

Association of skin diseases, biological treatment and COVID-19 during the first wave of the pandemic

DOI: 10.1111/bjd.19683

Linked Article: Cho *et al.* *Br J Dermatol* 2021; **184**:296–303.

While the current coronavirus disease 2019 (COVID-19) pandemic increases and spreads all over the world, the availability of large reliable datasets, in a short time or in real time is limited. In response to this challenge, the Ministry of Health from South Korea launched a highly commendable open initiative, making large health datasets accessible, and enabling researchers and clinicians to access data to control and fight the pandemic.¹ As a result, in this issue of the *BJD*, there is an informative paper presented by Cho *et al.* describing the association of skin diseases or biological treatment with COVID-19.²

Cho *et al.* described no association between SARS-CoV-2 infection and patients with some skin diseases, except for atopic dermatitis (AD). We were intrigued by the finding of a reduction in COVID-19-positive patients in the models presented for AD. This observation has already been shown in other studies^{3,4} consistent with evidence that atopic patients show a reduced expression of the SARS-CoV-2 receptor ACE2 and therefore a reduced vulnerability to the virus.⁴ However, the opposite occurs with patients with nonallergic asthma AD, which is associated with higher incidence of COVID-19 and worse outcomes.⁵

Another related hot topic discussed is the susceptibility to COVID-19 in dermatological patients treated with biologics. The conclusions of the current study were that the use of biologics may not increase vulnerability to COVID-19 and may not lead to worse outcomes. Although the number of patients exposed to biologics with the studied outcomes is extremely low, which may cause imprecise results, this finding adds to evidence from other studies that have not shown an increased risk in these patients.^{6,7} The finding is also in keeping with previous knowledge for other serious infections.⁸ Importantly, further larger and longer prospective studies with suitable comparison groups need to be done to confirm these conclusions.

Using large nationwide linked claim data during the COVID-19 pandemic like that in the OpenData4Covid19 from South Korea has many advantages, as they can provide evidence more quickly in a cost-effective way, being representative of the studied population and with high internal validity. Disadvantages include missing data, incomplete follow-up and issues with validation of diagnostic codes.⁹ OpenData4Covid19 includes only patients who were tested for COVID-19, which is another important limitation. The authors suggest that case registries can be helpful to answer research questions about COVID-19. However, there is a need to have good comparable

data from exposed and nonexposed patients, which might be difficult to obtain if all efforts are focused on detecting only exposed cases.

To summarize, the information provided by Cho *et al.* is highly relevant to dermatologists, analysing patients with dermatological diseases or treatment with biologics, showing it is likely that these patients did not have worse outcomes. They conclude that dermatologists may maintain therapy based on the latest evidence available and considering the benefit–risk balance during the COVID-19 pandemic.

Acknowledgments: we thank John Ingram for critical review and suggestions.

M.A. Descalzo ¹ and I. Garcia-Doval ^{1,2}

¹Research Unit, Fundación Piel Sana Academia Española de Dermatología y Venereología (AEDV), Madrid, Ferraz 100, 1º izda, Madrid, 28008, Spain and ²Department of Dermatology, Complejo Hospitalario Universitario de Vigo, Vigo, Meixoeiro sn, Vigo, 36313, Spain
Email: miguelangel.descalzo@aedv.es

Conflicts of interest: none to declare.

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