

Evaluation of Depression in Women Affected by Fibromyalgia Syndrome

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Abstract

Objective: In this paper, we explored the association between the clinical course of Fibromyalgia Syndrome (FMS) and patient's response to emotional stress in terms of depression.

Method: All participants (n=57 women with Fibromyalgia Syndrome (FMS); control group (203 healthy women) underwent the following tests: IPAT- CDQ-depression.

Results: Patients with FMS presented medium to high levels of depression ($p < 0.001$) as expected.

Conclusion: Patients show medium to high of depression Further studies are necessary especially on depressive symptoms, quality of life, to better understand the difficulty of adaptation during the course of the disease.

Keywords: Depression; Fibromyalgia syndrome

Introduction

Fibromyalgia syndrome (FMS) is a common form of widespread musculoskeletal pain and fatigue (asthenia), in at least 11 of the 18 points defined painfully, associated with sleeping disturbances, decreased physical functions, depression and deterioration of quality of life [1-3]. FMS affects 3 to 5 percent of the general population, approximately 1.5, 2 million Italians of all ages, (especially in middle age women). The etiology of this Syndrome remains unknown. The main expression of this disease is the chronic pain, in fact fibromyalgia is associated with high level of pain and suffering [4,5]. This pain causes problems about sleeping and fatigue, and a state of stress in a vicious cycle leading to greater sensitivity to pain [1-7]. The higher levels of disability in fibromyalgia can be explained by psychological distress [8,9]. The depressive symptoms impair the quality of life of patients with FM [4,8] by increasing the sensation of pain and the perception of functional disability.

The bio-psycho-social model looks at the [10,11] illness through the co-presence of various factors associated with greater or lesser strength in the individual [12,13]. Stress, anxiety, depression, beliefs and cultural meanings attributed to pain, personal strategies in response to pain (active, or passive), degree of self-esteem, mood, situations of fear-frustration are all important situations in the individual affected by Fibromyalgia [14-16]. About 34.8% of fibromyalgia patients have a mood disorder, especially of a depressive type. In addition, these negative emotions can increase or amplify pain [3,5,6,10]. Chronic pain increases the risk of a comorbidity like anxiety and depression disorder [9-13].

The presence of depressive symptoms is related to inadequate coping with stress [14-16]. Fibromyalgia patients show a high amount of maladaptive coping strategies and a reduction of positive emotions as well as a tendency to internalize and suppress anger [10,14,16]. Moreover, some psychological variables related to the inability to cope, such as catastrophic thoughts [8], external locus of control, a low sense of self-efficacy, and feelings of helplessness are also present [10]. Many studies have shown that women with fibromyalgia syndrome showed significantly more difficulty in identifying and describing feelings, but less externally oriented thinking than healthy women [14-16]. In the clinical group, difficulty in identifying feelings and difficulty in describing feelings significantly correlated with lower sleep quality, higher anxiety and depression, and increased pain catastrophizing and fear of pain [8,16]. Psychological conditions like anxiety and depressed mood are both partly determined by personality [17-20]. Several studies have shown that dysfunctional attitudes and sociotropy, but seldom autonomy, are salient in depressed patients, although it is unclear whether these cognitions are related to depressive disorder, syndrome depression or psychiatric disorder in general [19,20]. The understanding of the emotional variables involved in fibromyalgia is important to define the therapeutic strategy [21-31]. On the basis of these considerations it is important to assess depression of patients with FMS. The specific aim of our study was to establish whether a difference existed in the prevalence of depression of women with and without FMS. Screening for depression may constitute a means for planning a psychotherapeutic intervention designed to facilitate the adaptation to the disease condition.

Materials and Methods

Study population. Fifty seven women (age range: 40 to 70 years old) with diagnosed Fibromyalgia Syndrome who met American College of Rheumatology criteria for fibromyalgia (ACR) [32,33] (inclusion criteria), volunteered to participate in study protocol out of a total of one hundred and three. After completing this initial medical examination they were referred to the investigator. Selection criteria included: age (35-65 years); diagnosis for Fibromyalgia Syndrome (from 1 to 11 years) [33]. Patients were excluded if: they refused to participate; were unable to provide informed consent; had other forms of disease (cancer, cardiovascular disease, diabetes and other chronic diseases); were using any type of psychotropic drugs (including antidepressants). Age and demographic data including marital status and educational levels were collected. The case group show a medium age of 54.49 years with a medium-low educational level and tendency married (Table 1).

The control group was composed of two hundreds and three healthy women based on the same independent variables of the case group (age, civil status and educational level). Both groups, case and control, were homogeneous for age, marital status and cultural level (Table 1). All participants signed a consensus form regarding study protocol after detailed explanation by the physician at the Clinic.

