New-onset guttate psoriasis secondary to COVID-19

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March 30, 2021

Abstract

SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID19), is associated with flares of psoriasis in patients with well-documented disease. Both viral infection and medications used for treatment, like hydroxychloroquine, were incriminated. Herein, we report the case of a 25-year-old patient who presented a first-onset guttate psoriasis following COVID19.

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Word count: 418

Figures: 2

References: 5

Conflict of Interest Disclosure: None Declared

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Introduction

Guttate psoriasis commonly affects children and adolescents. It usually occurs after acute infections, particularly streptococcal ones. Though, it can also be triggered or aggravated by virus infections, especially rhinoviruses and coronaviruses[1]. SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID19), is associated with flares of psoriasis in patients with well-documented disease[2-4].

Case history and examination

Herein, we report the case of a 25-year-old male patient, with no personal or family history of psoriasis, who presented to the COVID unit with fever, headache, anosmia and ageusia. The diagnosis of COVID-19 infection was made by RNA detection from a nasopharyngeal swab. The patient received symptomatic treatment with paracetamol. He recovered in 10 days of self-isolation. Five days later, he developed multiple erythematous lesions. On clinical examination, there were several widespread drop-like erythematous scaly papules with sizes ranging from 0.5 to 1 cm affecting the trunk, the limbs and the genitals (figure 1,2).

Investigations and diagnosis

Histopathology showed parakeratosis, acanthosis, papillomatosis, Munro micro-abscesses, elongation of rete ridges and an inflammatory lymphocytic infiltrate of the dermis. The diagnosis of guttate psoriasis was established.

Management and follow-up

Treatment with topical betamethasone dipropionate 0.05% once a day was initiated. At the follow-up, there was a gradual improvement in the lesions.

Discussion

Since the start of the COVID-19 pandemic, numerous cases of psoriasis flares have been reported[2-4]. Both viral infection and medications used for treatment, like hydroxychloroquine, were incriminated[3]. In our case, the two possible causes are the viral infection and the emotional stress due to self-isolation. So far one case of guttate psoriasis secondary to COVID-19 has been reported in a patient with a past medical history of plaque psoriasis[1]. The delay of onset of psoriasis in this case was 6 days, similar to our case. A longer delay was observed in a patient who presented a new-onset pustular psoriasis 4 weeks after the beginning of COVID-19 symptoms. That was the first and the only case of new-onset psoriasis induced by COVID-19 described in the literature. The delay was explained by the fact that SARS-CoV-2 related inflammation has not yet resolved even though the patient was asymptomatic[5]. A dysregulation of innate immune response due to stimulation of toll-like receptor 3 by viral RNA leading to production of pathogenic cytokines (IL17, IL23) might be a possible mechanism for COVID 19 infection leading to psoriasis[2].

Conclusion

To our knowledge, our case is the second patient who presented new-onset psoriasis induced by COVID-19. We have not found previous descriptions of de novo guttate psoriasis post COVID-19.

AUTHORS CONTRIBUTION

Dr. Meriem Rouai: is the guarantor of the content of the manuscript, including the data and analysis.

Dr. Faten Rabhi: contributed to acquisition of data, analysis and interpretation of data, revised it critically for important intellectual content, and final approval of the version to be submitted.

Professor Kahena Jaber: revised data critically for important intellectual content.

Professor Mohamed Raouf Dhaoui: contributed to interpretation of data and revision of the manuscript.

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