

## SHORT COMMUNICATIONS

### Cyclosporine for Severe Drug Eruption in a Psoriasis Patient

Sarina Singer<sup>1</sup>, Nahla Shihab MD<sup>2</sup>, Mark Lebwohl MD<sup>3</sup>

<sup>1</sup>Research assistant, Icahn School of Medicine at Mount Sinai, New York, NY

<sup>2</sup>Clinical Dermatology Fellow, Department of Dermatology, Icahn School of Medicine at Mount Sinai, New York, NY

<sup>3</sup>Professor and Chairman, Department of Dermatology, Icahn School of Medicine at Mount Sinai, New York, NY

#### INTRODUCTION

Exanthematous drug eruptions, also known as morbilliform or maculopapular drug rashes, are the most common types of drug hypersensitivity reactions.<sup>1</sup> They are believed to be driven by delayed-type, T cell-mediated type IVc reactions.<sup>2</sup> Eliciting drugs may induce the reaction directly or act as haptens. The most common culprits are antibiotics, including penicillins, cephalosporins, and sulfa drugs.<sup>3</sup> The principal management of drug eruption is to withdraw the offending drugs and provide supportive care. For severe reactions, systemic corticosteroids are the most commonly used therapies. We herein report a case of a psoriasis patient with a severe exanthematous drug eruption that was successfully treated with short term of oral cyclosporine.

#### CASE PRESENTATION

A 75-year-old male presented to our department with a generalized exanthematous eruption two days after taking doxycycline for Lyme disease. Upon physical examination there were multiple erythematous macules and papules on face,

trunk, and extremities. There were also multiple sharply demarcated erythematous scaly plaques on bilateral arms and legs. There was no fever, lymphadenopathy or hepatosplenomegaly. His body weight was 106 kg. His blood pressure, complete blood count, and chemistry screen were within normal limits. The patient had a history of psoriasis for which he was treated with topical corticosteroids as needed. We suspected that his new rash represented drug eruption, suggested discontinuation of doxycycline, and prescribed cyclosporine 250 mg by mouth twice a day. Because guidelines and publications advise against use systemic corticosteroids in patients with psoriasis,<sup>4</sup> we avoided oral prednisone to prevent exacerbation of psoriasis. The patient returned to the clinic one week after administration of cyclosporine with significant clearance of rash. The cyclosporine dose was then tapered down and discontinued within three weeks.

#### DISCUSSION

The diagnosis of drug eruption is highly suspected in a patient with acute rash who recently receive a new systemic medication. Diagnosis is made primarily by history taking and physical examination. Laboratory

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examination may be needed to exclude other diagnosis or involvement of systemic organ, in particular drug reaction with eosinophilia and systemic symptoms (DRESS). Our patient came with a severe generalized exanthematous rash two days after taking oral doxycycline. He did not have fever, lymphadenopathy, or hepatosplenomegaly. His blood work was within normal limit. Systemic corticosteroid is the most widely used treatment for severe drug eruption. However, in patient with psoriasis, systemic corticosteroid may cause disease deterioration after dose withdrawal.<sup>5</sup> We chose oral cyclosporine for our patient because it is usually rapidly effective and has not been associated with rebound flares of psoriasis upon its discontinuation. The cyclosporine proved to be effective for both his drug eruption and psoriasis. Cyclosporine is an immunomodulator drug that works by selectively inhibit calcineurin, resulting in impairment on the transcription of interleukin (IL)-2, tumor necrosis factor (TNF)-alpha, IL-3, IL-4, and interferon (IFN)-gamma.<sup>6</sup> Our patient began a 7-day course of oral cyclosporine at a dose of 5 mg/kg per day divided into twice daily dosing (250 mg twice daily). After one week of treatment, his eruption has significantly resolved. The cyclosporine dosage was then tapered gradually to 150 mg twice daily for one week and 100 mg twice daily for another week. The rapid and successful response in our patient suggests that cyclosporine could be a potential alternative treatment for severe drug eruption in patient with psoriasis or other condition where systemic corticosteroid is contraindicated.

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**Corresponding Author:**

Nahla Shihab, MD  
 Clinical Dermatology Fellow  
 Department of Dermatology, Mount Sinai Medical Center, New York, NY  
 5 E 98<sup>th</sup> street, New York, NY, 10029  
 Email: [nahla.shihab@gmail.com](mailto:nahla.shihab@gmail.com)

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