

LETTER

Comment on “COVID-19 and psoriasis: Is it time to limit treatment with immunosuppressants? A call for action”

Dear Editor

Italian authors published recently in the journal of *Dermatologic Therapy* their recommendations for treatment of patients with psoriasis at time of new COVID-19 pandemic. The authors pointed to the importance of therapeutic reassessment of all psoriatic patients, particularly those with moderate-to-severe disease, who are candidate to systemic, mostly immunosuppressive, therapies in the era of COVID-19. The authors recommended topical and/or drugs with a lower impact on the immune system to avoid spread of the infection.¹ Though of interest, we have few points to comment on these recommendations based on the current literature review.

Psoriasis is a worldwide systemic inflammatory disease that has been associated with a number of comorbidities and increased mortality. Older patients with moderate-to-severe disease are more prone to cardiovascular and neurological comorbidities, such as hypertension and dementia, respectively. Independent of treatment, there is a twofold increased risk of serious infections among older adults with psoriasis compared to those without psoriasis. COVID-19-infected patients with hypertension are associated with higher rate of morbidity and mortality. COVID-19 virus has neurotropic potential that partially explains the higher rate of acute respiratory distress in elderly patients.^{2,3}

Psoriasis inflammatory mediators/cytokines may be amplified by viral infection, such as hepatitis C virus (HCV). Recently, researchers documented acute psoriasis flares following established respiratory virus infection, with rhinovirus and coronavirus as the most frequently detected pathogens, without evidence for group A *Streptococcus*.⁴ Psoriasis patients appear to have a slightly increased risk of cancer, particularly keratinocyte cancer, and lymphomas, regardless of their systemic therapies.⁵ Cancer patients are more susceptible to viral pneumonias, such as COVID-19, due to weakened immune response to respiratory bacteria and virus.⁶ Neuroinvasive propensity of COVID-19 is partially responsible for the acute respiratory failure of COVID-19 patients.⁶

Flare-up of psoriasis usually controlled with systemic biologic or nonbiologic therapy and phototherapy. Schneeweiss et al found no evidence that biologics increase the 6-month risk of serious infections when compared to systemic nonbiologics or phototherapy in elderly patients (≥ 65). Older adults should be offered the same level of disease control as all psoriasis patients.⁷ Others noted that new users of apremilast, etanercept, and ustekinumab are at lower risk rate of serious infection compared with those on methotrexate.⁸ Interleukin 17 inhibitors have lower effects on personal immune functions compared to traditional immunosuppressives and could be also considered in the priority.⁹

The tumor necrosis factor- α inhibitors, adalimumab is currently under evaluation for use in treating severe COVID-19 pneumonia. Unwise patients stopping biologics temporarily with or without their physician recommendation may lead to development of antidrug antibodies, and possible loss of response when these drugs reintroduced.^{10,11}

According to a very recent study testing direct acting antiviral drugs against COVID-19 model, the author noted that sofosbuvir, ribavirin, and remdesivir can tightly bind to COVID-19 RNA-dependent RNA polymerase and contradict its function leading to viral eradication.¹² That would be plausible for patients living in HCV-high prevalent countries, such as Italy. ultraviolet A1 (UVA1) phototherapy has a comparable efficacy in moderate-to-severe plaque-type psoriasis and could improve the clinical manifestations and quality of life more quickly than narrow band ultraviolet B therapy with no significant side effects, including lack of increased risk of cutaneous malignancies.^{13,14}

With the recent COVID-19 outbreak, dermatologists should prioritize and individualize treatment protocols to psoriatic patients based on diseases severity, patients medical conditions, and viral invasiveness. For biologics in the precoronavirus era, respiratory infection rates were comparable to placebo. Biologics may be tried in elderly patients with psoriasis. For the absolute highest risk patients, those with cardiovascular and pulmonary comorbidities, the risk-benefit may favor discontinuation on a case-by-case basis. UVA1 may be also considered. HCV-positive patients coinfecting with COVID-19 may benefit from direct acting antiviral. In other word, patients ranking for aggressive or conventional treatment modalities are to be considered.

