FIBROMYALGIA IN OLDER ADULTS

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Abstract
Fibromyalgia is a chronic pain condition. Mood disorders, sleep problems, fatigue, and temporomandibular disorders can accompany fibromyalgia. The hallmark of fibromyalgia is chronic generalized pain. Yet, numerous diseases can present with generalized pain in older adults. Careful anamnesis and a detailed physical examination are essential to rule out mimicking conditions. Treatment of fibromyalgia in elderly requires particular attention, as well. Older individuals are prone to experiencing adverse effects of certain drugs due to age-related alterations in pharmacokinetics and pharmacodynamics. The aim of this article was to review fibromyalgia in older adults; including its features, differential diagnosis, and management.

Keywords: elderly; fibromyalgia; older adults; pain.

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Introduction
Fibromyalgia is a chronic pain syndrome with several features/comorbidities such as mood disorders, sleep problems, fatigue, irritable bowel syndrome, and temporomandibular disorders [1]. According to the 2016 revisions to the 2010/2011 fibromyalgia diagnostic criteria; the diagnosis of fibromyalgia can be set when a patient has generalized pain (at least 4/5 sites), symptoms at a similar level for ≥ 3 months, widespread pain index ≥ 7 and symptom severity scale score ≥ 5 or widespread pain index = 4-6 and symptom severity scale score ≥ 9. The presence of other diagnoses does not exclude the diagnosis of fibromyalgia and vice versa [2]. Yet, on some occasions, fibromyalgia in the elderly can be misdiagnosed. It is important to rule out other potential clinical conditions that may mimic fibromyalgia.

Another important issue is the management of fibromyalgia in older age. Certain clinical problems and/or chronic diseases may restrict the use of some medications. Non-pharmacological approaches such as exercise should be prioritized for this group of patients. Given the clinical importance of the above-mentioned subjects, the current article aimed to review fibromyalgia in older adults including its features, differential diagnosis and management.

Search methodology
Search methodology proposed for narrative reviews was followed [3]. PubMed/MEDLINE database was searched through by using the keywords “fibromyalgia”, “elderly” and “older adults”. Articles written in English and published within the last 15 years were assessed for eligibility.
Case reports, case series, pilot studies, protocols, and congress abstracts were excluded. The included articles’ reference lists were evaluated. Further eligible articles were included.

**Frequency of fibromyalgia in older adults**

Santos et al. reported that the prevalence of fibromyalgia was 5.5% in 361 community-dwelling elderly people (mean age of 73.3±5.7 years, 64% women) in São Paulo. The prevalence of chronic widespread pain was 14% in the same population [4]. Garip et al. studied on a sample of 100 individuals (aged 65 and 80 years). The diagnosis of fibromyalgia was based upon 1990 American College of Rheumatology (ACR) classification criteria. The frequency of fibromyalgia was recorded as 31% in that elderly group. Based on the study results, the researchers concluded that the prevalence of fibromyalgia increased with age [5].

The range of chronic pain issues was more severe in fibromyalgia, followed by chronic widespread pain, indicating that these health conditions should be recognised and effectively treated in older people [4]. Available evidence in the general population shows that when compared to chronic widespread pain, fibromyalgia is linked with more severe symptoms and repercussions for everyday living, as well as higher pain severity [6].

**Symptomatology and concomitant clinical conditions in older adults with fibromyalgia**

The major symptom of fibromyalgia is generalized pain. Yet, it is accompanied by several other clinical conditions such as sleep impairment and mood disorders. A study examining the effects of age disparities in comorbid diseases, mental health, and cognitive performance in fibromyalgia revealed that middle adulthood was related to worse self-reported pain when compared to the youngest age group. On the other hand, older adults revealed better self-reported cognitive performance than younger adults [7].

Jacobson et al. characterized symptoms in patients with fibromyalgia (range 55-95 years old). Over a 6-year period, the researchers collected data related to history and examination. Medicines, tender point examination, neuropsychological evaluation, pain scores, sleep and, psychiatric symptoms, as well as the Fibromyalgia Impact Questionnaire’s Physical Function Subscale, were recorded. Eighty percent or more of subjects reported that pain and stiffness hampered physical function, sleep, and psychology. Pain affected a growing number of bodily locations over time [8].

Moreover, individuals with chronic pain conditions (e.g. fibromyalgia) might be prone to developing age-related diseases prematurely (i.e. earlier cognitive and/or physical decline, earlier mortality) [9].

