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Cartas al Editor

SARS-CoV-2 infection triggering a giant cell arteritis

Infección por SARS-CoV-2 como desencadenante de una arteritis de células gigantes

Dear Editor:

Introduction

Different infectious agents have been suggested to be involved in the pathogenesis of both classical and self-limited Giant Cell Arteritis (GCA).

Case report

On 14th March 2020, a 50-year-old-man without past medical history was assessed through teleconsultation with a dermatologist during the state of alarm due to Covid-19 in Spain. He reported high fever, cough and severe headache with bilateral temporal arteries thickening. No diagnostic tests could be performed at that time. As a non-severe SARS-CoV-2 infection was suspected, and visual or osteomuscular alterations were not reported, we opted for a late referral to specialized care and remote monitoring of the symptoms.

One month later, the patient presented not any more Covid-19 symptoms but reported persistent headache and temporomandibular joint pain. Clinical examination revealed swelling and inflammation of his right temple, where a filiform pulse was noted. A notable improvement from the previous temporal thickening was observed. At that time, several diagnostic tests were performed. Blood tests yielded normal or negative results, including erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) and autoimmunity profile; Covid-19 IgM/IgG Rapid Test (VivaCheck Biotech (Hangzhou) Co., Ltd.) was positive for both IgG and IgM; and a Doppler ultrasound of the right temporal artery showed a dark halo around lumen with a marked flow impairment, suggesting arterial wall inflammation, while left temporal artery Doppler echography was normal.

Two weeks later, an FDG PET-CT scan was performed, showing a slight increase of metabolic activity in the abdominal aorta, with a maximum standardized uptake value of 2.3 g/ml compared to 2.2 g/ml in the liver, without current active vasculitis signs.

Follow-up at three weeks revealed spontaneous clinical improvement with no corticosteroid treatment needed and a new temporal artery Doppler ultrasound was performed showing a resolution of arterial wall inflammation and blood flow.

Taking into account the complementary tests and the clinical evolution, we conclude that the most likely diagnosis was a Giant Cell Arteritis (GCA).[1] Given the coincidence in time with the surrounding SARS-CoV-2 infection we hypothesize that the virus could have acted as a trigger, because of its affinity for vascular endothelia. Varicella Zoster Virus (VZV),[2] *Chlamydia pneumoniae*, Parvovirus B19 and Epstein Barr Virus, have been suggested to trigger GCA. Our patient presented atypical clinical features of CGA with spontaneous resolution, which supports a virus-related pathogenesis. In addition, other vasculitis, such as Kawasaki disease in children or neurological complication with CNS vasculitis-like pattern, have been recently linked to Covid-19,[3,4] which supports our hypothesis.

Our main limitation is the lack of histological confirmation. However, the absence of any biologic abnormality in blood tests could be explained by the fact that biologic tests were performed after the patient presented with symptoms.[5] At the same time, we should take into account that general systemic symptoms, evaluated by telephone triage or similar, might be wrongly attributed to Covid-19, leading to the delayed diagnosis of this rheumatologic condition, which in turn could prompt to an irreversible visual loss, highlighting the severity of indirect morbidity related to Covid-19.

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Contributors

All authors have made substantial contributions in each of the following aspects: study conception and design, analysis and interpretation of data, draft manuscript, critical review of its intellectual content and definitive approval of the final version.

Patient and public involvement

This research was done without patient involvement. Patients were not invited to comment on the study design and were not consulted to develop patient relevant outcomes or interpret the results. Patients were not invited to contribute to the writing or editing of this document for readability or accuracy.

Competing interests

No, there are no competing interests for any author.

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Núria Riera-Martí[a,*], Jorge Romaní[a], Joan Calvet[b]

[a] *Department of Dermatology, Parc Taulí Health Corporation Consortium of Sabadell, Barcelona, Spain*
[b] *Department of Rheumatology, Parc Taulí Health Corporation Consortium of Sabadell, Barcelona, Spain*

* Corresponding author.
E-mail address: nriera@tauli.cat (N. Riera-Martí).

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Vacuna de la gripe en pacientes tratados con fármacos biológicos; también con belimumab

Influenza vaccine in patients on biological therapy; also with belimumab

Sr. Editor:

Hemos leído con interés el artículo recientemente publicado en su revista por Richi P et al. sobre la respuesta de la vacuna de la gripe en pacientes que reciben tratamientos biológicos[1]. En el trabajo se incluyeron múltiples biológicos, pero hemos echado en falta a belimumab, un biológico aprobado para al tratamiento del lupus eritematoso sistémico (LES)[2].

En el estudio pivotal de belimumab en LES, el BLISS-76 que incluyó a pacientes tratados con placebo o belimumab mensual intravenoso durante 76 semanas, se valoró a un grupo de pacientes que habían recibido diferentes vacunas, entre ellas la de la gripe. Se determinaron anticuerpos basalmente y a las 52 semanas, y se valoró el porcentaje de cambio en los niveles y la proporción de pacientes que mantuvieron los niveles. No se observaron cambios significativos en los antígenos de la vacuna recibida en 2007-8, ni en el porcentaje que mantuvo títulos. En los pacientes que recibieron la vacunación de la gripe, globalmente, los títulos se incrementaron de forma significativa, aunque fue mayor en los pacientes con placebo que los tratados, si bien en algunas cepas, en concreto la Brisbane 10 y 59, el porcentaje de pacientes con títulos > 1:10 fue menor en los tratados[3]. Los autores concluyen que el tratamiento con belimumab no afecta a los anticuerpos preexistentes en respuesta a la vacuna de la gripe en pacientes con LES, y que no parece haber un incremento de riesgo de respuesta inadecuada a la vacunación durante el tratamiento con belimumab.

Las recomendaciones actuales con los resultados disponibles son a favor de la vacunación antigripal de los pacientes con LES en tratamiento con belimumab[4]. Nosotros, en nuestra práctica habitual, vacunamos a todos nuestros pacientes tratados.

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José Luis Callejas Rubio[a,*], Carmen Valero Ubierna[b] y Norberto Ortego Centeno[a]

[a] *Unidad de Enfermedades Sistémicas, Servicio de Medicina Interna, Hospital San Cecilio de Granada, Granada, España*
[b] *Servicio de Medicina Preventiva, Hospital San Cecilio de Granada, Granada, España*

* Autor para correspondencia.
Correo electrónico: jlcalleja@telefonica.net (J.L. Callejas Rubio).

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Respuesta

Reply

Agradecemos la oportunidad de responder a la interesante carta que Callejas JL et al., han remitido a su revista comentando nuestro trabajo. Aunque en nuestro estudio reclutamos pacientes con enfermedades del tejido conectivo, ninguno de los enfermos incluidos padecía lupus eritematoso sistémico (LES). Al ser belimumab un fármaco aprobado exclusivamente para el tratamiento del LES y no contar con participantes con esta enfermedad, no pudimos estudiar el comportamiento de la vacuna en los enfermos que reciben tratamiento con belimumab. Las recomendaciones vacunales de la European League Against Rheumatism (EULAR), actualizadas en 2019, incluyen la vacunación antigripal anual a los pacientes con enfermedades autoinmunes inflamatorias que reciben tratamientos inmunosupresores[1]. Entre estos tratamientos se encuentra belimumab, además de otros como secukinumab, ixekizumab, canakinumab, tofacitinib o baricitinib, que tampoco incluimos en nuestro estudio, bien porque en el periodo de inclusión no reclutamos pacientes con estas terapias o bien porque en el momento en el que se desarrolló el trabajo, todavía no habían sido aprobadas