



The Coexistence of Pain and Depression Could be as a Factor for Diagnosis of Multiple Sclerosis

ARTICLE INFO

Article Type
Editorial letter

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How to cite this article

Moeini Badi F. The Coexistence of Pain and Depression Could be as a Factor for Diagnosis in of Sclerosis. *Int. J. Musculoskelet. Pain. Prev.* 2023; 8(4): 943-944.

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10.22034/ijmp.8.4.943

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Article History

Received: May 7, 2023
Accepted: Jul 4, 2023
E Published: Dec 30, 2023

Multiple sclerosis (MS) is a disease where the immune system attacks the central nervous system (brain and spinal cord) and causes damage over time [1]. There are 28 million people who have MS, and the number of people with the disease has been increasing since 2013 [2]. In Iran, the rate of MS is highest in Tehran and lowest in Khuzestan and Sistan-Baluchestan provinces [3]. The prevalence of pain in multiple sclerosis patients ranges between 29% and 86% [4]. Moreover, the Prevalence of depression in MS is 24% to 50% [5].

Pain in multiple sclerosis (MS) has been linked to different factors like a person's social and economic situation, chronic disease, and mental health conditions [6]. Pain and depression are prevalent in newly diagnosed MS [7]. In particular, pain has been related to higher disability, depression, and fatigue [1]. According to a study, pain in MS is associated with more severe symptoms of anxiety and depression and worse quality of life [8].

It has been shown in a cohort study that different types of pain were closely connected to fatigue, depression, and disability.

This connection became even stronger after 4 years compared to the starting point [9]. Both symptoms (depression and pain) have been linked to dysfunction of monoaminergic neurotransmission in the central nervous system (CNS) inflammation [10]. Therefore, in MS patients, the simultaneous presence of pain and depression can help the initial diagnosis of MS. Because pain and depression are both very difficult to deal with, it is not surprising that people with multiple sclerosis who have both pain and depression, experience a combined negative effect on their mental health and overall their quality of life.

Therefore, improving MS patients can be achieved through routine screenings of these symptoms, and also by expanding studies in the field of prevention and early interventional programs during this sensitive period after diagnosis, which may result in enhancing the quality of life of patients.

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