

Image Diagnosis: A Striking Bleomycin-Induced Skin Toxicity: Flagellate Hyperpigmentation

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CASE PRESENTATION

A 31-year-old man underwent left radical orchiectomy at our hospital for a growing left testicular mass. Pathology revealed a mature teratoma. Computed tomography scan of his abdomen and pelvis obtained in the following month revealed periaortic and pericaval adenopathy, with the largest nodal mass measuring 1.5 cm. Serum alpha-fetoprotein level was persistently elevated at 336.7 ng/mL (normal ≤ 9 ng/mL). Three months after surgery, our patient completed 3 cycles of bleomycin, etoposide, and cisplatin chemotherapy. During a follow-up visit a month later, physical examination revealed a painless, nonpruritic, linear hyperpigmentation on the patient's trunk (Figure 1). Six months after the skin pigmentation first appeared, our patient continued to have the hyperpigmentation and remained otherwise asymptomatic.

DISCUSSION

Flagellate dermatitis or hyperpigmentation has been reported in the setting of bleomycin therapy.¹ The term "flagellate" is derived from the Latin *flagellum*, referring to the characteristic whip-like appearance of the dermatitis.¹ The rate of flagellate hyperpigmentation in patients who are treated with bleomycin may be as high as 20%.² Onset of bleomycin-induced skin lesions can vary from 1 day to 2 months after bleomycin administration.^{3,4} Many patients present with urticarial rash and generalized pruritus, which ameliorates spontaneously when the lesions develop into their striking hyperpigmentation-like lesions.^{3,4} Our patient did not report any pain or itching. The pathogenesis of bleomycin-induced skin lesions is not clear, but a hypothesis is skin reaction to localized toxic levels of bleomycin.^{3,4}

Bleomycin is an antitumor antibiotic that was isolated from a strain of *Streptomyces verticillus*.² It is widely used to treat a variety of malignancies and warts, and it is used in chemical pleurodesis.² Bleomycin-related dermatologic toxicities include alopecia, skin ulceration (predominantly plantar-palmar), eczematous changes, erythematous bullae, sclerodermoid lesions, nail-bed changes, Raynaud phenomenon, painful inflammatory nodules on the fingers, warty hyperkeratotic plaques on the knees and elbows, digital gangrene, blisters, infiltrated violaceous plaques, and flagellate dermatitis.^{1,2,5} Other side effects include pneumonitis that may lead to lung fibrosis, which is an absolute indication to stop bleomycin therapy. Bleomycin may cause nausea, vomiting, fatigue, and stomatitis.^{1,5}

CONCLUSION

Bleomycin-induced skin lesions are usually self-limited and resolve within several weeks to months as long as bleomycin is avoided, although permanent hyperpigmentation in affected areas is not unusual.¹⁻⁴ The striking bleomycin-induced skin hyperpigmentation, as in our case, needs to be expected, and oncologists should discuss this adverse event with their patients before treatment. Primary care physicians should also be aware of this reaction because these patients may present for routine examinations. The image in Figure 1 is memorable and will benefit all clinicians or practitioners working with this patient population. No treatment is necessary apart from stopping bleomycin therapy because the lesions usually resolve spontaneously up to a year after discontinuation of bleomycin.¹ ♦

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

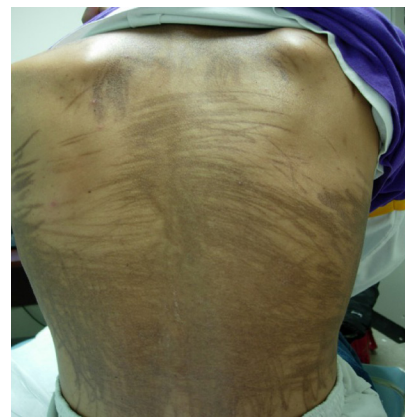


Figure 1. The painless, nonpruritic, linear hyperpigmentation on the patient's trunk, revealed during physical examination.

How to Cite this Article

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