Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Evidence following guidelines: Another COVID-19 paradox

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Evidence-based medicine is predicated on the concept of making clinical decisions based on the best available clinical evidence. One of the great concerns for dermatologists at the onset of the pandemic was to determine how to treat patients with psoriasis, atopic dermatitis, autoimmune bullous disorders, and connective tissue diseases who were prescribed immunosuppressants or immunomodulators.[1] In the topsy-turvy COVID-19 universe, guidelines needed to be developed posthaste, based on expert opinion rather than data.

Gadarowski et al[2(p1)] note that "in March 2020, it was unclear whether dermatology patients on biologics or other forms of systemic therapy should continue medication, or whether it would be inappropriate to initiate such treatment in an at-risk cohort." The essence of the American Academy of Dermatology guidelines (https://www.aad.org/member/practice/coronavirus/clinical-guidance/biologics) is that patients on these agents should not discontinue them unless testing positive for COVID-19; they may be readministered after COVID-19 resolution. Initiation of such therapy is based on disease severity and comorbidities, with postponement of administration for high-risk patients (>60 years old; diabetes, cardiovascular, hepatic, renal, or respiratory disease). Guidelines from multiple international organizations all concurred that patients should not discontinue treatment without first speaking with their providers.[2]

Entering year 2 of the pandemic, data are beginning to accrue that will help confirm or deny the validity of these guidelines. Haberman et al[3] performed a prospective study on 86 patients with immune-mediated inflammatory diseases on biologics and immunomodulatory therapies who were confirmed to have COVID-19 (59 patients) or highly suspected to have the infection (27 patients). Only 14 of the 86 patients required hospitalization, which was similar to the general population. The authors concluded that the baseline use of biologics was not associated with worsened outcomes while acknowledging that their study was small.[3] Gisondi et al[4] performed a retrospective study of 5206 patients with psoriasis on biologics (tumor necrosis factor [TNF], interleukin (IL) 17, IL-12/23, and IL-23 inhibitors) during the Italian pandemic. Only 4 patients, all with COVID-19 risk factors, required hospitalization for pneumonia; none died. Despite the limitations of this study, the results were reassuring for the continued use of biologic agents during the pandemic.[4]

In this issue of the *Journal of the American Academy of Dermatology*, Yousaf et al[5] evaluated whether patients on TNF inhibitors and/or methotrexate are at increased risk of COVID-19–related outcomes. A total of 214 patients with COVID-19 were identified with recent TNF inhibitor or methotrexate exposure and compared to 31,862 patients with COVID-19 without TNF inhibitor or methotrexate exposure. After propensity matching, the likelihoods of hospitalization and mortality were not significantly different between the treatment and nontreatment groups, allowing the investigators to conclude that patients with recent TNF inhibitor and/or methotrexate exposure do not have increased hospitalization or mortality compared to patients with COVID-19 without recent TNF inhibitor and/or methotrexate exposure.

I applaud every dermatologist involved with the rapid development of the thoughtful American Academy of Dermatology guidelines for COVID-19

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that allowed us to navigate unchartered seas. The coming year(s) will bring us multiple studies that may modify these guidelines accordingly. It is imperative that we all keep abreast of these developments in real time.

REFERENCES

1. Drenovska K, Schmidt E, Vassileva S. Covid-19 pandemic and the skin. *Int J Dermatol*. 2020. https://doi.org/10.1111/ijd.15189.
2. Gadarowski MB, Balogh EA, Bashyam AM, Feldman SR. Examining recommendations for the use of biologics and other systemic therapies during COVID-19: a review and comparison of available dermatology guidelines and patient registries. *J Dermatolog Treat*. 2020. https://doi.org/10.1080/09546634.2020.1808154.
3. Haberman R, Axelrad J, Chen A, et al. Covid-19 in immune-mediated inflammatory diseases—case series from New York. *N Engl J Med*. 2020;383(1):85-88.
4. Gisondi P, Facheris P, Dapavo P, et al. The impact of the COVID-19 pandemic on patients with chronic plaque psoriasis being treated with biological therapy: the Northern Italy experience. *Br J Dermatol*. 2020;183(2):373-374.
5. Yousaf A, Gayam S, Feldman S, Zinn Z, Kolodney M. Clinical outcomes of COVID-19 in patients taking tumor necrosis factor inhibitors and/or methotrexate: a multi-center research network study. *J Am Acad Dermatol*. 2021. https://doi.org/10.1016/j.jaad.2020.09.009.