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Non-pharmacological Therapy in Fibromyalgia

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Abstract

Fibromyalgia (FM) is a syndrome manifested by chronic, generalized muscle and joint pain and symptoms such as sleep problems, mental disorders, mainly depression, which significantly reduces the patients' quality of life. The etiology, pathogenesis, and pathomechanism of symptoms in FM are still not fully understood, which makes the therapeutic options unsatisfactory. Treatment is mainly based on relieving the symptoms of the disease and is based on both pharmacological and non-pharmacological treatments. It seems that the best results are achieved by a combination of cooperation between a rheumatologist, psychiatrist, psychologist and physiotherapist.

The aim of the study is to present the current state of knowledge about the possibilities of non-pharmacological treatment in people with fibromyalgia

Standard criteria were used to review the literature data. The search of articles in the PubMed and Google Scholar database was carried out using the following keywords: fibromyalgia, chronic pain, non-pharmacological therapy in fibromyalgia

Key words: fibromyalgia, chronic pain, non- pharmacological therapy

INTRODUCTION

Fibromyalgia is a chronic and distressing pain syndrome that affects millions of people around the world, especially women. The disease is rarely diagnosed in children, it mainly affects adults [1]. On a global scale, this problem affects 0.2% to 6.6% of the population [2]. The symptoms of FM are very diverse and changeable depending on the patient. They depend on exogenous stress factors such as noise, smells, injuries, psychosocial factors or cold, and on endogenous factors such as infections, endocrine disorders, psychiatric diseases, connective tissue diseases or neurological diseases. One of the diagnosis criteria is the characteristic soreness at typical points of a specific location, the so-called "tender points" [3], which correspond to the tendon attachment sites or their course.

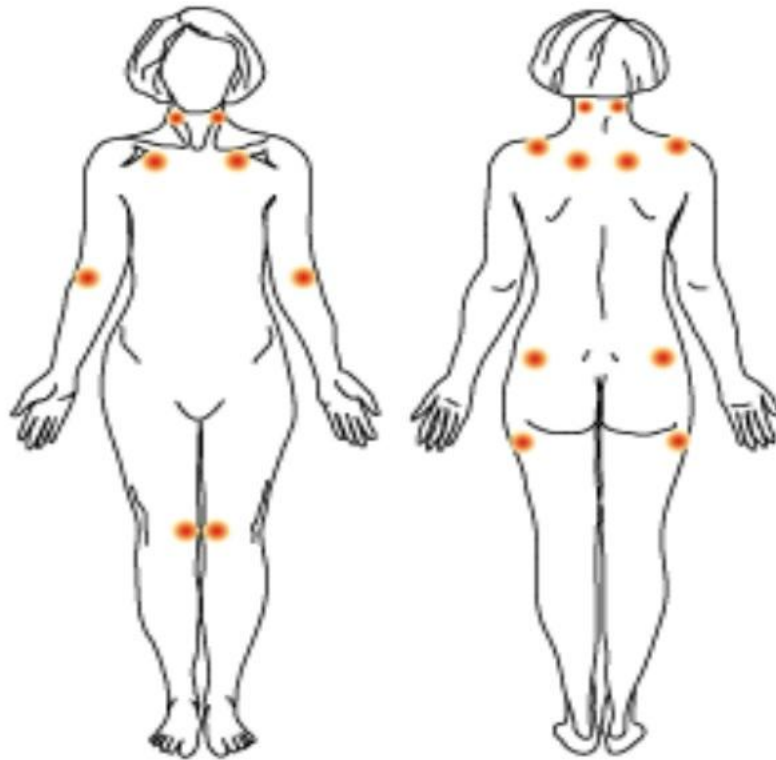


Figure 1. The location of the typical painful points in fibromyalgia established by the American College of Rheumatology [4]

Other symptoms of the disease include fatigue, sleep disturbances with prolonged latency phase, morning stiffness, gastrointestinal disorders including irritable bowel syndrome, headaches (migraine), dysuria symptoms such as pollakiuria and night urination, cold hands feeling or feet, dry mouth, excessive sweating, dizziness, sensation of a foreign body in the throat, irregular heartbeat sensation, periodic dyspnoea, paraesthesia [5]. Symptoms of anxiety and depression also occur in a significant proportion of people affected by FM [6]. These symptoms may be due to chronic pain and distress that are not reflected in laboratory test results. No additional tests reveal any abnormalities that could explain the characteristic complaints of patients with FM. Chronic pain also affects the biochemistry and blood circulation of the brain. As the disease progresses, this can lead to loss of neurons in the cerebral cortex and thalamus. This has a direct impact on the spread of mental and emotional disorders, family and partner problems, and the development of cognitive disorders in patients with FM [7].

