

Response to: myositis after SARS-CoV-2 vaccination occurs more frequently than assumed and is probably causally related

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Dear Editor,
we thank Finsterer et al. for the attention paid to our publication (1); we recognize the validity of the points mentioned in their letter to the editor and will try to answer the observations made.

The reason why we did not include the first article referred to (2) is that the described patient did not meet the American College of Rheumatology/European League Against Rheumatism (ACR/EULAR) 2017 classification criteria for inflammatory myopathies, nor the 2013 European Neuromuscular Center (ENMC) criteria for inclusion body myositis, the 2016 ENMC criteria for immune-mediated necrotizing myopathy (IMNM), the 2018 ENMC classification criteria for dermatomyositis, or the 2010 Connor's criteria for antisynthetase syndrome. Although a very interesting case, that we believe was immune-mediated and had a temporary relationship with the COVID-19 vaccine, the patient cannot be classified as having an idiopathic inflammatory myopathy (IIM) with the data provided, and was therefore not included in the article.

As for the following 3 cases mentioned (3-5), there is no doubt that they are IIM since they met some of the aforementioned classification criteria and would have been added to our article if only the cut-off date used in our study was not September 1, 2022. These studies were published at the beginning of 2023, and it was impossible to include them.

It is also noted by Finsterer et al. that we included patients without biopsy or electromyography only by myositis-specific auto-

antibodies or myositis-associated autoantibodies; this is not true since, as we mentioned before, patients had to fulfill the ENMC, ACR/EULAR, or Connor's criteria that include clinical criteria.

Vaccines are powerful stimuli of the immune system; we do not consider a causal relationship to be impossible, and it is true that it is possible to find many case reports [including ours (6)] that report a correlation between the vaccination event and the onset of symptoms. However, to date a large part of the world's population has been vaccinated and no national epidemiological study that reports a substantial increase in cases of inflammatory myopathies has been published. We will have to wait or carry out such studies to be able to make this assertion.

Contributions

All authors contributed equally.

Conflict of interest

The authors declare no potential conflict of interest.

Availability of data and materials

Data and materials are available from the corresponding author upon request.

REFERENCES

1. Finsterer J, MohanaSundaram AS, Scorza F. Myositis after SARS-CoV-2 vaccination occurs more frequently than assumed and is probably causally related. *Reumatismo*. 2023, 75: (3). doi: 10.4081/reumatismo.2023.1601.
2. Al-Rasbi S, Al-Maqbali JS, Al-Farsi R, Al Shukaili MA, Al-Riyami MH, Al Falahi Z, et

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- al. Myocarditis, pulmonary hemorrhage, and extensive myositis with rhabdomyolysis 12 days after first dose of Pfizer-Biontech BNT162b2 mRNA covid-19 vaccine: a case report. *Am J Case Rep.* 2022; 23: e934399.
3. Rodrigues de Carvalho M, Sá de Deus Rocha MM, Alves Bezerra V, de Pontes ME, Del Negro MC, Antunes JS, et al. Anti-3-hydroxy-3-methylglutaryl-coenzyme a reductase immune-mediated necrotizing myopathy following mRNA SARS-CoV-2 vaccination. *Case Rep Neurol Med.* 2023; 2023: 7061783.
 4. Syrmou V, Liaskos C, Ntavari N, Mitsimponas K, Simopoulou T, Alexiou I, et al. COVID-19 vaccine-associated myositis: a comprehensive review of the literature driven by a case report. *Immunol Res.* 2023; 16: 1-10.
 5. Chang CH, Gupta R, Setyono D, Cuevas-Ocampo AK, Khoshnoodi MA. Refractory seronegative immune-mediated necrotizing myopathy after receiving mRNA-1273 SARS-CoV-2 vaccine: a case report. *J Clin Neuromuscul Dis.* 2023; 24: 168-9.
 6. Camargo Coronel A, Jiménez Balderas FJ, Quiñones Moya H, Hernández Zavala MR, Mandinabeitia Rodríguez P, Ramiro Hernández J, et al. Dermatomyositis post vaccine against SARS-COV2. *BMC Rheumatol.* 2022; 6: 20.