Hydroxycarbamide-induced dermopathy

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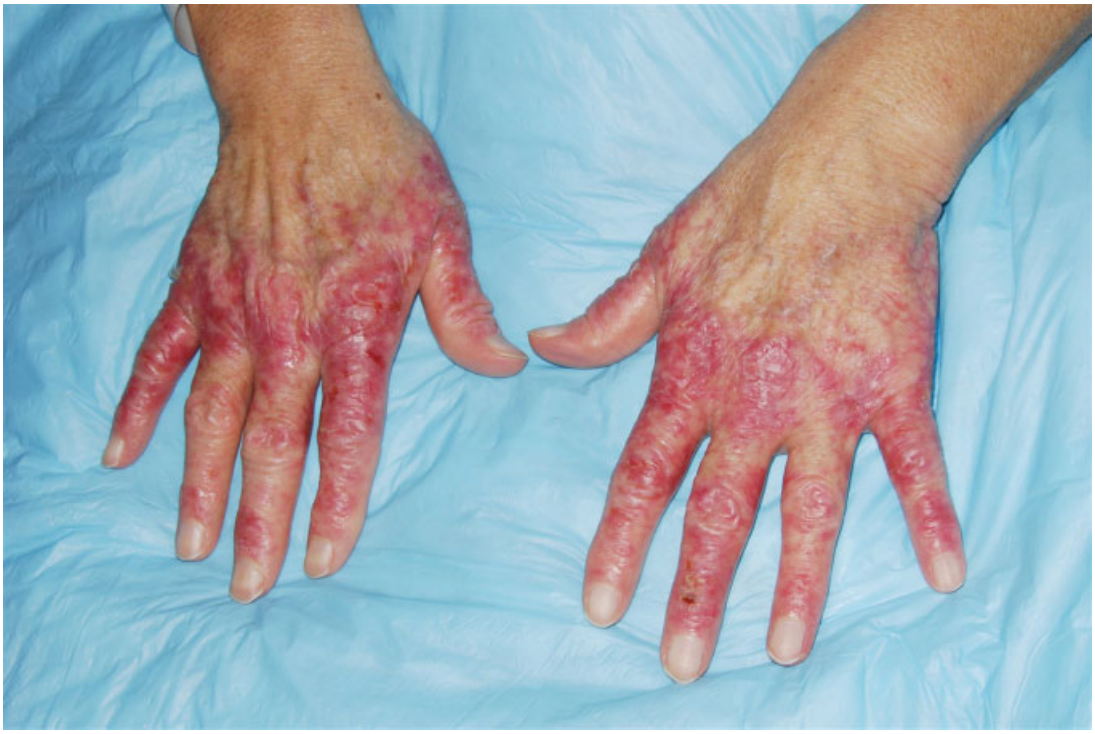

Image 1. Shiny, violaceous papules over the knuckles and erythematous, reticulated, scaly plaques on the fingers and the dorsum of the hands caused by reaction to long-term hydroxycarbamide therapy.

Hydroxycarbamide (hydroxyurea) is an agent administered orally for the treatment of chronic myelogenous leukemia, myeloproliferative disorders, thalassemias, erythrocytosis, and sickle cell anemia [1–3]. An estimated 13% of patients with chronic myelogenous leukemia have mucocutaneous changes with long-term hydroxycarbamide therapy [4]. Myriad cutaneous adverse effects from long-term hydroxycarbamide therapy have been noted in the medical literature, including a dermatomyositis-like erythematous eruption on the hands, mucositis and oral ulceration, hair loss, nail pigmentation, and hyperpigmentation of the face [5]. The most common cutaneous adverse effect of long-term hydroxycarbamide therapy is painful lower-leg ulcers that typically appear spontaneously, involve the lateral malleoli and exhibit poor healing [6,7].

A 62-year-old woman presented with an 18-month history of a painful and pruritic eruption on the dorsum of her hands. The patient's medical history showed myelodysplasia that had been treated with hydroxycarbamide for the past 5 years. Her hands showed shiny, violaceous papules over her knuckles and erythematous, reticulated, scaly plaques on her fingers and the dorsum of her hands (Image 1), mimicking Gottron papules and mechanic hands of dermatomyositis. Laboratory evaluation showed a negative result for antinuclear antibody and normal aldolase and creatine kinase values. A skin biopsy showed hyperkeratosis and epidermal atrophy. The basal layer showed vacuolar change and cytoid bodies. Direct immunofluorescence testing was negative for a lichenoid tissue reaction or lupus band.

The skin eruption improved with use of a midpotency topical corticosteroid and discontinuation of hydroxycarbamide therapy. After 7 months of follow-up, only cutaneous atrophy remained. Unfortunately, the patient's myelodysplasia had progressed to acute myelogenous leukemia.

Several terms have been used to describe the cutaneous changes of the hands associated with long-term hydroxycarbamide therapy, including hydroxyurea dermopathy, pseudo-

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Conflict of interest: Nothing to report.

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Received for publication 20 February 2009; Revised 20 March 2009; Accepted 23 March 2009

Am. J. Hematol. 85:75–76, 2010.

Published online 31 March 2009 in Wiley InterScience (www.interscience.wiley.com).
DOI: 10.1002/ajh.21421

dermatomyositis, dermatomyositis-like eruption, and dermatomyositis-like lesions [8,9]. The eruption on the hands is characterized by poikiloderma (i.e., atrophy, telangiectasias, and mottled pigmentation) with violaceous papules on the dorsum of the hands and on the fingers, erythematous plaques with scale mimicking mechanic hands of dermatomyositis, and, occasionally, nail fold infarcts [8,10]. Results on physical examination lack the proximal muscle weakness, heliotrope rash, and shawl sign typically seen with dermatomyositis [9]. Serologic testing usually shows a negative result for antinuclear antibody and normal aldolase and creatine kinase values.

A review of two larger case series showed an average age at onset of 60 years, a male-to-female ratio of 1.2:1, and an average time to onset of symptoms after initiation of hydroxycarbamide therapy of 56 months [8,11]. Hydroxycarbamide-induced dermopathy is most commonly seen in patients receiving therapy for chronic myelogenous leukemia [8]. Most patients (82%) have partial or complete improvement after discontinuation of hydroxycarbamide therapy; however, some patients have persistent cutaneous atrophy [8,11].

In summary, hydroxycarbamide-induced dermopathy is a dermatomyositis-like eruption on the dorsum of the hands that is seen occasionally with long-term use of hydroxycarbamide. Typically, discontinuation of the medication results in improvement of symptoms, with the exception of skin atrophy. Therefore, cessation of hydroxycarbamide therapy should be considered when hydroxycarbamide-induced dermopathy is found.

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