from their less able counterparts demonstrated the importance of physical activity efficacy, pain efficacy, perceived control and health related quality of life to be important predictors of disability due to FMS⁸.

It is evident from previous discussion that actual aetiopathogenesis of FMS are still not very clearly understood and consequently the treatment principally aims at relieving symptoms. Therapeutic options therefore comprise drugs, exercise, educational and psycho-behavioural treatment. An integrated treatment plan combining these options, a sustainable doctor-patient relationship, and a continuous supportive maneuver are likely to be beneficial⁶. The condition responds best to a combination of symptom-based pharmacological therapies, and non-pharmacological therapies such as exercise, education and cognitive behaviour therapy (CBT). In contrast to drugs that work for peripheral pain due to damage or inflammation, neuroactive compounds, especially those that raise central levels of noradrenaline or serotonin are most effective for treating central pain¹. Among pharmacological treatment tricycles antidepressants like amitriptyline and some muscle relaxants like ciclobenzaprime have demonstrated some beneficial effect contrary to the classical antirheumatic drugs like NSAID, corticosteroids³. Such therapy should be initiated only after careful patient information and delineation of therapeutic goals⁴.

Psychological and behavioural treatments are used more frequently now a days to treat patients with fibromyalgia. The rationale for including psychological therapies is not to treat the co-existing mood states, but rather to manage the many non-psychiatric psychosocial factors that comprise pain perception and its maintenance. In biopsychosocial models of illness the commonly used psychological therapy in the management of chronic pain conditions is CBT. The empirical literature supports the use of CBT in FMS and demonstrates a modest outcome across multiple symptom complex including pain, fatigue, physical functioning and mood. More benefits appear to occur when CBT is used adjunctively with exercise. Although the benefits are not curative or universally obtained by all patients, these are considerably accountable to encourage future improvement and development of newer CBT modules for this patient population⁹.

There are pragmatic and theoretical arguments about the application of psychological and behavioural therapies in FMS. It is pragmatic to target obvious and treatable factors including inactivity and depression. A theoretical model in which psychological, physiological and social factors interact offers a plausible rationale for such treatment. Cognitive behaviour therapy indeed offers a pragmatic and rational therapy for patients with FMS. There is evidence for the efficacy of cognitive behaviour therapy and most patients receiving cognitive behaviour therapy improve, especially in terms of functional impairment¹⁰. Controlled trials of various strategies including cognitive behavioural techniques have been reported over the years. Most of the studies showed significant benefits to patients with fibromyalgia¹¹. The results of self-management programme enhancing the self-efficacy and life quality were positive. Patients who are treated intensively for even a short time can continue to improve as they practice non-drug treatment strategies¹¹.

A recent study evaluating the association between treatment process variables and treatment outcome at the end of a 4-week multi-disciplinary treatment programme and also after 3- and 6- month follow ups by multiple regression analysis indicated that the outcomes were most closely related to therapeutic targets consistent with cognitive behavioural model of fibromyalgia. The factors that showed overt relationship to therapeutic outcome were an increased sense of control over pain, belief of not being disabled and the pain is not a sign of damage, decreased guarding, increased use of exercise, seeking support from others, activity pacing and use of coping self statements¹². Another prospective randomized controlled clinical trial to see the effectiveness of an attention distracting and attention focusing guided imagery on fibromyalgic pain showed pleasant imagery has a significant therapeutic effect on fibromyalgic pain¹³.

There is high rates of complementary and alternative medicine use in fibromyalgia, but empirical research data support the use of only three: mind-body, acupuncture, and manipulative therapies. The strongest data exist for the use of mind-body techniques like CBT, biofeedback, hypnosis, particularly when utilized as part of a multi-disciplinary treatment approach. Although there are evidence that acupuncture may at times exacerbate

the symptoms, the data supporting the use of acupuncture for fibromyalgia are moderately strong and only very weak evidence is available in favour of manipulative therapies like massage¹⁴.

A firm theoretical basis for patient education in chronic pain disorders has been built up over the past 25 years. Education in self-management has enabled patients to control symptoms and contribute in their own care along with their health providers. Education for fibromyalgia patients in particular has come to the foreground during the last 15 years as health professionals have come to understand the syndrome better and recognized the role of psychological stresses in the exacerbation of symptoms. Management of simple fibromyalgia involves education regarding the nature of the problem, an exercise programme and advice on stress management. However, management needs to be flexible and holistic, and may involve relaxation programmes and physical therapies².

The functional prognosis of FMS is usually favourable with a comprehensive supportive programme although some degree symptoms tends to persist and may only inadequately respond to treatment. FMS patients' work capacity cannot be established by mere diagnosis; individual impairments have to be taken into account: Clinical, psychosocial and behavioural dimensions have to be considered¹⁵.

In conclusion, it may be said that the importance of approaching the patients of FMS from a holistic and multidisciplinary viewpoint paying attention to the physical, emotional, spiritual and behavioural components of the syndrome is necessary. It is important that pain, tissue dysfunction and disability from pain are all separate issues and should be approached as such. Treatment in all cases should be individualized and comprehensive. Drug therapy, if chosen, should be administered in combination with physical treatment and CBT. Because of the appearing contours of pathogenic mechanisms, hopefully a number of new drugs will be available to the patients with this complex pain syndrome in the near future⁴. However, in any case the treatment programmes should not be geared to pain relief alone but rather to restore individuals to functional lifestyles and to promote both physical and emotional flexibility, balance and 'wellness'. It is often necessary to involve the family unit as an inherent and critical part of the treatment team, particularly with the patient who continues to be dysfunctional despite apparently appropriate treatment¹⁶. Although treatment always

starts at the tissue level, a good treatment programme must always be holistic in nature and should treat the patient as a whole, and her or his environment.

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