

How important are the psychological aspects in fibromyalgic syndrome?

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Received on December 6, 2010; accepted on December 7, 2010.

Clin Exp Rheumatol 2010; 28 (Suppl. 63): S3-S6.

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EXPERIMENTAL RHEUMATOLOGY 2010.

Key words: psychological aspects, fibromyalgia

Fibromyalgia (FM) is a severe chronic disease characterised by diffused pain and hyperalgesia. Frequently, other disorders such as insomnia and fatigue are associated with the pain. There are many studies in the literature on fibromyalgia, however, the psychological and somatic factors related to the cause and the prognosis of the disease are still mostly unknown.

Although increasing research has been devoted to FM, the pathophysiologic mechanisms underlying this condition are still poorly understood, but most probably include complex and interrelated disturbances of the neurobiological stress system (*i.e.* the HPA axis, sympathetic nervous system, and different brain neurotransmitters). Some authors have suggested that alterations of the autonomic nervous system can be responsible for the onset of the fibromyalgic syndrome (1-3). Conversely, other authors have emphasised the role of stress (both physical and psychological) and they have shown how the hypothalamus-pituitary-adrenal axis perturbing the autonomic nervous system could cause the symptoms of fibromyalgia and the emotional discomfort associated with it (4-7). Further, vulnerability to this dysregulation may be genetically based in interaction with early life experiences and, particularly, childhood trauma (8-10).

From a psychological point of view, interactions between the psychological and somatic processes have represented one of the most important issues in psychoanalysis since its beginning (11, 12). If, in the past, the connection between emotions and somatic diseases was not well documented, but nowadays it is accepted in the medical field. Already in 1987, Solomon (13) sustained that many somatic diseases are multi-factorial and bio-psychosocial,

both for their cause and their prognosis. Particularly for physical pain, a crucial moment for the acceptance of psychology as an important discipline related to this topic was in 1965, the year of the publications of the "Gate Control Theory" by Melzack and Wall. They suggested how cognitive functions such as attention, suggestion and anxiety could influence perception of pain, acting as activators or inhibitors. According to the Gate Control Theory, emotions and mental activities can modulate pain through their capabilities to act on sensorial processes and/or on the motivation mechanisms (14).

In the last decade, the presence of the Italian Society of PsychoNeuroEndocrinology (SIPNEI), in part inspired by the principles of the theory of the Complex Systems, suggested considering the "person-affected-by" as a network in temporary disequilibrium and studying how to re-equilibrate his conditions. The word network is used in medicine to indicate the complexity of the interconnections both physical and psychological that characterise the human being. Every person is a network, a system composed of elements that, at different levels, interact in a complex and dynamic way. Thus, we have the development of a new concept of the person as a "system" and the disease itself as a "systemic" event. The concept of network underlines the importance of all the components (psyche, nervous system, endocrine system, immune system and others) that make up the individual. They are strongly interconnected, interrelated and each of them can influence the others. The systems that form the network, through a constant process of communication and regulation, try to find the balance for the individual. As Bateson says, "the map is not the territory" and the real-

Competing interests: none declared.

ity of the human being is not merely its representation.

In this editorial, we have focused on the most recent studies on the psychological aspects and consequences related to the fibromyalgic syndrome. Even if it is known that psychological factors are implicated in the perception of the symptoms and in the adaptation to the pathology, only recent studies have been able to underline which factors really have a predominant role.

Some potentially relevant predisposing personality factors to fibromyalgia have been reported, such as negative affectivity or neuroticism (15) and alexithymia (16-17), although findings concerning the latter characteristic remain inconclusive.

The attachment style is a concept elaborated by Bowlby (18). It refers to the modality of interaction with the "others", to the self-perception and the perception of the other people. The same concept was taken up again by Psychology of Health which emphasised the important role of mediation in the adhering to treatment of organic pathologies. Govender and colleagues (19) have reported how fibromyalgic patients characterised by an insecure style of attachment showed greater levels of depression compared those with a secure style. According to the authors, this would appear to be due to the fact that an insecure attachment style renders patients more inclined to consider themselves and others negatively and is thus associated with greater difficulties in internal regulation of affection and emotions, consequently leaving patients more vulnerable to psychological distress.

Regarding alexithymia, that is, the deficiency in understanding, processing, or describing one's own feelings and emotions and those of others, is a feature that can be found in many subjects affected by chronic disease (20). The emotions have a very important role in the equilibrium of a person and, particularly, in order to have access to the patient affected by alexithymia we have to take into consideration the reduced capacity of his emotional feelings. Alexithymia can be considered as a wider aspect of the theoretical assumption of self-regu-

lation, that refers to the autonomous functioning of the subjects that can be found both in biological and mental behaviour (21, 22). While some authors have not found any significant association between alexithymia and FM (23), more recent studies have pointed out the possibility of there being a connection. Sayar, Gulec and Topbas (24) identified the alexithymic characteristic that distinguished fibromyalgic patients from those with rheumatoid arthritis in the difficulty of the patients in identifying their sentiments. Pedrosa and colleagues (25) reported a clinically significant prevalence of alexithymia in 15% of the fibromyalgic subjects studied. In a larger study, van Middendorp and colleagues (26) found marked difficulties in identifying sentiments in women with FM, associated moreover with a greater presence of negative emotions and more accentuated use of coping strategies of avoidance compared to the healthy controls. Patients affected by alexithymia might have an avoidant personality character (27) and tend to have less empathy (28).

