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Fibromyalgia: proposal of a clinical diary for the qualitative and quantitative assessment of pain

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Keypoints

The adoption of a clinical diary in fibromyalgia syndrome allows for a more objective assessment of pain, helping to reduce psychological, social, and memory-related interferences.

Abstract

Fibromyalgia is characterized by chronic, widespread musculoskeletal pain and is often associated with asthenia, sleep disturbances, cognitive difficulties (e.g., impaired attention and memory), psychiatric comorbidities (e.g., anxiety and depression), and a wide range of somatic and neurovegetative symptoms.

The use of a clinical diary, preferably completed on a daily basis, allows for a more objective and systematic collection of data related to pain symptomatology.

Relying solely on verbal anamnesis may be substantially biased by the patient's psychological and emotional state at the time of assessment, as well as by limitations in memory recall.

Keywords

Fibromyalgia, pain, cronic pain, clinical diary, anamnesis fibromyalgia pain, fibromyalgia syndrome.

Introduction[1-16]

Fibromyalgia is characterized by chronic, widespread musculoskeletal pain, often associated with asthenia, sleep disturbances, cognitive difficulties (e.g., attention and memory deficits), psychiatric symptoms (e.g., anxiety and depression), and a wide range of somatic and autonomic symptoms. Although fibromyalgia is a clinical condition known since antiquity (already described by Hippocrates), it has only recently received a scientific definition and formal recognition. International scientific interest and public awareness of fibromyalgia have increased exponentially over the past decades.

Etiopathogenesis

The etiology of the syndrome has not yet been fully understood, and uncertainty remains regarding its pathophysiological mechanisms. The prevailing etiopathogenetic hypothesis involves the process of central sensitization of pain, dysregulation of pain control mechanisms by the central nervous system, and a reduced capacity for pain modulation through descending pathways.

Fibromyalgia can be classified as primary or secondary, the latter being associated with other conditions. A key feature of primary fibromyalgia is that the pain is not attributable to the presence of another rheumatic and/or systemic disease.

Epidemiology

At the international level, the prevalence of fibromyalgia is estimated to range between 2–3% and 8%, with an incidence of 7-11 new cases per 1,000 people per year. Fibromyalgia is more common in women than in men and can develop at any age.

In Italy, several estimates of fibromyalgia prevalence are available; according to Branco et al. (2010), it affects 3.7% of the general population aged 15 years and older.

Between 10% and 30% of individuals with fibromyalgia report being unable to work, a proportion higher than that observed in other groups of people with chronic pain.

Diagnosis

The international scientific literature agrees that the diagnosis of fibromyalgia should be based on characteristic symptoms, specific diagnostic criteria, and the exclusion of other possible conditions. The symptomatology of fibromyalgia can fluctuate over time and even from day to day, both in terms of symptom type and severity; moreover, no specific symptom pattern can be identified at disease onset. For at least 50% of patients, symptoms have a “very” or “extremely” negative impact on quality of life.

According to the scientific literature, the essential symptoms for diagnosing fibromyalgia are pain, fatigue, sleep disturbances, and cognitive impairments.

Pain is chronic and widespread, often described as burning, stabbing, pulling, itching, compressive, or muscular-tension type. Its intensity and characteristics can vary depending on the time of day, activity levels, weather conditions, stress, and sleep patterns.

Fatigue is reported in approximately 90% of cases, with reduced endurance even during minimal exertion.

Sleep disturbances are common and include frequent nighttime awakenings and non-restorative sleep, resulting in easy fatigability and a persistent feeling of unrefreshing rest.

Cognitive impairments (“fibro-fog”) affect the majority of patients and involve difficulties in concentrating on work or study tasks, as well as short-term memory deficits.

The characteristic symptomatology of fibromyalgia is assessed using the Fibromyalgia Severity Scale (also known as the Polysymptomatic Distress Scale), with the final score obtained by summing the scores of the Widespread Pain Index (WPI) and the Symptom Severity Scale (SSS).

