Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

involved in a patient's intoxication, which is why the use of confirmatory techniques is required.

Acknowledgments

We would like to thank Rafael de la Torre, from the Municipal Medical Research Institute (*Institut Municipal d'Investigació Mèdica*) and member of the Integrative Pharmacology and Systems Neuroscience group of the Neurosciences Research Program, for the critical reading of the manuscript, and Jordi García Quintana for applying the HPLC–MS/MS technique.

References

1. Moeller KE, Kissack JC, Ataye RS, Lee KC. Clinical interpretation of urine drug test: what clinicians need to know about urine drug screens. Mayo Clin Proc. 2017;92:774–96.
2. Vallersnes OM, Persett PS, Oiestad EL, Karinen L, Heyerdahl F, Hovda KE. Underestimated impact of novel psychoactive substances: laboratory confirmation of recreational drug toxicity in Oslo, Norway. Clin Toxicol (Phyla). 2017;55:636–44.
3. Córdoba F, Iglesias Lepine ML, García Gibert L, Gispert MA, Moreno A, Supervía A. Grado de conocimiento de la detección de drogas en orina entre médicos que atienden a pacientes intoxicados. Emergencias. 2020;32:451–2.
4. Rausberg BO, Al-Saffar AL. Detectability of new psychoactive substances, 'legal highs' in CEDIA, EMIT, and KIMS immunochemical screening assays for drugs of abuse. Drug Test Anal. 2014;6:492–9.
5. Lung D, Wilson N, Chatenet FT, La Croix C, Gerona R. Non-targeted screening for novel psychoactive substances among agitated emergency department patients. Clin Toxicol (Phyla). 2016;54:319–23.

August Supervía [a,b,c,d,*], Meritxell Gabarró [e], Oriol Pallàs [a,b,c]

[a] *Servicio de Urgencias, Hospital Universitario del Mar, Barcelona, Spain*
[b] *Unitat Funcional de Toxicologia, Hospital Universitario del Mar, Barcelona, Spain*
[c] *Universitat Autònoma de Barcelona, Barcelona, Spain*
[d] *Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Barcelona, Spain*
[e] *Centre d'Atenció Primària Sant Roc, Badalona, Barcelona, Spain*

* Corresponding author.
E-mail address: Asupervia@parcdesalutmar.cat (A. Supervía).

https://doi.org/10.1016/j.medcle.2021.01.024

Efficacy and safety of SARS-CoV-2 vaccine in patients with giant cell arteritis☆

Eficacia y seguridad de la vacuna frente a SARS-CoV-2 en pacientes con arteritis de células gigantes

Dear Editor:

The efficacy and safety of the messenger ribonucleic acid (mRNA) vaccine against the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in patients with systemic autoimmune diseases (SADs) and receiving immunosuppressive treatment is unknown. The American Rheumatology Society has recently published their guidelines for these patients.[1] In a publication regarding 325 patients with a SAD who had been vaccinated with either the Pfizer/BioNTech (51%) or Moderna (49%) vaccine, mild local and generalized reactions were described, with no evidence of outbreak of the disease being reported, but no antibody response against the virus being described either.[2] Giant cell arteritis (GCA) is the most common type of vasculitis among the elderly,[3] mostly among patients over 80 years, age at which the vaccine was initially administered in Spain. The influence of the 2019 coronavirus disease (COVID-19) pandemic on the diagnosis and treatment of GCA has recently been reviewed.[4] However, the efficacy and safety of the vaccine against the SARS-CoV-2 in patients with GCA has been unknown to date, which is why we set out to analyze them.

To this end, we reviewed the medical records of patients with GCA who had received this vaccine and were being followed at our unit. We determined the presence and concentration of immunoglobulin G (IgG) antibodies in these patients through an enzyme-linked immunosorbent assay (ELISA) starting one week after they had received the second dose. In this context, safety was defined by the absence of recurrence of the disease according to the GiACTA criteria,[5] including reappearance of the signs and symptoms of GCA and/or increased C-reactive protein levels >0.5 mg/dl, in relation to the GCA, after completing the vaccination. Both local and generalized effects were collected through telephone calls.

