A MACULOPAPULAR AND PUSTULAR RASH FOLLOWED BY ERYTHEMA MULTIFORME IN A PATIENT TREATED WITH HYDROXYCHLOROQUINE

Hatice Duman1, İltėris Oğuz Topal1, Kübra Cüre1, Emek Kocatürk1, Çağlar Çakır2
1Okmeydanı Training and Research Hospital, Department of Dermatology, Istanbul
2Okmeydanı Training and Research Hospital, Department of Pathology, Istanbul

ABSTRACT

Hydroxychloroquine (HCQ) is a synthetic antimalarial drug that has been used widely in the treatment of dermatologic and rheumatologic diseases. Anti-malarials cause many adverse reactions, with ocular, neurological, and cutaneous side effects being the most frequently described. The most common cutaneous adverse reaction is skin pigmentation. Two different clinical patterns in the same patient and erythema multiforme (EM) due to HCQ have rarely been reported. Here, we report a 51-year-old man with rheumatoid arthritis who developed maculopapular and pustular lesions, followed by EM after HCQ treatment.

Keywords: Hydroxychloroquine, erythema multiforme, side effect, maculopapular drug eruption.

INTRODUCTION

Hydroxychloroquine (HCQ) is a synthetic antimalarial that has been used widely in the treatment of dermatologic and rheumatologic diseases since 1950s due to its immunosuppressive and anti-inflammatory properties. The risks of HCQ treatment are low. Retinal damage and neuromyotoxicity are the most common adverse effects. HCQ-induced cutaneous adverse events have also been reported. However, HCQ-induced erythema multiforme (EM) combined with two different clinical patterns seen together in the same patient has rarely been reported. We report a patient who developed HCQ-induced maculopapular and pustular lesions and then EM.

CASE

A 51-year-old man was diagnosed with rheumatoid arthritis one month earlier and was treated with 200 mg/day HCQ and 4 mg/day prednisolone. Twenty-three days after starting the new treatment, he developed a red itchy rash that started on his left foot and then spread to the entire body. The patient had no personal or family history of psoriasis.

On the second day of his rash, he presented with macules, papules, and plaques with erythema accompanied by rare pustules on all extremities and the trunk (Figure 1). Three days after his first symptoms, his maculopapular and pustular lesions evolved into atypical target-like lesions on the trunk and extremities, which spread to the dorsal surface of the hands and palms (Figure 2); there was no mucosal involvement.

The patient had no fever (36.8°C). The hemogram (white blood cell count 9.03x10³/μL, neutrophils 68.9%, eosinophils 4.1%), urine examination, and kidney and liver functions were normal. Anti-cyclic citrullinated peptide was increased and rheumatoid factor, antinuclear antibody, anti-SSA, anti-SSB, and anti-dsDNA were negative. Viral serology for cytomegalovirus, Epstein–Barr virus, rubella, and toxoplasmosis were unremarkable. Bacterial and viral infections were ruled out. A punch biopsy from a pustule revealed orthokeratosis, subcorneal macro- and micro-pustule formation in the epidermis, acanthosis, basal vacuolar degeneration, spongiosis, edema of the papillary dermis, and inflammatory infiltrate on the papillary dermis (Figure 3). The HCQ and oral prednisolone were stopped after the initial presentation of the lesions. The patient was started on intramuscular methylprednisolone 40 mg/day. The next day, the dose was increased to 80 mg/day and administered intravenously; this dose was tapered to 0 mg/day over 2 months. The lesions had resolved completely by the 13th day of treatment, and no new lesions developed during the 7-month follow-up. A patch test with HCQ could not be performed.

Figure 1. Erythematous papules, plaques, macules and pustules on the trunk.

Figure 2. Atypical target-like lesions on lower extremities.

Figure 3. Histopathological findings of the lesion.
DISCUSSION

Cutaneous adverse reactions have been reported with HCQ treatment, such as generalized morbilliform eruptions, erythroderma, drug rash with eosinophilia and systemic symptoms syndrome, Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and acute generalized exanthematous pustulosis (AGEP).1,3,4 HCQ-induced EM has rarely been reported. Different types of cutaneous adverse reactions induced by HCQ seen together in the same patient have also been observed. Lateef et al. reported a patient who presented with features of AGEP and later developed EM-like lesions and was diagnosed with AGEP-TEN overlap as an adverse reaction to HCQ treatment.5 Pérez-Ezquerra et al. reported a case of two different types of cutaneous eruption induced by HCQ. This patient first presented with EM and subsequently developed a generalized pruriginous erythematous papular exanthema. This was the first case of EM in response to HCQ reported.6 Leckie and Rees reported four cases of EM associated with HCQ according to the Medicines Control Agency.7 Our patient had two different clinical presentations that are more common in patients with dermatomyositis than in patients with cutaneous lupus erythematosus.8

CONCLUSION

Clinicians should keep in mind that HCQ can cause maculopapular, pustular, and EM-like lesions.

*The authors declare that there are no conflicts of interest.