Fibromyalgia is not associated with laboratory or instrumental (e.g., radiographic) abnormalities. The main conditions to consider in the differential diagnosis include rheumatoid arthritis, systemic lupus erythematosus, polymyalgia rheumatica, polymyositis, spondyloarthritis, hypo- or hyperparathyroidism, and neuropathies.

Treatment

The treatment of fibromyalgia is primarily aimed at reducing or alleviating the severity of its characteristic symptoms, including chronic widespread pain, fatigue, sleep disturbances, and cognitive impairments.

Analysis

The data were collected from 45 female patients aged 15 to 45 years with a confirmed diagnosis of primary fibromyalgia.

The patients, who were being treated at Pain Management Outpatient Clinic, were receiving both pharmacological and non-pharmacological therapies, including physical activity, nutritional therapy, and psychological support.

At the initial assessment, each patient was provided with a 30-day clinical diary in which to record the daily qualitative and quantitative characteristics of their pain syndrome.

The parameters evaluated included the main pain locations (up to three), maximum pain intensity (using the NRS scale), qualitative characteristics of the pain (e.g., burning, stabbing, cramp-like), presence of nocturnal

pain, the impact of pain on daily quality of life (rated as strongly negative, negative, or acceptable), and the impact of pain on work and social functioning (rated as strongly negative, negative, or acceptable).

After 30 days, the patients, who had continued their ongoing therapy, were reassessed. The physician conducted a detailed verbal anamnesis regarding the course of the pain, evaluating the same parameters recorded in the diaries. Only after completing the verbal assessment were the patients' clinical diaries reviewed, in order to avoid any potential influence on the anamnesis.

Discussion

60% of the patients (27 individuals) verbally reported a higher pain intensity during the anamnesis compared to the data recorded in their clinical diaries over the preceding 30 days.

Specifically, 40% (18 patients) reported an average pain level classified as severe (NRS 7–10), whereas their diaries indicated a moderate average pain level (NRS 4–6). Additionally, 20% (9 patients) reported an average pain level classified as moderate (NRS 4–6), while their diaries recorded a mild average pain level (NRS 1–3) (Table 1).

N. PATIENTS (Total 45)	VERBAL ANAMNESIS	CLINICAL DIARY
18 (40%)	NRS 7-10	NRS 4-6
9 (20%)	NRS 4-6	NRS 1-3

Table 1. Patients that showed NRS variations between the clinical diary and the verbal anamnesis

69% of patients (31 individuals) verbally reported a greater impact of pain on quality of life during the anamnesis compared to the data recorded in their clinical diaries over the previous 30 days. Specifically, 40% (18 patients) reported an average impact as strongly negative, whereas their diaries indicated an average negative impact. Additionally, 29% (13 patients) reported an average impact as negative, while their diaries recorded an average impact as acceptable (Table 2).

N. PATIENTS (Total 45)	VERBAL ANAMNESIS	CLINICAL DIARY
18 (40%)	Strongly negative	Negative
13 (29%)	Negative	Acceptable

Table 2. Patients that showed variations on perceptionof quality of life between the clinical diary and the verbal anamnesis.

No substantial differences were identified between verbal anamnesis and the clinical diary regarding the qualitative characteristics of pain, its locations, or the presence of nocturnal pain.

Pain is defined as an "unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage". It is a personal experience influenced at multiple levels by biological, psychological, and social factors.

The main differences between verbal anamnesis and the clinical diary were related to average pain intensity and its impact on quality of life and on work and social functioning. This finding highlights the strong association between pain and psychological and social factors.

The use of a written clinical diary allows for a more objective collection of information regarding both the qualitative and quantitative aspects of pain, as well as its impact on quality of life and work and social functioning. Relying solely on verbal anamnesis may be substantially biased by the patient's psychological and emotional state at the time of the interview, as well as by memory limitations. The adoption of a diary also provides much more detailed information.

Conclusion

The use of a clinical diary, preferably completed on a daily basis, allows for a more objective collection of data. Emotional impact, social context, and psychological factors can strongly influence pain perception and the way

patients report or describe their symptoms to the physician.

Additionally, the use of a written diary can help prevent potential distortions in the clinical report that may arise from memory limitations or inaccurate or reconstructed recollections.

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