

LETTERS TO THE EDITOR

Guttate flare in a patient with chronic plaque psoriasis following COVID-19 infection: A case report

To the Editor,

The incidence of psoriatic flares has increased during the ongoing COVID-19 pandemic. Possible explanations are rampant usage of hydroxychloroquine, withdrawal of traditional antipsoriatic agents, and use of oral corticosteroids while managing COVID-19 disease, or after COVID-19 infection itself.¹ Herein, we present a case of guttate flare in a patient with chronic plaque psoriasis following COVID-19 infection.

A twenty-one-year-old woman presented to us with multiple reddish scaly lesions over bilateral extremities for 15 days. She was a diagnosed case of psoriasis vulgaris on oral methotrexate therapy who had stopped treatment 2 months ago and was under good disease remission. She was infected with COVID-19 infection 20 days back and 5 days later started developing skin lesions. All lesions appeared over a duration of 2–3 days. As the patient was under home isolation, no treatment was taken and she presented to us after recovery. On examination, there were multiple monomorphic erythematous scaly papules over the extensor aspect of both forearms and legs (Figure 1A). The trunk and back also had few similar lesions. The Auspitz sign was positive. The patient gave no history of similar lesions in the past. Routine hematological and biochemical tests revealed no abnormality. Her antistreptolysin O titer was negative. Based on the above findings, a diagnosis of guttate psoriasis was made. The patient was treated with emollients and topical halobetasol 0.5% lotion. Marked improvement was noted over a period of 2 weeks via telephonic consultation (Figure 1B).

Guttate psoriasis is a morphological variant of psoriasis seen commonly in children and young adults. Family history of psoriasis, stress, and infections (most commonly streptococcal) are the proven causative factors.² Viral infections such as EBV, Coxsackie virus, and varicella-zoster virus have also been implicated in individual reports.³ In a study by Sbidian et al, respiratory viruses such as rhinovirus, parainfluenza, influenza B, coronavirus Hku1, and coronavirus Oc43 were also reported during a psoriatic flare of either guttate or pustular type via a throat swab with negative bacteriological culture. The mean duration from symptoms of viral infection to psoriatic flare was 2 days in this particular study. Viral mRNA stimulating Toll-like receptor 3 leading to the production of pathogenic IL-36-Y and CXCL8 has been postulated to cause an innate immunity dysregulation responsible for psoriatic exacerbations.⁴

Multiple reports of a pustular and erythrodermic flare of psoriasis post-COVID-19 infection have been described.¹ An

extensive literature search revealed a single case of guttate flare after COVID-19 infection wherein guttate exacerbation occurred 6 days after infection and improved within 2 weeks after use of topical betamethasone lotion.⁵ In our patient, the temporal relation between acquiring COVID-19 infection and the appearance of guttate lesions 5 days later explains the precipitating event. However, stress as an equally relevant risk factor cannot be disregarded.

In patients presenting with a guttate flare during the ongoing COVID-19 pandemic, it thus seems pertinent to enquire history related to recent COVID-19 infection. Future studies may help prove a causal relation between COVID-19 and guttate psoriasis.

DISCLAIMER

We confirm that the manuscript has been read and approved by all the authors, that the requirements for authorship as stated earlier in this document have been met, and that each author believes that the manuscript represents honest work.

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CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

All authors have contributed equally to the manuscript.

ETHICAL APPROVAL

The patient consent was obtained for publication purposes.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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FIGURE 1 (A): Multiple monomorphic erythematous scaly papules present over the extensor aspect of both forearms. (B): Marked improvement upon treatment with halobetasol 0.5% lotion



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REFERENCES

1. Samotij D, Gawron E, Szczęch J, et al. Acrodermatitis continua of hallopeau evolving into generalized pustular psoriasis following COVID-19: a case report of a successful treatment with infliximab in combination with acitretin. *Biologics*. 2021;15:107-113.
2. Naldi L, Peli L, Parazzini F, Carrel CF. Psoriasis study group of the Italian group for epidemiological research in dermatology. Family history of psoriasis, stressful life events, and recent infectious disease are risk factors for a first episode of acute guttate psoriasis: results of a case-control study. *J Am Acad Dermatol*. 2001;44:433-438.
3. Rychik KM, Yousefzadeh N, Glass AT. Guttate psoriasis following presumed coxsackievirus A. *Cutis*. 2019;104:248-249.
4. 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;181:1304-1306.
5. Gananandan K, Sacks B, Ewing I. Guttate psoriasis secondary to COVID-19. *BMJ Case Rep*. 2020;13:e237367.