The so-called pain catastrophising is a somewhat recent construct and is used to define the tendency to catastrophise the experience of pain. Currently it is considered a key personality characteristic of the FM (29), precisely because it is prone to chronicity. By increasing anxiety and anger, the catastrophisation of the experience of pain stimulates the neural system, thus fostering greater sensitivity to pain (30) and thereby magnifying the perception of it on the part of the patient (31). The tendency to catastrophise is therefore considered an important risk factor for pain in general, and above all for fibromyalgia (32). It is often associated with a marked difficulty in understanding fibromyalgic symptoms and this distortion in relation to the perception of the illness worsens the emotional adaptation and hence quality of life (33).

Coping strategies, or rather the set of psychological processes that we enact in the face of critical and emotionally demanding situations, are considered among the principal mediators of the adaptation of the patient to his/her own pathology. Coping, in fact, has

an important role in the capacity to undertake adaptive behaviour and to learn and use new strategies to better deal with problems, so much so as to be implemented even in the most general type of psychosocial functioning. In a recent study carried out by Wilson, Robinson and Turk (34) on fibromyalgic patients, greater difficulties in coping and greater use of healthcare were found in the groups of patients who presented higher severity of muscular-skeletal, non-muscular-skeletal and psychic symptoms. Moreover, McParland and Knussen (35) point out how the adaptation to this type of pathology also notably influences the well-being of the individual.

From a psychopathological point of view, mood disorders are frequently found in patients with chronic diseases such as FM (36, 37). This comorbidity has important consequences in the workplace and in relationships, and is often associated with a worsening of general state of health and higher risk of suicide (37). Ciapparelli and colleagues (38) found that psychic disorders are very frequent in patients with FM and that this comorbidity contributes to a further worsening of the quality of life of these patients. Carta and colleagues (39) had previously reported that subjects with fibromyalgia showed greater comorbidity with major depressive disorder, generalised anxiety disorder and panic disorder compared with the healthy controls. Thus also anxiety disorders are frequently associated with fibromyalgia (40). Furthermore, it should be taken into account that fibromyalgic symptoms and mood and/or anxiety disorders affect each other reciprocally, often triggering a sort of spiral in which physical pain and emotional adaptation are mutually influenced by each other to the point of generating particularly prominent states of suffering. Even when the psychological suffering is not so marked as to meet the criteria for a full disorder, the psychological well-being (understood as subjective perception of the quality of life) of patients affected with fibromyalgia is particularly impaired for the chronicity and interference of the fibromyalgic symptoms in normal

daily activities (41). In this regard, one of us (42) reported high rates of lifetime manic spectrum symptoms, detected by means of a specific instrument such as the MOODS-SR lifetime version (43), amongst patients with fibromyalgia. Furthermore, these symptoms resulted to be related to the severity of pain and to a worsening of the quality of life.

Many authors have emphasised how the suffering associated with this pathology has obvious consequences precisely on the quality of life of the person affected (44, 45), but not only. Also the fact that the psychological distress reverberates negatively on adherence to treatment when it becomes excessive should not be underestimated (46).

To sum up, from the literature currently available it emerges that factors of a psychological nature such as style of attachment, alexithymia, tendency to catastrophise the experience of pain, anxiety and depression are all involved in the development of different ways of adaptation to the illness or of experience itself of the pain and symptoms associated with it. Nevertheless, further research is needed which may enable us to identify the effective role these factors have in the adaptation to the illness or in the perception of pain, but it is also necessary to study the methods of interaction between these factors and between these last and those which are more typically "clinical".

In our opinion, is possible to hypothesize that fibromyalgia is a disorder of the whole subject, including both physical and psychological aspects, with a particular deficit in processing emotions.

The first step in drawing up individualised treatment programmes targeted at helping the patient to actively live with chronicity and acquire a responsible role in the treatment of his/her own illness is the integration of knowledge from different disciplines. The importance of taking a subjective view and considering the psychical implications involved must in fact not be underestimated (38), not least because this omission leaves the state of psychological suffering of the patients without assistance, but above all because the psychic distress interferes negatively in the course of the

therapy undertaken and thus increases the risk of aggravation, with economic and social damage as a result that can be considerable. The psychological aspects of FM patients are peculiar. The psychological profile can help the practitioner in the diagnosis. The physician who takes care of fibromyalgia patients should know the psychological aspects of this illness, in order to assume a correct approach and to improve patients' adherence to the therapy. As such, integrating different disciplines is fundamental for a better understanding of the fibromyalgic syndrome – to be considered, in our opinion, as one of the possible pathological manifestations of that subjectivity that originates from the so variegated and complex system that is the human being.

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