

## LETTERS TO THE EDITOR

# Letter to the editor regarding article “Yalici-Armagan B, Tabak GH, Dogan-Gunaydin S, Gulseren D, Akdogan N, Atakan N. Treatment of psoriasis with biologics in the early COVID-19 pandemic: A study examining patient attitudes toward the treatment and disease course. *J Cosmet Dermatol.* 2021;00:1–5”

Dear Editor,

We read with great interest the article published by Yalici-Armagan et al.<sup>1</sup> titled “Treatment of psoriasis with biologics in the early COVID-19 pandemic: A study examining patient attitudes toward the treatment and disease course” reporting that 30 out of 106 patients (28.3%) autonomously discontinued biologic therapy for psoriasis during COVID-19 pandemic, frequently experiencing disease worsening (20/30, 66.7%).

Herein, we describe our experience at the Dermatology Centre of the University of Naples Federico II, reporting that only 16/965 psoriasis patients (1.6%) stopped the biologic treatment during the early pandemic period (February 2020–June 2020).<sup>2</sup> Among these, 13/16 (81.3%) voluntarily interrupted biologic therapy and the remaining (3/16, 18.8%) after seeking medical advice. Similarly, 7/965 subjects (7.3%) voluntarily delayed the biologic administration. Detailed features of Yalici-Armagan et al. study population and ours are reported and compared in Table 1. Student's *t* test (for continuous variables) and Chi-square test (for categorical variables) were used to calculate statistical differences. *P*-values <0.05 were considered to be statistically significant. All statistical analyses were performed using GraphPad Prism 4.0 (GraphPad Software Inc., La Jolla, CA, USA).

Our investigated sample is significantly greater than Yalici-Armagan et al.,<sup>1</sup> being comparable for sex and mean age. However, a significant lower discontinuation rate of biologics was assessed in our cohort compared with Yalici-Armagan et al. (1.6% vs 28.3) ones. Several factors may explain this result: the difference in COVID-19 incidence rate between Italy and Turkey and different related government actions, the necessity of hospitalization for intravenous administration of infliximab, a drug which was more frequently used in the Turkish sample, different subjects' attitudes to psoriasis and their treatments, as well as the telemedicine and informatic support system developed by our clinic during the pandemic. Indeed, at our Institution psoriasis patients were daily contacted by phone and/or e-mails in order to provide them updated information about the

relationship of COVID-19, psoriasis, and biologics, and to answer their questions and fears.<sup>3</sup> In this way, we could reassure the patients about the safety of biologics even during pandemic, avoiding the spread of fake news and increasing patients' compliance, limiting biologic interruption only when necessary (eg, respiratory symptoms, fever, strict contact to a confirmed COVID-19 case, etc.). We believe that our telemedicine reorganization system was strictly necessary to avoid uncontrolled discontinuation of biologics which would have led to significant disease worsening, decreased quality of life, and increased health costs.<sup>4</sup> In literature, there are different studies investigating the use of biologics during pandemic and the relationship with COVID-19 infection.<sup>5</sup> Regarding psoriatic disease, drugs selectively blocking tumor necrosis factor (TNF) and interleukins (IL) 23, 17, and 12/23 have revolutionized the management of this disease. Among these cytokines, TNF and IL17 inhibition seem to prevent the infection of SARS-CoV-2 and the cytokine storm of COVID-19 while the possible role of IL23 in the pathogenesis of COVID-19 infection is not understood yet.<sup>5</sup> The initial doubts about the use of biologics at the beginning of COVID-19 pandemic have been soon clarified in literature. Indeed, nevertheless Conforti et al.<sup>6</sup> expressed the fear of an increased infection risk and more severe disease course advising to preventively discontinue biologics, several studies have confirmed the safety of these drugs even during the pandemic.<sup>5</sup> Suggesting patients to discontinue biologic treatment for psoriasis in order to reduce the risk of COVID-19 infection is absolutely not advisable since it would worsen the disease and its psychological impact as well as it would cause a higher pro-inflammatory state which may potentially increase the susceptibility to a more severe SARS-CoV2 condition.

In conclusion, clinicians should guide and continuously assist psoriasis patients in order to reduce incorrect autonomous decisions and allow to reach the best therapeutic outcomes informing them regarding the more recent evidence about psoriasis, COVID-19, and COVID-19 vaccines.

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TABLE 1 Comparison between Yalici-Armagan et al.'s population and our sample.

	Our study (n=965)	Yalici-Armagan et al. (n = 106)	P
Time of observation	February 2020–June 2020	March 2020–July 2020	
Demographic features			
State	Italy	Turkey	
Sex, M (%)	565 (58.5)	65 (61.3)	ns
Mean age (years)	52.5	46.1	N/A
Mean disease duration (years)	–	18	N/A
Current biologic treatment n (%)			
Anti-TNF			
Adalimumab	238 (24.7)	4 (3.7)	<0.001
Etanercept	72 (7.5)	1 (0.9)	<0.05
Infliximab	1 (0.1)	19 (17.9)	<0.001
Anti-IL12/23			
Ustekinumab	244 (25.3)	48 (45.2)	<0.01
Anti-IL23			
Guselkumab	51(5.3)	0 (0)	<0.001
Risankizumab	13 (1.3)	0 (0)	ns
Tildrakizumab	0 (0)	0 (0)	ns
Anti-IL17			
Brodalumab	5 (0.5)	0 (0)	ns
Ixekizumab	189 (19.6)	4 (3.7)	<0.001
Secukinumab	152 (15.7)	30 (28.3)	<0.05
Treatment compliance n (%)			
Continuation	942 (97.6)	76 (71.7)	<0.05
Temporary suspension	7 (0.7)	0 (0)	ns
Voluntarily	5 (0.5)	0 (0)	ns
After medical advice	2 (0.2)	0 (0)	ns
Interruption	16 (1.6)	30 (28.3)	<0.001
Voluntarily	13 (1.3)	30 (28.3)	<0.001
After medical advice	3 (0.3)	0 (0)	ns
Patients with COVID-19 infection n (%)	1 (0.1)	0 (0)	ns

**KEYWORDS**

biologic treatment, COVID-19, psoriasis, psoriasis management

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**CONFLICT OF INTEREST**

None.

**ETHICAL APPROVAL**

The authors confirm that the ethical policies of the journal, as noted on the journal's author guidelines page, have been adhered to. No

ethical approval was required as this is a review article with no original research data.

**AUTHOR CONTRIBUTIONS**

Luca Potestio involved in data curation, formal analysis, investigation, visualization, and writing-original draft preparation. Elisa Camela involved in data curation, investigation, methodology, visualization, and writing-original draft preparation. Gabriella Fabbrocini involved in conceptualization, validation, visualization, and writing—review and editing, supervision. Matteo Megna involved in conceptualization, validation, visualization, writing-original draft preparation, and writing—review and editing. All authors read and approved the final version of the manuscript.

## DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

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