A total of 17 patients, 12 of whom were women and five men, with a pooled mean age of 85.1 (80–95) years, were included in the study. The time elapsed between the GCA diagnosis and the vaccination was 6.6 (1–14) years. Two patients had previously overcome the infection with a positive (+) polymerase chain reaction (PCR) test performed on a nasopharyngeal exudate sample. All patients had received two doses of the Pfizer/BioNTech vaccine separated by a 21-day interval. At the time of vaccination, five patients were not receiving specific treatment, four were only receiving prednisone at a dose of 5 mg/day, five were receiving prednisone at a dose of 5 mg/day together with methotrexate 7.5 mg/week, and three were receiving subcutaneous tocilizumab 162 mg/week. None exhibited signs of clinical activity. None had symptoms of GCA other than low-grade fever, asthenia, and headache in five patients (29.4%), all of which resolved within less than 48 h with symptomatic treatment and were more attributable to the vaccine itself rather than to GCA. Fourteen out of the 17 patients (82.35%) described localized symptoms. Two patients had increased CRP levels without other signs of disease activity. All but one developed antibodies at a mean concentration of 1025.7 (57–2080) binding antibody units (BAU) per mililiter. The only patient who did not develop them was an 88-year-old woman who was untreated at the time of vaccination and had received only glucocorticoid therapy.

In this paper we present the first efficacy and safety data of the vaccine against SARS-CoV-2 in patients with GCA, with no vasculitis relapses being detected and with a very good immune response being achieved, reflected by the significant concentrations of IgG antibodies developed in all but one patient. Local reactions occurred in most patients (87%) and mild systemic reactions were only reported by a minority of them.

There have been, and still are, many doubts regarding the safety and efficacy of the different vaccines marketed against SARS-CoV-2 in patients with SADs, mainly in relation to the occurrence of outbreaks/disease activity and the capacity to generate an antibody response. Guidelines recently published by the American Rheumatology Society highlight some of them.[2] In this case, GCA is included in the group of SADs for which vaccination is recommended, and it is advised that the vaccine be administered once the disease activity is well controlled. It is completely unknown whether the

☆ Please cite this article as: Callejas Rubio JL, Ríos Fernández R, De la Hera Fernández J. Eficacia y seguridad de la vacuna frente a SARS-CoV-2 en pacientes con arteritis de células gigantes. Med Clin (Barc). 2022;158:91–92.

mRNA vaccine against SARS-CoV-2 is capable of inducing the onset of vasculitis, in general, and of GCA, in particular.

The main limitation of our study is its sample size and the lack of a control group. Even so, we believe that our results are interesting with a view to promoting vaccination in patients with SADs, in general, and with GCA, in particular.

Thus, we conclude that the Pfizer/BioNTech mRNA vaccine against SARS-CoV-2 is safe and effective in patients with GCA.

References

1. Curtis JR, Johnson SR, Anthony DD, Arasaratnam RJ, Baden LR, Bass AR, et al. American College of Rheumatology Guidance for COVID-19 vaccination in patients with rheumatic and musculoskeletal diseases — version 1. Arthritis Rheumatol. 2021, http://dx.doi.org/10.1002/art.41734. Mar 17.
2. Connolly CM, Ruddy JA, Boyarsky BJ, Avery RK, Werbel WA, Segev DL, et al. Safety of the first dose of mRNA SARS-CoV-2 vaccines in patients with rheumatic and musculoskeletal diseases. Ann Rheum Dis. 2021, http://dx.doi.org/10.1136/annrheumdis-2021-220231. Mar 19.
3. Sharma A, Mohammad AJ, Turesson C. Incidence and prevalence of giant cell arteritis and polymyalgia rheumatica: a systematic literature review. Semin Arthritis Rheum. 2020;50:1040–8, http://dx.doi.org/10.1016/j.semarthrit.2020.07.005. Oct.
4. Mackie SL, Brouwer E, Conway R, van der Geest KSM, Mehta P, Mollan SP, et al. Clinical pathways for patients with giant cell arteritis during the COVID-19 pandemic: an international perspective. Lancet Rheumatol. 2021;3:e71–82, http://dx.doi.org/10.1016/S2665-9913(20)30386-6. Jan.
5. Stone JH, Tuckwell K, Dimonaco S, Klearman M, Aringer M, Blockmans D, et al. Trial of tocilizumab in giant-cell arteritis. N Engl J Med. 2017;377(4):317–28, http://dx.doi.org/10.1056/NEJMoa1613849. Jul 27.

José Luis Callejas Rubio*, Raquel Ríos Fernández, Javier De la Hera Fernández

Unidad de Enfermedades Sistémicas, Servicio de Medicina Interna, Hospital Clínico Universitario San Cecilio, Granada, Spain

* Corresponding author.
E-mail address: jlcalleja@telefonica.net (J.L. Callejas Rubio).

https://doi.org/10.1016/j.medcle.2021.05.009