Ayman Abdelmaksoud¹ 

Mohamad Goldust^{2,3,4} 

Michelangelo Vestita^{5,6} 

¹Mansoura Dermatology, Venerology and Leprology Hospital, Mansoura, Egypt

²Department of Dermatology, University of Rome G. Marconi, Rome, Italy

³Department of Dermatology, University Medical Center Mainz, Mainz, Germany

⁴Department of Dermatology, University Hospital Basel, Basel, Switzerland

⁵Unit of Plastic and Reconstructive Surgery, Department of Emergency and Organ Transplantation, University of Bari, Bari, Italy

⁶Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts

Correspondence

Ayman Abdelmaksoud, Mansoura Dermatology, Venerology and
Leprology Hospital, 5-Amien Alsamanoudy Street, Abdelsalam Aaref
Street, Mansoura, Egypt.
Email: behcet.behcet@yahoo.com

ORCID

Ayman Abdelmaksoud  <https://orcid.org/0000-0003-4848-959X>

Mohamad Goldust  <https://orcid.org/0000-0002-9615-1246>

Michelangelo Vestita  <https://orcid.org/0000-0002-2203-0353>

REFERENCES

- Conforti C, Giuffrida R, Dianzani C, Di Meo N, Zalaudek I. COVID-19 and psoriasis: is it time to limit treatment with immunosuppressants? A call for action. *Dermatol Ther.* 2020;33(4):e13298. <https://doi.org/10.1111/dth.13298>.
- Baig AM, Khaleeq A, Ali U, Syeda H. Evidence of the COVID-19 virus targeting the CNS: tissue distribution, host-virus interaction, and proposed neurotropic mechanisms. *ACS Chem Neurosci.* 2020;11(7):995-998. <https://doi.org/10.1021/acscemneuro.0c00122>.
- Li YC, Bai WZ, Hashikawa T. The neuroinvasive potential of SARS-CoV2 may play a role in the respiratory failure of COVID-19 patients. *J Med Virol.* 2020. <https://doi.org/10.1002/jmv.25728>. [Epub ahead of print].
- Sbidian E, Madrange M, Viguier M, et al. Respiratory virus infection triggers acute psoriasis flares across different clinical subtypes and genetic backgrounds. *Br J Dermatol.* 2019;181(6):1304-1306.
- Vaengebjerg S, Skov L, Egeberg A, Loft ND. Prevalence, incidence, and risk of cancer in patients with psoriasis and psoriatic arthritis: a systematic review and meta-analysis. *JAMA Dermatol.* 2020. <https://doi.org/10.1001/jamadermatol.2020.0024>. [Epub ahead of print].
- Yang G, Zhang H, Yang Y. Challenges and countermeasures of integrative cancer therapy in the epidemic of COVID-19. *Integr Cancer Ther.* 2020;19:1534735420912811. [Epub ahead of print].
- Schneeweiss MC, Perez-Chada L, Gottlieb AB, Merola J. Older adults on systemic treatment for psoriasis and risk of infection: a propensity score matched population-based study. *Br J Dermatol.* 2020. <https://doi.org/10.1111/bjd.19028>. [Epub ahead of print].
- Dommasch ED, Kim SC, Lee MP, Gagne JJ. Risk of serious infection in patients receiving systemic medications for the treatment of psoriasis. *JAMA Dermatol.* 2019;155:1142. <https://doi.org/10.1001/jamadermatol.2019.1121>.
- Zheng Y, Lai W. Dermatology staff participate in fight against COVID-19 in China. *J Eur Acad Dermatol Venereol.* 2020. <https://doi.org/10.1111/jdv.16390>. [Epub ahead of print].
- Bashyam AM, Feldman SR. Should patients stop their biologic treatment during the COVID-19 pandemic. *J Dermatol Treat.* 2020;1-2. <https://doi.org/10.1080/09546634.2020.1742438>. [Epub ahead of print].
- Lebwohl M, Rivera-Oyola R, Murrell DF. Should biologics for psoriasis be interrupted in the era of COVID-19? *J Am Acad Dermatol.* 2020; pii: S0190-9622(20)30445-X. <https://doi.org/10.1016/j.jaad.2020.03.031>. [Epub ahead of print].
- Elfiky AA. Anti-HCV, nucleotide inhibitors, repurposing against COVID-19. *Life Sci.* 2020;248:117477. <https://doi.org/10.1016/j.lfs.2020.117477>.
- Bedair K, Elhadad A, Hamad S, Ferguson J, Donnan P, Dawe RS. No association between whole-body UVA1 phototherapy and skin cancers in humans: a cancer registry linkage study. *Br J Dermatol.* 2020. <https://doi.org/10.1111/bjd.19041>. [Epub ahead of print].
- Silpa-Archa N, Pattanaprichakul P, Charoenpipatsin N, et al. The efficacy of UVA1 phototherapy in psoriasis: clinical and histological aspects. *Photodermatol Photoimmunol Photomed.* 2020;36(1):21-28.