MS Care in Novel Coronavirus 19 Pandemic

One hundred years after the influenza outbreak in 1918 coronavirus disease (COVID-19) became a global health issue, which forces us to adapt our professional customs in the health care system. Our recent practice, since the 1990s, of processing experimental and observational evidences and time-consuming methods of developing guidelines seem not to be efficient enough because of scarce evidence and rapidly spreading disease. According to formal announcements, until writing this letter, we had more than 95,000 COVID-19 patients in Iran with a mortality rate of 6.3%.[1]

Many people with multiple sclerosis (MS) and their families are concerned about how COVID-19 disease may affect their conditions. Current evidences don't support that patients with MS are more vulnerable to COVID-19.[2]

MS medicines may act as disease modifying and/or immune suppressant drugs of the immune system. Currently, there is no evidence that patients on immunosuppressant treatments, even recently transplanted individuals, have a higher risk of COVID-19 complications.[2] On the other hand, moderate immunosuppression may prevent severe inflammatory complications associated with COVID-19 infection.[3] The prompt use of immune modulator drugs together with supportive treatments may prevent acute respiratory distress syndrome (ARDS).[4] Interferon beta-1a, leflunomide (inactive form of teriflunomide), and fingolimod are being tested as a treatment for COVID-19 ARDS. The interleukin-6 (IL-6) receptor antagonist, tocilizumab, which was recently introduced as a disease-modifying treatment for neuromyelitis optica spectrum disorder (NMOSD), is now under trial for COVID-ARDS treatment due to its prohibitory effect on cytokine release syndrome.[5]

On the other hand, some experts forewarn that MS patients with severe lymphopenia (drug- induced), under treatment with alemtuzumab, cladribine, and fingolimod, maybe at a higher risk for SARS-COVID.[2] In addition to infection risk, there may be concerns regarding the immunogenicity of future vaccines for COVID-19. B-cell depletion induced by rituximab or ocrelizumab reduces the immunogenicity of several vaccines, which encourages performing vaccination before starting them. This will probably impair the immunological memory following SARS-COVID, making COVID-19 patients sensitive to reinfection.

MS relapses are usually treated with a high dose of corticosteroid (500–1000 mg/d for 3–5 days). In the context of the COVID-19 pandemic, we suggest careful clinical and laboratory examinations of possible COVID-19 before this treatment. Nondisabling pure sensory relapses may be observed without treatment. Disabling relapses may be treated with the ambulatory prescription of oral or intramuscular injectable corticosteroids. Due to increased risk of infection by more frequent clinic visits, routine consults and evaluations can be planned through telemedicine or phone.

Ongoing observational studies and outcomes of national and international registries will provide us with more evidence of risks and benefits of disease-modifying therapies (DMT) during the COVID-19 pandemic. However, a strict recommendation would not be realistic and robust.

The only restrict recommendation is that MS patients should follow the general recommendations for protection against the virus (i.e., hand washing, physical isolation), particularly for patients under the treatment of anti-CD20 drugs or those with the risk of lymphopenia.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Received: 04 May 20 **Accepted:** 08 May 20
Published: 09 Jul 20

References

1. World Health Organization. Coronavirus disease (COVID-19) outbreak. 2020.
2. Brownlee W, Bourdette D, Broadley S, Killestein J, Ciccarelli O. Treating multiple sclerosis and neuromyelitis optica spectrum disorder during the COVID-19 pandemic. Neurology 2020. doi: 10.1212/WNL.0000000000009507.
3. Xu Z, Shi L, Wang Y, Zhang J, Huang L, Zhang C, *et al*. Pathological findings of COVID-19 associated with acute respiratory distress syndrome. Lancet Respir Med 2020;8:420-2.
4. Giovannoni G, Hawkes C, Lechner-Scott J, Levy M,

Waubant E, Gold J. The COVID-19 pandemic and the use of MS disease-modifying therapies. Mult SclerRelat Disorder 2020;39:102073.

5. Lythgoe MP, Middleton P. Ongoing Clinical Trials for the Management of the COVID-19 Pandemic. Trends Pharmacol Sci 2020;41:363-82.

Access this article online

Quick Response Code:

Website: www.ijpvmjournal.net/www.ijpm.ir

DOI: 10.4103/ijpvm.IJPVM_242_20

How to cite this article: Ramezani N, Adibi I, Mirmosayyeb O, Shaygannejad V. MS care in novel coronavirus 19 pandemic. Int J Prev Med 2020;11:98.