The 2nd International Neuroinflammation Congress and 2nd Student Festival of Neurosience

Shefa Neuroscience Research Center, Tehran, Iran, 17-19 April, 2018

The Neuroscience Journal of Shefaye Khatam

Volume 6, No. 2, Suppl 1

Poster Presentation

Efficacy and Safety of Dimethyl Fumarate Treatment in Relapsing-Remitting Multiple Sclerosis

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Published: *17 April, 2018*

Abstract

Multiple sclerosis (MS) is a chronic autoimmune disorder of central nervous system. This demyelinating disease affects more than 2.3 million people world wild. Most of patients are young adult. The most common type of MS is relapsing remitting multiple sclerosis (RRMS). However there is no cure, available modifying therapies has revolutionized the care of patients with RRMS. Interferon (IFN) beta has been considered as the first line treatment of RRMS. Some reasons including lack of efficacy and safety concern cause to switch to an alternative disease-modifying therapy (DMT). Delayed-release dimethyl fumarate (DMF) has been recently approved as DMT and demonstrated significant efficacy in patients with RRMS. It activates the nuclear factor-related 2 (Nrf2) pathway which cause augmenting the oxidative capacities and reduction of inflammation. This review has focused on elucidating the efficacy and safety of Dimethyl Fumarate for Relapsing-Remitting Multiple Sclerosis. In most studies the relapsing ratio had been decreased for at least 6 months using of DMF. Expanded Disability Status (EDSS) and radiological activity had improved in case group versus placebo in most studies. DMF has significant efficacy in patients with previous IFN treatment. The severe side effect of DMF occur in approximately 5% of patients but in most clinical trials Absolute Lymphocyte count (ALS) were generally stable throughout the observational period. So DMF appeared to be safe and efficient in most clinical trials.

Keywords: Dimethy Fumarate, Relapsing Remitting Multiple Sclerosis, Safety, Efficacy

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