In case of the presence of generalized pain in an older adult, it is not correct to automatically diagnose the patient with fibromyalgia [10]. There are numerous conditions that can present with generalized pain in older individuals. It is important to verify that the fibromyalgia diagnosis is true and that other disorders are not misinterpreted as fibromyalgia [11]. A comprehensive history and physical examination are required since fatigue and generalized pain may signal a significant underlying problem such as malignancies or connective tissue diseases. Certain laboratory tests can also help to rule out such conditions [10]. Even in the presence of fibromyalgia, every new symptom should not be instantly assigned to fibromyalgia, but should be thoroughly explored because new medical disorders may arise over time in older individuals [11].

Patients with fibromyalgia have decreased physical activity and increased sedentary behavior. Moreover, muscle function can be impaired in elderly patients with fibromyalgia [12]. In this regard, sarcopenia should also be taken into account in older adults. Sarcopenia refers to the age-related reduction of skeletal muscle mass and function [13]. The European Working Group on Sarcopenia in Older People created a realistic clinical definition of sarcopenia as well as consensus diagnostic criteria [14]. Kapuczinski et al. examined whether muscular function in fibromyalgia could be attributable to sarcopenia using the criteria of the European Working Group on Sarcopenia in Older People. Muscle strength and physical performance were statistically poorer in the fibromyalgia group than in the control group. However, there was not a difference in skeletal muscle mass between the fibromyalgia and control groups. Kapuczinski et al. suggested classifying fibromyalgia patients as having dynapenia [12]. Dynapenia is muscular atrophy with a conserved number of fibers that causes a loss of muscle strength without muscle mass loss. Dynapenia puts elderly people at a higher risk of functional limits and mortality [15]. On the other hand, sarcopenia is muscular atrophy linked with a reduction in the number of fibers. A study with a large sample of fibromyalgia patients showed that the fibromyalgia group revealed less muscle strength than the control group in all parameters of muscle strength for all age groups. Handgrip strength differed by age only in patients with fibromyalgia. There was an inverse association of age with muscle mass and handgrip strength in the fibromyalgia group.
Women with fibromyalgia revealed muscle strength reduction along the ageing process, indicating an increased risk of dynapenia [16].

The presence of fibromyalgia may impair postural control in older individuals. Serpas et al. conducted a study on community-residing adults diagnosed with fibromyalgia. Self-reported sleep quality, intensity of pain, and depressive symptoms were recorded. For an objective evaluation of postural control, the Fullerton Advanced Balance Scale and 8-Foot Up and Go Test were used. The results showed that the serial relationship between depressive symptoms and intensity of pain mediated the relationship between sleep quality and Fullerton Advanced Balance and 8-Foot Up and Go Test performance. This finding highlighted the role of sleep and depression interventions that may improve functional outcomes in older patients with fibromyalgia [17].

Comorbid conditions such as mood disorders can impair physical function in patients with fibromyalgia. Depression is related to decreased physical functioning in middle-aged and older people with fibromyalgia. A study in 239 middle-aged and older individuals with or without fibromyalgia revealed that patients with fibromyalgia had greater depressive symptoms than non-fibromyalgia controls, which might impair physical performance even if age and severity of symptoms were taken into consideration. The study pointed out the importance of fibromyalgia severity and depressive mood in assessing the health and disability risk of ageing individuals [18].

Management of fibromyalgia in older adults

The first step in the management of fibromyalgia is patient education. Patients should be informed about their condition in order to set realistic treatment objectives that focus on improving pain and daily function. Elderly people with fibromyalgia should be taught about the various treatment choices available, such as aerobic exercise, cognitive behavioral therapy, stepped-care medications, and multidisciplinary treatment [10]. Treatment options should, if feasible, emphasize non-pharmacological therapies that include good lifestyle practices, with a focus on appropriate physical exercise in particular [11]. Exercise is an essential component of fibromyalgia therapy. Exercise that is of adequate intensity, self-modified, and symptom-limited can improve health and fitness, as well as reduce symptoms [19]. Over the last several decades, there has been a growing body of research supporting the use of electrotherapy in the treatment of fibromyalgia. The most widely studied electrotherapy treatments in fibromyalgia were transcutaneous electrical nerve stimulation, non-invasive brain stimulation techniques, and light amplification by stimulated emission of radiation [20].

