

LETTER

Dupilumab in atopic dermatitis, a protocol for SARS-COV-2-infected patients

Dear Editor,

During SARS-COV-2 pandemic scarce articles have been written regarding the possible effects of biologics and immunosuppressants in chronic inflammatory skin diseases, such as atopic dermatitis (AD).¹ Looking after optimal skin care, the most appropriate topical and systemic treatments and balanced mental status of AD patients is an important role of dermatologist not only for patients, but for health systems and emergency rooms occupancy. Therefore, it is important as dermatologist to be involved in health care of infected or COVID-19 patients having severe dermatological diseases and making appropriate decisions for their skin health.

Biologics have shown minimal increased risk of infection and its discontinuation can lead to loss of efficacy and drug-autoantibodies.² Dupilumab is an inhibitor of IL-4 and IL-13 signaling pathway that, theoretically, could lower risk for SARS-COV-2.² The virus has tropism for cells expressing the angiotensin converting enzyme 2 receptor and then hyperactivates the immune response (CD8+ and CD4+, specially helper 1, T cells) releasing proinflammatory cytokines that results in lung impairment.³ But IL-4 and IL-13 pathways have not been implicated in the host defense mechanism against viral infections, neither cytokine storm in COVID-19.³ This type of cellular response also appears to be common to other coronavirus-induced infection.² Also, by treating asthma dupilumab may theoretically decrease risk for COVID-19 and severe respiratory disease.⁴

In Latin America COVID-19 is rapidly spreading, in Colombia numbers are increasing, positioning us now as the second country with the most cases in Latin America and it has encountered our AD clinic.

We report a 22 year old male nurse, diagnosed with AD at 14 with no comorbidities, who is in treatment with dupilumab since September 2019. On November 2019, he stopped dupilumab for 3 months due to insurance problem (the medication was not provided because of an administrative issue) and had to be admitted in the ER because of a severe flare. He restarted dupilumab in January 2020 with control of the disease and no new flares.

On May 18, 2020 he was diagnosed with asymptomatic SARS-COV-2 by PCR due to occupational exposure, to our knowledge the first patient in Latin America infected while in treatment with dupilumab. Given the documented flare with suspension and need for ER attention we decided to continue the medication and established a protocol (shown in Figure 1) for these patients at our clinic (currently 90 patients treated with dupilumab for severe AD).

We would like to highlight the importance of reassessing decisions periodically in all immunodepressed or immunomodulated

patients due to scarce information regarding the potential benefit of continuing systemic medications in patients with severe chronic skin diseases.

Since the emergence of the COVID-19 pandemic patients and physicians are concerned about the benefits of immunosuppressants vs the effect in case of infection by SARS-COV-2.² In some patients treated with dupilumab and infected or living in hyperendemic zones in Europe, it does not seem to worsen symptoms and it is not considered to increase the risk of infection or the prognosis of the disease, but further studies are needed.^{2,5-7} It is stated that dupilumab may be preferred over traditional immunosuppressive drugs when starting treatment in selected severe cases during the pandemic.^{5,6} As described in the literature, in our Country biologics are difficult to dispense due to administrative problems and costs that make them inaccessible many times to patients and that makes continuity and adherence to medications difficult for AD patients, even though it is the only biological authorized for the treatment of severe adult AD.⁸ We share our institutional protocol in order to optimize AD patients care, especially in centers where severe AD is treated with dupilumab.


CONFLICT OF INTEREST

Dr Maria Fernanda Ordóñez, Dr Isabela Campo, and Dr Mirian Casas have no relevant financial or nonfinancial relationship to disclosure. Also, declare that we do not have any conflict of interest in this article.

DATA AVAILABILITY STATEMENT

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials.

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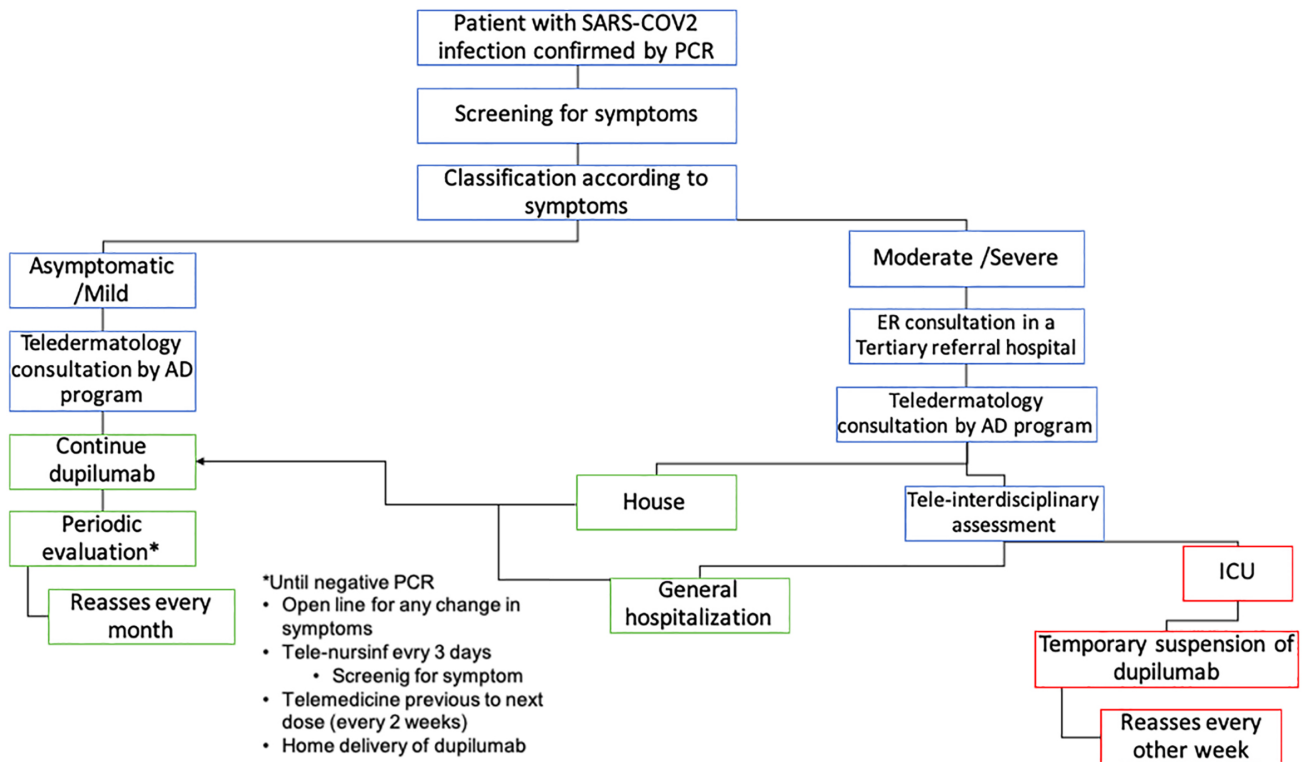


FIGURE 1 Protocol for atopic dermatitis in patients treated with dupilumab

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