

Pruritus and Hyperpigmented Streaks

What's the diagnosis?



A 57-year-old man presented to the dermatology clinic for evaluation of a widespread pruritic rash. The patient had a recent diagnosis of non-Hodgkin lymphoma and was currently undergoing chemotherapy with adriamycin, bleomycin sulfate, vinblastine sulfate, and dacarbazine. The patient's medical history included hypertension, which was well controlled, and a remote history of a stroke. The patient stated that the rash was recurrent and developed a few days after each dose of bleomycin. Review of systems was otherwise unremarkable, except for pruritus.

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The Diagnosis: Flagellate Hyperpigmentation

Physical examination of our patient revealed multiple linear, flagellate, and hyperpigmented plaques on the trunk. Similar lesions were seen on the upper and lower extremities. Given the patient's history of non-Hodgkin lymphoma and concurrent chemotherapy, the use of systemic steroids was avoided. Notable improvement in the symptoms was achieved with topical steroids (triamcinolone acetonide ointment) under occlusion and systemic gabapentin. The patient's chemotherapy is ongoing. This characteristic skin eruption often is seen after treatment with systemic bleomycin sulfate.

Flagellate hyperpigmentation following systemic bleomycin sulfate use as a chemotherapeutic agent is a well-known cutaneous reaction that occurs in approximately 10% of exposed individuals.¹ Bleomycin sulfate, an antibiotic derived from *Streptomyces verticillus*, is a commonly used antitumor agent for both hematologic and solid-organ malignancies.² Many patients develop generalized pruritus within several days after initiating bleomycin sulfate, followed by the characteristic linear and hyperpigmented streaks. The exact mechanism of this characteristic rash is unknown. Suggested pathways include induction of neutrophilic eccrine hidradenitis, postinflammatory pigmentary incontinence, and altered levels of melanin due to a toxic effect of the medication. Other commonly reported adverse events to bleomycin sulfate include alopecia and stomatitis.³

Although a diffuse rash is the most commonly reported cutaneous reaction to systemic bleomycin sulfate, there have been reports of hyperpigmentation only in areas of pressure and palmar creases.

Tsuji and Sawabe⁴ reported a case of hyperpigmentation limited to areas of striae distensae after systemic bleomycin sulfate. Flagellate hyperpigmentation also has been reported following intralesional bleomycin sulfate for the treatment of verruca plantaris. In that case, the patient had received 14 U of intralesional bleomycin sulfate injected at different sites of recalcitrant verruca and developed urticaria, generalized pruritus, and flagellate hyperpigmentation.⁵

Treatment of flagellate hyperpigmentation includes cessation of the medication, which is not always possible due to the need for an effective chemotherapeutic regimen. Most cases are reversible following discontinuation of bleomycin sulfate, and care is directed at symptom relief with antipruritic agents, antihistamines, systemic steroids, or topical steroids.³

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