LETTER TO THE EDITOR

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Adequate antibody response to BioNTech COVID vaccine in a multiple sclerosis patient treated with siponimod



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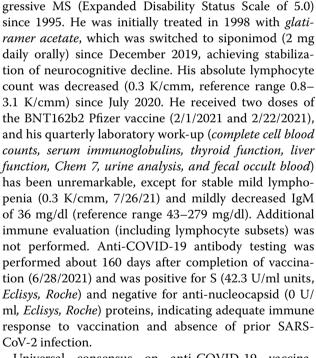
To the editor,

We appreciated Mansoor and colleagues review entitled "COVID-19 pandemic and the risk of infection in multiple sclerosis patients on disease-modifying therapies: "what the bleep do we know?"" [1]. The authors examined available evidence guiding the management of multiple sclerosis (MS) patients during this pandemic, indicating that sphingosine 1-phosphate receptor modulators (S1PRM), including siponimod, could increase the risk of COVID-19 infection due to immunosuppression.

However, emerging data suggest that MS patients mount a humoral and cellular immune response even while receiving disease-modifying therapies (DMT) [2, 3]. For instance, retrospective data [2] from MS patients receiving S1PRM who completed two doses of anti-SARS-CoV-2 vaccination (either Pfizer or Moderna) showed positive anti-spike (S) protein antibody titers (Abbott or Roche SARS-CoV-2 IgG assay) determined forty-five and half days (average) after immunization. A wide range (16.1-80.4) of IgG index was observed. The incidence of COVID-19 infection, however, was not analyzed [2]. Surprisingly, the study suggested that based on "real-life experience", S1PRM could potentially hamper an effective humoral response to anti-COVID-19 vaccination in MS patients, which may unnecessarily discourage urgent immunization efforts.

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At the Veterans Affairs Medical Center, Washington

DC, we have followed a 73-year-old man with active pro-

Universal consensus on anti-COVID-19 vaccination in MS patients treated with DMT is still emerging [2]. PubMed does not yield real-life data on the use of siponimod in MS patients exposed to COVID-19 or vaccination against it. Diminished immune response to non-COVID-19 vaccines have been reported after treatment with siponimod [4], which may be less



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immunosuppressive than fingolimod (another S1RP inhibitor). Caution is necessary while using DMT in MS [1–3]. One must also consider that many studies are limited to static analysis of humoral responses without correlates with cell blood counts or neutralizing activity [2]. Further research is necessary to determine if DMT hamper appropriate immune responses, especially since the BNT162b2 vaccine also elicits T-cell immunity [5]. In summary, our experience suggests that siponimod may not significantly alter humoral immunity against COVID-19 vaccination, and may contribute to encourage vaccination against this pandemic in MS patients receiving DMT.

Abbreviations

COVID-19: Coronavirus disease 2019; MS: Multiple sclerosis; S1PRM: Sphingosine 1-phosphate receptor modulators; DMT: Disease-modifying therapies; SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2; Chem-7: Basic metabolic panel; BNT162b2: Pfizer-BioNTech COVID-19 vaccine.

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Authors' contributions

GS: design, literature search, discussion, first draft, critical comments. VN: design, literature search, discussion, critical comments, final approval. All authors read and approved the final manuscript.

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Availability of data and materials

The data sets supporting the conclusion of this article are included within the article.

Declarations

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Consent for publication

Not applicable.

Competing interests

The authors confirm that they have no competing interests.

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