	Fibromyalgia subjects group (N=57, 21.92%)	Healthy subjects group (N=203, 78.08%)
Age		
Media	55.65	47.46
Mediana	55	49
Moda	55	52
Dev. Stand.	10.47	9.716
Civil Status		
Single	78.20%	20.40%
Married	10.90%	64.20%
Divorced	5.50%	5.50%
Widow	5.50%	10.40%
Educational level		
Literate	32.70%	3.00%
Elementary	23.60%	18.20%
Middle school	30.90%	49.30%
High school	12.70%	29.10%
University	0.00%	0.50%

Table 1: Descriptive Statistics of fibromyalgia and healthy subjects.

One hundred and two patients were approached in the clinic by the physician and asked to participate in the study. Only seventy-seven decided to participate and to fill out and sign the consent form.

The patients were free to complete the questionnaire either in the clinic or at home. Patients who decided to complete forms at home

were given a self-addressed, stamped 5 envelope to return the forms. Twenty patients didn't answer all the questions in the questionnaires: it was therefore decided not to consider them for the analysis.

All the subjects studied completed the following questionnaires:

- Social schedule, including data on gender, age, marital status, educational level, profession.
- IPAT-CDQ Tests by Cattell [34,35] have been used as methods of self-report which describe depression. This test describes the actual experience of the subjects examined. The test has the appropriate reliability and validity to evaluate depression the range is subdivided as follows: 0-3 indicates absence of depression; 4-7 indicates medium to medium-high level of depression; 8-10 indicates a high level of depression.

Statistical analysis

The data were analyzed using SPSS 21 (SPSS Inc. Chicago, Illinois). Variance analysis (ANOVA) was applied to evaluate if there are significant differences between the two groups of subjects (case and control groups) on the CDQ test.

The maximum significant level considered in this study was 0.05. To achieve an internal consistency of 0.80 and a medium effect size, a sample greater than 50 was required to detect a significant model.

Results

CDQ- Depression - Differences between FS Group and healthy subjects. The results show a significant difference between the two groups of patients (affected by FMS and healthy subjects) for the test CDQ describing depression ($F=110.702$, $p<0.001$) as expected.

The case group presented a medium-high score in depression (mean value = 7.67) scale. The range of scores reached by the control group was medium-low (Tab.1). The FMS patients show higher level of depression than control group. This result means the FMS patients show serious depression (medium-high level- CDQ) while the healthy subjects show medium-low levels of depression (CDQ). These levels indicate the relevant issues and a minor depression.

Discussion

From the results it emerges that the patients affected by Fibromyalgia Syndrome show levels of depression so high to indicate the presence of serious psychological problems. Such result suggests some considerations. These results are in agreement with different studies in particular the following:

These patients's depression level can be traced to the patient's condition and pain. Many studies have shown that chronic pain creates a decline in mood and leads to a real state of depression [23]. Another question that arises is whether the repeated pain can affect mood states or is the depression to influence in this sense. Probably both are true positions in a vicious circle of mutual influence [22]. In fact depression may be related to physical control and to tighten the muscles [3,8,10]

This consideration is based on the assumption that the vicious circle of pain includes muscle stiffening. The FMS patients with level of depression so high may have problems of disease management.

This consideration may be important for different reasons in particular the following: depression may hamper adaptation to the disease condition and to the medical treatment.

Some authors affirm that patients with FMS tended to have an increased risk for depressive symptoms and tended to have more unhappy and discontented feelings [13].

Other authors affirm that the psychological situations may represent a risk factor for the development of fibromyalgia considering its real presence in a good number of patients even if in some patients may also be a consequence of the disease [17,18].

Moreover no association was found between depression, history of psychiatric symptoms and increased FMS risk [15,19]. However, personality disorders are rarely diagnosed in Fibromyalgia Syndrome [10,11,24]. So further studies are necessary in this field.

Conclusion

In conclusion this study raises the following questions:

- The presence of high level of depression may be markers of patients with a bad adaptation to the disease conditions?
- Screening of depression in patients suffering from fibromyalgia may be used in programming a psychotherapeutic holistic intervention (for example with mindfulness therapy) [25,29,31] aimed at achieving a good quality of life?

Further studies may demonstrate which psychological factors (also considering for example the patient's personality-intrapsychic processes) [18,20] may be linked to depression.

To study depressive symptoms, and their link to personality [17,18] and quality of life, may allow to better understand the difficulty of adaptation during the course of the disease.

Despite of the limitation of the small sample studied significant difference in depression in FMS patients emerged. The results of this study may help proper further researches.

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