AIM OF THE STUDY

The aim of the study is to present the current state of knowledge about the possibilities of non-pharmacological treatment in people with fibromyalgia

MATERIAL AND METHODS

Standard criteria were used to review the literature data. The search of articles in the PubMed and Google Scholar database was carried out using the following keywords: fibromyalgia, chronic pain, non-pharmacological therapy in fibromyalgia

DESCRIPTION OF THE STATE OF KNOWLEDGE

Due to such a diverse and complex clinical picture of FM, and the lack of tests that can definitively recognize the disease, the diagnosis and treatment of FM are very complex. Until now, curing the disease is unattainable for modern medicine. Only symptomatic treatment is possible, aimed at alleviating pain and improving the quality of life of patients. Treatment consists of a holistic and comprehensive approach to the disease and a combination of pharmacological and non-pharmacological methods such as physiotherapy, hydrotherapy, cognitive behavioral psychotherapy or at least psychoeducation of patients and their families about the disease [8, 9, 10].

Psychoeducation can allow patients to learn to set realistic expectations for the rest of the treatment for their disease, and it can help them learn to cope with the stresses of the disease. According to some sources and studies, acupuncture and dry needling seem to be also effective [11]. While one review concluded that there was moderate evidence for the effectiveness of acupuncture [12], the other found that the evidence for acupuncture in the treatment of FMS was mixed [13].

Psychotherapy.

In the treatment of FM, psychotherapy is one of the most effective methods of therapy immediately after physiotherapy and pharmacotherapy. The most common form of psychotherapy used in this disease entity is cognitive behavioral therapy. It is important that the therapy is carried out by a well-qualified and experienced specialist [14]. In a systematic review of the psychotherapy of physical pain in patients with fibromyalgia, developed by L. Gomez-de-Regil and D. F. Estrella-Castillo and published in 2020. According to this study, the most common form of therapy turned out to be cognitive behavioral therapy (CBT) [15]. Lami et al. Demonstrated that CBT resulted in a significant improvement in the quality of sleep and reduced pain intensity in patients [16]. The conclusions of this systematic review showed that the results were inconsistent. Most patients experienced an improvement in pain, but the improvement was not always permanent or significant. Differences in outcomes may be caused by different psychotherapeutic approaches, assessment tools and other variables, such as, for example, different psychiatric symptoms, patient compliance in compliance with treatment, patient involvement in the therapeutic process, different personality traits of the respondents or various external factors such as family and relatives support in therapy. [15]

Physiotherapy.

Physiotherapeutic techniques used in this group of patients include massage, kinesiotherapy, electrotherapy, hydrotherapy and therapeutic exercises (TE) [17]. Therapeutic exercise includes activities such as postural stabilization, gait training, coordination training, muscle-strengthening exercises, and relaxation techniques [18]. The purpose of TE is to prevent muscle weakness, improve coordination and balance, improve aerobic immunity and thus slow the deterioration of the patient's quality of life [17, 19].

Therapeutic exercise appears to have positive effects, but studies do not specify the type and duration of any particular physical activity that would have more beneficial effects than other activities [20].

According to a systematic review and meta-analysis of randomized clinical trials conducted by M. Dolores Sosa-Rein, S. Nunez-Nagy, T. Gallego-Izquierdo, D. Pecos-Martín, J. Monserrat, M. Álvarez-pon published in 2017, a conclusion was obtained that that exercise is beneficial for patients with FM, but it has not been established which activity is most effective. The authors of the review suggest that aerobic exercise combined with stretching improves

HRQOL, while aerobic exercise combined with increasing muscle strength is effective in reducing pain.

It has also been suggested that combined exercise is one of the most effective ways to alleviate depressive symptoms [17].

Hydrotherapy.

In addition to exercising on land, exercise in an aquatic environment is also recommended in the treatment of FM. Due to its hydrodynamic properties, water is a very good environment for relieving, aerobic and relaxing exercises. Hydrotherapy helps to strengthen the muscles and their relaxation. It also improves venous return and a slight improvement in the proper functioning of the joints. [9, 23]

This type of therapy can be combined with other methods, such as electro-water baths, which allows for better results in the treatment of FM symptoms. Hydrotherapy can take various forms, such as baths in thermal, artificial and natural pools, but also baths in sea water, i.e. thalassotherapy [21, 22].

Hydrotherapy used in people with FM did not significantly improve depression symptoms and the number of tender points. However, hydrotherapy showed evidence of a slight reduction in pain and thus further improvement in the functioning of patients with FM. [24]

SUMMARY

FM therapy is extremely difficult and causes many problems for both patients and doctors. Based on the above-mentioned studies, it can be concluded that the greatest benefits in the treatment of fibromyalgia come from a holistic approach to the disease and its treatment. The best results in terms of improving the well-being of patients and alleviating pain symptoms are achieved by a combination of pharmacological and non-pharmacological therapy, including in physiotherapy, psychotherapy and psychoeducation of the patient and those around him. Non-pharmacological therapy is an important component of treatment because, unlike pharmacological therapy, it has a limited number of side effects or no side effects at all [25].

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