Haematology patients infected with SARS-CoV-2, pretreated with eculizumab or siltuximab, develop oligosymptomatic disease

We have read with great interest the publication from Palanques-Pastor and colleagues,[1] and due to the interest in this subject we would like to mention that we also observed no SARS-CoV-2 symptoms in a patient with multicentric Castleman's disease. The patient was a woman diagnosed in her 20s, who initially presented with sweating, fatigue, dyspnoea at medium effort and weight gain. At the clinical exam, the only concerning observation was that the patient presented with abdominal obesity. Aside from this, the patient had normal respiratory, cardiac and digestive examinations. She was negative for the following viruses: HIV, human herpesvirus 8, hepatitis B virus and hepatitis C virus, and received four cycles of anti-interleukin-6 (IL-6) therapy with siltuximab. She later tested positive for SARS-CoV-2 at a routine screening, but had no symptoms. The patient was asymptomatic throughout the period of time she was positive. We assume that the siltuximab treatment helped in the lack of symptoms when she was infected with SARS-CoV-2. This was possible because SARS-CoV-2 leads to cytokine release and determines the formation of an important proinflammatory environment.[2] This has been observed in studies and current guidelines because SARS-CoV-2 infection is associated with an increase in blood IL-6, with patients with severe disease benefiting from tocilizumab treatment.[3] Tocilizumab acts by binding both to the soluble and membrane bound forms of the IL-6 receptor, thus inhibiting IL-6 signalling and the inflammatory response to SARS-CoV-2.[4] Siltuximab also inhibits IL-6 signalling, but by directly forming complexes with IL-6, thus blocking its action on the IL-6 receptor.[5] Because of this observation we would like to add to the article by Palanques-Pastor and colleagues,[1] who said that siltuximab might be a viable option in the treatment of SARS-CoV-2, by suggesting that drugs that induce a similar biological effect could have similar therapeutic applications. More specifically, we would like to propose that drugs inducing a reduction in immune activity might be candidates for ameliorating severe SARS-CoV-2 infection.

In this regard we would like to mention two patients from our clinic diagnosed with paroxysmal nocturnal haemoglobinuria and treated with eculizumab. Both of these patients were infected with SARS-CoV-2 but presented no symptoms. The lack of symptoms in these patients might also be caused by the mechanism of action of eculizumab because it binds to the C5 fraction of complement, inhibiting the complement pathway, thus reducing inflammatory signalling and the effects that SARS-CoV-2 would induce.[6] More curiously, we have to mention that of all the patients infected with SARS-CoV-2 in our department, only one died of SARS-CoV-2 while the remainder had mild symptoms. Because most treatments in haematology generate a certain level of immunosuppression and because haematological disorders are frequently associated with immune suppression, these factors might add to our argument that there are cases in which there are equivalent therapeutic strategies to obtaining the same effect. This observation is important because it could offer an additional factor for consideration when assessing the probability of a patient developing the severe form of SARS-CoV-2. Moreover, drugs could be repurposed that might be useful in the treatment of this viral infection.

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