Mindfulness-based stress reduction is an emerging psychotherapeutic approach in the management of fibromyalgia. Functional effects obtained by mindfulness-based stress reduction therapy were found to be mediated by psychological rigidity and the mindfulness component acting with awareness [21]. There are other potential non-pharmacological therapy options that have been studied in patients with fibromyalgia. Yoga is one of those therapies. Gentle daily yoga practice is supposed to allow a gradual increase in activity and positively impact fibromyalgia-related symptoms. A telephone interview study investigated the experiences of patients with fibromyalgia who participated in a yoga intervention. Participants noted improvements in mood, sleep, self-confidence and fibromyalgia symptoms [22]. Kinesio-taping is used as an adjuvant therapy in various musculoskeletal conditions. Espí-López et al. investigated the impact of kinesio-taping on pain, posture, bodily comfort, and quality of life in fibromyalgia patients. The outcomes were favorable following treatment with a reduction in pain, as well as neck and shoulder discomfort [23]. Studies examining the effects of these therapeutic options in older adults with fibromyalgia are warranted.

Pharmacological therapies can be used to improve severe pain or sleep disturbance [24]. Pharmacotherapy should be customized to the patient’s specific needs [11]. It is critical that healthcare practitioners understand the possible advantages and hazards of pharmacological agents in elderly. Age-related cognitive dysfunction, alterations in pharmacokinetics and pharmacodynamics, as well as drug-drug interactions due to polypharmacy, may all contribute to an increased risk of adverse event rates in older people [25].

In a six-year follow-up study, it was reported that more than half of the subjects with fibromyalgia were treated with non-steroidal anti-inflammatory drugs, 1/4 of the patients with opioids, and 1/4 of the subjects with estrogen. There were only few patients who were prescribed pregabalin or dual-acting antidepressants. The authors reported that the elderly cohort with fibromyalgia was treated suboptimally. The results of the study also revealed that either suggested therapies were not used or were poorly tolerated [8]. Opioid use is common in patients with intolerable fibromyalgia-related pain. It is important to note that sleep disruption can be exacerbated by higher opioid doses in older adults [26].
Mood disorders in elderly patients with fibromyalgia have a great impact on patients’ health related quality of life. In this regard, targeting mood disorders in the management of fibromyalgia can pave the way to a better outcome [27]. Positive psychology therapies that improve affect balance are simple to implement, cost-efficient, and may provide an essential supplementary therapeutic modality for sustaining health in both healthy ageing individuals and those suffering from chronic pain [28]. Lower resilience is known to be related to impaired control over stress and negative circumstances [29]. Resilience appeared as a novel variable in fibromyalgia research. It was reported as a predictor of physical function in older adults with fibromyalgia [30]. For that reason, being aware of the possible long-term influence of emotional state on overall function in older individuals with fibromyalgia can help assist patients with healthy ageing, as well as counsel patients on prospective therapies to increase positive global emotions such as resilience [28].

Fibromyalgia may accompany other diseases or clinical conditions such as autoimmune inflammatory rheumatic diseases and chronic low back pain. Concomitant fibromyalgia in patients with autoimmune inflammatory rheumatic diseases (e.g. rheumatoid arthritis, spondyloarthritis, systemic lupus erythematosus) may interfere with pain, thus may increase disease activity scores, particularly those that rely solely on patient-reported measures. This important point should be kept in mind while evaluating the response to biological disease modifying anti-rheumatic drugs in patients with autoimmune inflammatory rheumatic diseases and concomitant fibromyalgia [31].

Fibromyalgia may contribute to chronic low back pain in older adults [10]. Almost one in three older adults with low back pain and depression was found to have fibromyalgia [32]. In patients with chronic low back pain and concomitant fibromyalgia, treatment that targets both conditions may result in better pain and disability results. Fatemi et al. created an evaluation and treatment strategy to help with the care of older patients with chronic low back pain who also have fibromyalgia. The authors recommended that fibromyalgia be investigated in older individuals with chronic low back pain as a possible cause/contributor to their pain and functional impairment. The management algorithm for fibromyalgia in older adults included patient education, management of sleep and mood disorders, quitting or changing medications causing fatigue, exercising, cognitive behavioral therapy, stepped-care drugs, and a multidisciplinary pain program [10]. Overall, fibromyalgia is a chronic painful condition that interferes with quality of life in older adults. Both the diagnosis and management of fibromyalgia in the elderly require particular attention. In order to enhance fibromyalgia therapy in the elderly population, it is of great importance to apply age-appropriate therapies [8].

CONFLICT OF INTEREST
The author declares no conflicts of interest regarding the publication of this article.

REFERENCES


