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Letter

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# Biologic Therapies, Psoriasis, and COVID-19: Our Experience at the Psoriasis Unit of the University of Naples Federico II

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Dear Editor,

Since the worldwide spread of SARS-CoV-2 infection, great concern arose on the safety of biologics, whose role has been extensively discussed on whether being beneficial, neutral, or detrimental in terms of susceptibility to the infection and/or severity of COVID-19 disease [1]. Biologics generally expose patients to an increased risk of contracting common and opportunistic infections; conversely, some classes of biologics, i.e. anti-interleukin (IL)-6 receptor, anti-IL-17A, and anti-tumor-necrosis factor (TNF)-α, were demonstrated to limit the cytokine storm involved in the pathogenesis of COVID-19 disease by modulating specific cytokines [1].

Herein we report our experience regarding the biologic treatment of psoriasis patients during the COVID-19 pandemic at the University of Naples Federico II, Italy. During the pandemic (February 25, 2020, to June 25, 2020), 965 psoriasis patients (mean age 52.1 years, male 58.5%) on biologics were interviewed about having been infected with SARS-CoV-2 virus, having had COVID-19 suspected symptoms (fever, dyspnea, cough, malaise), or having had contact with positive patients. Moreover, they were questioned about withdrawal or change in the due schedule of administration of biologics and, if so, whether the decision was voluntary or based on medical advice (Table 1). Of the 965 interviewed patients, 311 (32.2%) were under anti-TNF-α, 346 (35.8%) under IL-17, 64 (6.6%) under anti-IL-23 therapy and 244 (25.0%) on anti-IL-12/23.

Our analysis highlighted that 16/965 patients (1.6%) suspended the treatment during the pandemic: 3 (18.7%) after seeking medical advice for fever and/or cough, while the remaining (81.2%) were moved by the fear of being more susceptible to the infection. Likewise, 7 patients (0.7%) delayed the administration of the biologic: 5 (71.4%) voluntarily, while 2 (28.6%) were instructed to suspend by the doctor after the occurrence of fever and/or cough.

Interestingly, only 1 patient (0.1%), male and aged 74 years, with hypertension, contracted SARS-CoV-2 infection: although asymptomatic, he precautionarily suspended adalimumab for 1.5 months and restarted it after 2 negative swab results. He observed the house quarantine and did not require hospitalization or any related treatment.

Likewise, only a healthy 43-year-old woman (0.1%) declared a strict contact with a SARS-CoV-2-positive patient but did not develop the infection. She precautionarily suspended etanercept and observed the quarantine, without hospitalization, then reintegrating the biologic.

Our data support that biologics may neither represent a risk factor for SARS-CoV-2 infection nor for a more severe disease.

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**Table 1.** Main features of the study population (*n*, %): patients' stratification according to biologic treatments and their suspension or delayed administration

| | Patients | Patients who suspended biologic therapy | | Patients who delayed biologic therapy | |
|---|---|---|---|---|---|
| | | voluntarily | after medical advice | voluntarily | after medical advice |
| *Biologic treatment* | | | | | |
| Adalimumab originator | 107 (11.1) | – | – | 1/965 (0.1) | – |
| Adalimumab biosimilar | 131 (13.6) | 1/965 (0.1) | – | – | – |
| Etanercept originator | 43 (4.5) | – | – | 2/965 (0.2) | – |
| Etanercept biosimilar | 29 (3) | – | – | – | – |
| Infliximab originator | 1 (0.1) | – | – | – | – |
| Infliximab biosimilar | 0 (0) | – | – | – | – |
| Brodalumab | 5 (0.5) | – | – | – | – |
| Guselkumab | 51 (5.3) | – | – | – | – |
| Ixekizumab | 189 (19.6) | 4/965 (0.4) | 2/965 (0.2) | 1/965 (0.1) | 2/965 (0.2) |
| Secukinumab | 152 (15.7) | 4/965 (0.4) | 1/965 (0.1) | 1/965 (0.1) | – |
| Risankizumab | 13 (1.3) | – | – | – | – |
| Tildrakizumab | 0 (0) | – | – | – | – |
| Ustekinumab | 244 (25.3) | 4/965 (0.4) | – | – | – |
| Subtotal | | 13 (1.3) | 3 (0.3) | 5 (0.5) | 2 (0.2) |
| Total | 965 (100) | 16 (1.6) | | 7 (0.7) | |

Such statements are in line with the most recent findings about the topic, as shown from the analysis run in two high-epidemic areas ($n$ = 159 patients at Bergamo Hospital and $n$ = 139 patients at Lecco Hospital, both treated with biologics), and so encourage adherence to biologics given the well-known effects at withdrawal such as flares and resistance to further treatments [2–5].

In this context, biologics for psoriasis seem to be an effective and safe therapy also during the COVID-19 pandemic. However, more research is needed to give consistency to our data and establish international guidelines on the management of psoriasis during the pandemic.

## Limitations

Our study's limitations are the relatively short time of follow-up (4 months) and the lack of a control group (e.g., patients under conventional systemic treatments).

## Statement of Ethics

The study was conducted ethically in accordance with the World Medical Association Declaration of Helsinki. Patients gave their written consent.

## Conflict of Interest Statement

The authors have no conflicts of interest to declare.


## Funding Sources

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## Author Contributions

*Elisa Camela:* conception and design of the work. *Gabriella Fabbrocini:* acquisition, analysis, and interpretation of data for the work. *Eleonora Cinelli:* drafting the work for important intellectual content. *Wanda Lauro:* revising the work critically. *Matteo Megna:* final approval of the version to be published.

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