

Asymptomatic SARS-CoV2 infection in a patient receiving risankizumab, an inhibitor of interleukin 23



Madison Ward, BSc, MD,^a and Melinda Gooderham, MD, MSc, FRCPC^{a,b,c}
Peterborough, Waterloo, and Kingston, Ontario, Canada

Key words: biologic therapy; COVID-19; IL-23; psoriasis; risankizumab; SARS-CoV-2.

INTRODUCTION

First reported in Wuhan, China, in December 2019, SARS-CoV-2 virus, causing COVID-19, quickly escalated to a global pandemic. This resulted in many clinicians and patients becoming concerned about continuing biologic therapies for immune-mediated inflammatory diseases, such as psoriasis. Given the potential risk of immunosuppression, a number of publications subsequently appeared in the literature, weighing in on whether biologic therapies should be continued in psoriasis patients.^{1,2} Guidelines were published to help guide clinicians in their decision-making.³ Risk factors for severe COVID-19 infection were identified, including higher age, diabetes, hypertension, cardiovascular disease, and respiratory system disease.^{4,5} No good evidence to date has shown that biologic therapies impact the risk of SARS-CoV-2 infection or COVID-19 outcomes.

CASE REPORT

We report a 45-year-old man with developmental delay who had a 22-year-long history of psoriasis. He had a medical history of coronary artery disease, heart failure, atrial fibrillation, type-2 diabetes mellitus, chronic kidney disease, stroke, and depression. The patient had been on multiple treatments for his psoriasis over the years, including topical steroids, methotrexate, adalimumab (2012-2016), ustekinumab (2016-2018), guselkumab (2018-2019), and, most

recently, risankizumab (2020), to maintain control of his severe disease. He received his first injection of risankizumab on January 10, 2020, and his second loading dose injection on February 7, 2020, prior to the onset of the pandemic in our area. Due to an outbreak of COVID-19 in the long-term care facility where he resided, he underwent routine testing for SARS-CoV-2 on April 6, 2020, with a nasopharyngeal swab. Although he was asymptomatic for fever, cough, or shortness of breath, he tested positive for SARS-CoV-2 infection and remained in lockdown in his facility. He was retested on April 20, 2020, and April 27, 2020; both the results were negative, and his infection was considered to be resolved. Given his negative status and resolution of the outbreak in his facility, he received his next scheduled risankizumab injection on May 1, 2020. His psoriasis is now controlled, with minimal residual disease activity.

DISCUSSION

It is essential to report real-world cases to contribute to the growing body of literature pertaining to SARS-CoV-2 infection in patients receiving biologic therapies for psoriasis. Many case reports on COVID-19 patients receiving biologic therapies have recently been reported, including those on patients treated with risankizumab.^{6,7} We report a patient who, despite his younger age, had significant comorbidities, putting him at a risk of severe COVID-19 infection; however, unlike the previously reported

From the SKiN Centre for Dermatology, Peterborough, Ontario^a; Probitry Medical Research, Waterloo, Ontario^b; and Queen's University, Kingston, Ontario.^c

Funding sources: None.

Conflicts of interest: Dr Gooderham has been an investigator, speaker, consultant, or advisory board member for AbbVie, Amgen, Akros, Arcutis, Boehringer Ingelheim, BMS, Celgene, Dermira, Dermavant, Galderma, GSK, Eli Lilly, Incyte, Janssen, Kyowa Kirin, Leo Pharma, Medimmune, Merck, Novartis, Pfizer, Regeneron, Sanofi Genzyme, Sun Pharma, UCB, and Valeant/Bausch. Author Ward has no conflicts of interest to declare.

IRB approval status: Not applicable.

Correspondence to: Melinda J. Gooderham, MD, MSc, FRCPC, Skin Centre for Dermatology, 775 Monaghan Road South, Peterborough, ON K9J 5K2, Canada. E-mail: mgooderham@centrefordermatology.com.

JAAD Case Reports 2021;7:60-1.

2352-5126

© 2020 by the American Academy of Dermatology, Inc. Published by Elsevier, Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.jidcr.2020.10.032>

cases, in spite of being positive for SARS-CoV-2, he remained asymptomatic and was clear of the infection without an interruption in the therapy.

REFERENCES

1. Lebwohl M, Rivera-Oyola R, Murrell DF. Should biologics for psoriasis be interrupted in the era of COVID-19? *J Am Acad Dermatol*. 2020;82(5):1217-1218.
2. Nogueira M, Vender R, Torres T. Psoriasis, biologic therapy, and the pandemic of the 21st century. *Drugs Context*. 2020;9:2020-4-10.
3. American Academy of Dermatology Association (2020). Guidance on the use of immunosuppressive agents. Accessed May 31, 2020. Available at: <https://www.aad.org/member/practice/coronavirus/clinical-guidance/biologics>
4. Li H, Wang S, Zhong F, et al. Age-dependent risks of incidence and mortality of COVID-19 in Hubei Province and other parts of China. *Front Med*. 2020;7:190.
5. Yang J, Zheng Y, Gou X, et al. Prevalence of comorbidities and its effects in patients infected with SARS-CoV-2: a systematic review and meta-analysis. *Int J Infect Dis*. 2020;94:91-95.
6. Wang CJ, Truong AK. COVID-19 infection on IL-23 inhibition. *Dermatol Ther*. 2020;e13893.
7. Kiss N, Lőrincz K, Medvecz M, et al. Coronavirus disease 2019 in a psoriatic patient with concomitant chronic obstructive pulmonary disease under treatment with risankizumab. *Dermatol Ther*. 2020;e14186.