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Impact of coronavirus disease (COVID-19) pandemic on multiple sclerosis care

Dear Editor,

Since the declaration of coronavirus disease 2019 (COVID-19) as a pandemic in March 2020, physicians have been facing huge challenges in many aspects of patients’ care. It has been speculated that elderly individuals and those with comorbidities are at particular risk for contracting the infection. Neurologists in particular are facing a dilemma with their multiple sclerosis (MS) patients. These patients were thought to be at a higher-risk than normal population and the question of whether to continue or stop disease modifying drugs has been raised, in the absence of formal guidelines and a plethora of recommendations. Another dilemma is initiating newly diagnosed MS patients on treatment, especially those who need highly effective medications.

Many recommendations have been suggested by multiple sclerosis international federation (MSIF), and national MS society (NMSS), but still data are not sufficient to reach solid evidence-based decisions.

In Kuwait, as of July 17th, there are 57,668 confirmed COVID-19 cases with a total of 402 deaths 1.

In an attempt to explore the effects of COVID-19 pandemic on MS patients, we conducted a cross-sectional, Internet-based study on a random sample of MS patients from Ibn Sina Hospital, Kuwait using a “Google Forms” survey. The questionnaire included data regarding patient and physician attitude towards MS treatment in the era of the pandemic. The survey was conducted over 3 weeks during May/June 2020. Answering the survey was considered an implied consent to participate in the study.

A total of 141 MS patients responded. The mean age of the patients is 33.7 years (12-63), with 64% being females. Fifty-seven patients (40%) had a full time job, 26 (18%) had a part time job, and 59 (42%) were not working or retired.

The vast majority were being treated by interferon beta formulations (40 patients), followed by B-cell depleting agents; Rituximab (30 patients) and Ocrelizumab (24 patients). Fewer patients were on Natalizumab and alemtuzumab (15 patients each). As for the oral DMTs, 12 patients were on fingolimod, 10 on teriflunamide, 7 on dimethyl fumarate (DMF), and 2 on cladribine.

Forty-one (29%) patients relapsed during the time of the pandemic and as a consequence received pulse corticosteroids for 5-7 days. Fortunately, most patients (124 patients) kept in contact with their treating physicians, mainly through phone (61 patients), social media (31 patients) and less frequently through hospital/clinic visits (25 patients).

Regarding the patients’ perspective towards their medications at the time of the pandemic, 66% never considered stopping their treatments mainly based on advice from their neurologists. However, 12% did stop their treatment despite advice, mainly out of fear of acquiring the infection. Eleven patients (7.8%) had the start of their treatment delayed as a result of the pandemic. Of those, Eight were prescribed rituximab, 1 ocrelizumab, and 2 natalizumab.

Immunosuppression has been logically considered a risk factor for COVID-19 infection. However, no solid evidence so far supports or denies this statement. Additionally, many case reports suggest a favorable outcome in patients who acquired the infection while on disease modifying drugs for MS 2,3. One explanation might be the opposition of the over firing immune system, an event known as “cytokine storm”, which is responsible for the more aggressive disease course. Also, some of the MS drugs are being trialed for treatment of severe COVID-19 pneumonia 4,5.

On the other hand, one study reported that patients on B-cell depleting drugs were more likely to develop COVID-19 as compared to other DMDs 6.

Because of the conflicting data, many physicians favored the “no change plan” for their patients at the time of the pandemic in order to keep their MS disease course under control. In the studied sample, physicians favored this attitude in the majority of their patients, while keeping a close contact to spot any signs of infection, and balance that with the risk of their disease deterioration.

Generally speaking, it is believed that B-cell depletion may affect the response to vaccine and long-term immunity, while not affecting the acute phase dramatically. This call for some relief when using drugs that deplete these cells. On the other hand, long term T-cell depletion might be of concern in the acute infection.

In conclusion, the absence of definite guidelines leaves the choice to neurologists to manage their patients in the best possible ways they perceive. As agreed, interferons are considered safe to start and continue, and oral drugs need close monitoring of the lymphocyte count. Alternatively, caution should be paid for B-cell depleting drugs and extreme caution for long term T-cell immunodepletion.

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Declaration of Competing Interest

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Sara Salama*
Department of Neurology and Psychiatry, University of Alexandria, Alexandria, Egypt

Samar Farouk Ahmeda,b
a Department of Neurology, Ibn Sina Hospital, Kuwait
b Department of Neurology and Psychiatry, Minia University, Minia, Egypt

Ismail Ibrahim Ismail
Department of Neurology, Ibn Sina Hospital, Kuwait

Raed Alroughani
Division of Neurology, Department of Medicine, Amiri Hospital, Sharq, Kuwait

* Corresponding author.
E-mail address: ssalamafoaud@gmail.com (S. Salama).