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LETTER

A case of exacerbation of psoriasis after oseltamivir and hydroxychloroquine in a patient with COVID-19: Will cases of psoriasis increase after COVID-19 pandemic?

Dear Editor,

COVID-19 pandemics have been described in the city of Wuhan in China and spread around the world.[1] The new type of SARS-Cov2, a mutant novel coronavirus that humans encountered for the first time, binds to ACE receptors cause pneumonia. Researchers have focused on the treatment of the current disease through different pathways, especially this pathophysiological mechanism besides FcR activation.[2] Recent studies have revealed numerous effective therapeutic options including favipiravir, brincidofovir, monoclonal antibodies, hydroxychloroquine, oseltamivir, and antisense RNA.[3,4] Herein, a case of psoriasis exacerbated with hydroxychloroquine and oseltamivir treatment in a patient with COVID-19 will be presented. A 71-year-old woman with no skin lesions was admitted to the pandemic clinic with the diagnosis of COVID-19. The patient had a history of psoriasis that has been activated occasionally since childhood. The patient was started orally oseltamivir 2×75 mg and hydroxychloroquine on 2×400 mg on the first day then 2×200 mg. On the fourth day of treatment, the patient had an exacerbation of silver-scaled psoriatic plaques spread quickly all over the body separated from the surrounding tissue with sharp borders. This is the first case of exacerbation of psoriasis during COVID-19 infection in a patient receiving oseltamivir versus hydroxychloroquine. The exacerbation of psoriasis in this patient can be explained by several conditions. First, it is well known that hydroxychloroquine is an inhibitor of the epidermal trans--glutaminase, cause to the collection of the epidermal cells.[5] In addition, hydroxychloroquine promotes IL-17 production through p38-dependent IL-23 release resulting in keratinocyte growth and differentiation.[6] Therefore, hydroxychloroquine treatment, which was started as a high dose on the first day, maybe the main factor that exacerbates psoriasis in this patient. To date, we did not find any reports that oseltamivir may affect psoriasis. To be under quarantine and learn the diagnosis of COVID-19, which is a fatal disease in older patients may have contributed to the triggering of psoriasis by increasing a stress burden in this patient. Finally, infections are known to trigger psoriasis, especially the pustular form. Here, we present for the first time a case of psoriasis potentially triggered by COVID-19 infection. Although exacerbation of psoriasis may occur after hydroxychloroquine, given severe psoriasis which occurs in a very short time may indicate that the COVID-19 infection also plays an important role in the etiology of psoriasis. Patients with SARS-CoV2, that have been reported recently, have increased plasma concentrations of inflammation-related cytokines, including interleukins 2, 7, and 10, granulocyte-colony stimulating factor, interferon-inducible protein 10, monocyte chemoattractant protein 1, macrophage inflammatory protein 1 alpha, and tumor necrosis factor α.[7] The increasing some cytokines in the COVID-19 that are also accused in the etiopathogenesis of psoriasis may suggest that COVID-19 may be a new entity that exacerbates psoriasis vulgaris. As a result, it can be speculated that hydroxychloroquine, a commonly used drug for COVID-19 infection, can lead to a worldwide increase number of psoriasis that is prevalence between 1% and 3%. This condition may lead clinicians to new treatments that do not have immunosuppressive properties.[8]

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

Ömer Kutlu
Ahmet Metin

Department of Dermatology and Venereology, School of Medicine, Uşak University, Uşak, Turkey

Correspondence
Ömer Kutlu, MD, MRCP, Department of Dermatology and Venereology, School of Medicine, Uşak University, Uşak, Turkey.
Email: omerkutlu22@gmail.com

ORCID

Ömer Kutlu https://orcid.org/0000-0002-9665-015X
Ahmet Metin https://orcid.org/0000-0002-6512-4990

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