Siponimod in Secondary Progressive Multiple Sclerosis

Dear Editor,

We read the article entitled, "A Pilot Study of Fear of Disease Consequences and Its Relationship with Quality of Life, Depression and Anxiety in Patients with Multiple Sclerosis," on the "International Archives of Health Sciences" with great interest. Azami-Aghdash *et al*. performed a cross-sectional study in 70 patients diagnosed with multiple sclerosis. They observed a significant relationship between fear of disease and symptoms of depression and anxiety. Furthermore, a linear regression analysis showed a strong correlation between depression and/or anxiety and quality of life.[1]

MS is an autoimmune disease that affects the central nervous system, which is pathologically characterized by chronic inflammation, demyelination, gliosis, and neuronal loss. The epidemiology of this disease defines itself importance, approximately more than three hundred thousand individuals in the United States and two million individuals worldwide have MS. The course may be relapsing-remitting or progressive in nature, divide between primary and secondary. To the diagnosis, the dissemination in time and the dissemination in space need to be assessed. The primary goal in the treatment of multiple sclerosis is to prevent areas of damage by using maintenance therapies also known as disease-modifying therapies.[2]

Herein, we would like to discuss siponimod a novel drug approved in March 2019 by the Food and Drug Administration for clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease.[3] The approval comes after the EXPAND trial, in which more than one thousand individuals with secondary progressive MS and moderate-to-severe Expanded Disability Status Scale used oral siponimod once a day for a period of 3 years or if they have recurrent symptoms. The mechanism is unknown, but it is known that siponimod binds with higher affinity in sphingosine-1-phosphate, modulating this receptor, which probably reduces the peripheral blood lymphocytes and thereby the lymphocyte migration to the central nervous system. The oral availability is more than 80%, the peak plasma could be achieved within 4 h, almost total protein-bound, and in rat models showed that crosses the blood–brain barrier.[4]

One important fact about siponimod is that is an oral medication, which is good due to easy maintenance, unnecessity of time for infusions, and for patients with needle concern. Another interesting point was the approval for secondary progressive disease, in which only a small list of medications has shown efficacy. The drugs until now preferred for this severe form include ocrelizumab, cladribine, and siponimod. Furthermore, it is worthy of mentioning that the approval of them was only within the last 3 years.[5]

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Received: 16-Mar-2019 **Accepted:** 16-May-2020 **Published:** 26-Aug-2020

Access this article online

Quick Response Code:

Website: http://iahs.kaums.ac.ir

DOI: 10.4103/iahs.iahs_23_20

How to cite this article: Rissardo JP, Caprara AL. Siponimod in secondary progressive multiple sclerosis. Int Arch Health Sci 2020;7:155.