

Development of Acute Generalized Exanthematous Pustulosis due to Hydroxychloroquine Use for COVID-19 Treatment

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Abstract; Acute generalized exanthematous pustulosis (AGEP) is a cutaneous drug eruption, which is characterized by nonfollicular, sterile pustules, rapidly and severely progresses on an erythematous base. Although antibiotics have been considered to be responsible for most of the development of AGEP, many drugs, such as hydroxychloroquine (HCQ), may also cause it. Recently, HCQ is frequently used in the prophylaxis and treatment of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection along with antiviral drugs. In our study, we have presented an AGEP reaction case that has been developed in one patient who is being treated for coronavirus disease-19 (COVID-19) and using the HCQ.

INTRODUCTION

Acute generalized exanthematous pustulosis (AGEP) is a cutaneous drug eruption, which is characterized by nonfollicular, sterile pustules and rapidly and severely progresses on an erythematous base. Although antibiotics have been considered to be responsible for most of the development of AGEP, many drugs, such as hydroxychloroquine (HCQ), may also cause it¹. HCQ is an antimalarial treatment agent. It has safely been used in the treatment of Systemic Lupus Erythematosus, Rheumatoid Arthritis and Malaria for more than 50 years². Recently, HCQ is frequently used in the prophylaxis and treatment of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection along with antiviral drugs³. In our study, we have presented an AGEP reaction case that has been developed in one patient who is being treated for coronavirus disease-19 (COVID-19) and using the HCQ.

Case report

A 47-year-old male patient who is being followed in the COVID-19 service was consulted to dermatology clinic due to rashes developed on his body. Widespread rashes were found to be developed on his body on the 3rd day of the patient's treatment to whom hydroxychloroquine (400 mg) started to be

administered. He did not have any psoriasis history, another drug use, or any disease. In the physical examination of the patient, there were pustular lesions and desquamation on the erythematous base in the lower and upper extremities of the body (Figure 1). There was no mucosal involvement. The examinations of the other systems were normal.

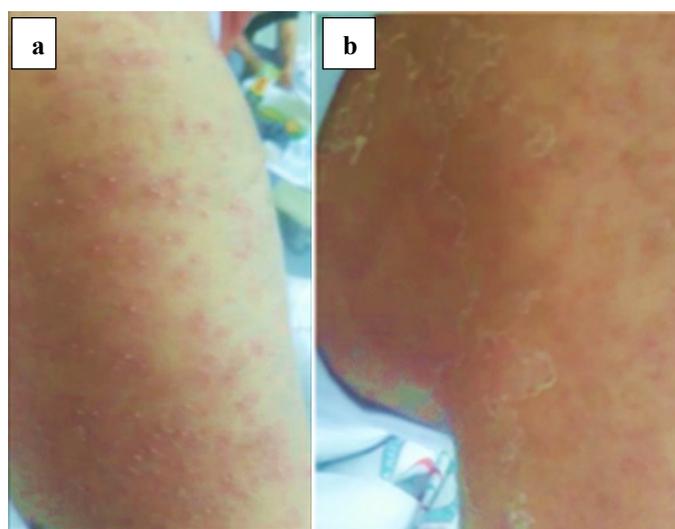


Figure 1. a) Pustular lesions and **b)** desquamation on the erythematous base in the upper extremities of the body

In laboratory analysis, Leukocytosis (WBC 10.96 / mm³) and neutrophilia (NEU 9.3 / mm³) were found. The patient was diagnosed with acute generalized exanthematous pustulosis

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(AGEP) with these histopathological and clinical findings. Hydroxychloroquine treatment was stopped. Local steroid, moisturizing and antihistamine treatment were initiated. During the follow-up of the patient, his lesions were observed to be regressed.

DISCUSSION

AGEP is a disease typically characterized by erythematous sterile pustules that rapidly develops within 48 hours after drug exposure⁴. The most common treatment agents that cause AGEP are aminopenicillins, macrolides, sulfonamides, terbinafine, diltizem and antimalarials as in our case⁵. COVID-19, severe acute respiratory syndrome, is a highly contagious respiratory disease, which is caused by coronavirus 2 (SARS-Cov-2), was defined in Wuhan, China for the first time on 11th December, 2019 and has been declared as a pandemic by the World Health Organization (WHO) on 11th March 2020. Millions of people have been infected until today. Many skin manifestations, such as urticarial, maculopapular, purpuric, livedoid, and thrombocytopenic similar to chickenpox are seen in COVID-19 infection⁶. In our case, skin rashes due to hydroxychloroquine, which is widely used in COVID-19 infection, was seen. As there may be skin rashes due to the disease itself, skin rashes may also develop depending on the drugs used in the treatment (especially hydroxychloroquine). This should be taken into account in terms of differential diagnosis. This case is presented to emphasize the importance of this.

Conflict of interest

There is no conflict of interest among the authors of the article.

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