

Pruritic and Erythematous Rash Resembling Marks Caused by a Lashing

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A 40-year-old man presented to the clinic with a sudden-onset pruritic rash of 4 days' duration. He denied any trauma and had no notable medical history. Furthermore, he denied taking any prescription or over-the-counter medications and had no known food or drug allergies. A review of systems was negative. He appeared well on physical examination with normal vital signs. A full-body skin examination displayed no mucosal lesions, but he had multiple areas of scattered and erythematous 1- to 2-mm macules and patches in a curvilinear parallel array on the shoulders (top), back (bottom), and neck.

WHAT'S THE DIAGNOSIS?

- dermatographism
- dermatomyositis flagellate erythema
- excoriation disorder
- keratosis lichenoides chronica
- shiitake mushroom dermatitis

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THE DIAGNOSIS: Shiitake Mushroom Dermatitis

Given the scattered and erythematous 1- to 2-mm macules and patches in a flagellate pattern on the shoulders, back, and neck, the differential diagnosis included shiitake mushroom dermatitis, bleomycin-induced flagellate dermatitis, dermatomyositis flagellate erythema, excoriation disorder, dermatographism, and keratosis lichenoides chronica. On further questioning, the patient indicated that he had consumed raw shiitake mushrooms 3 days before the onset of the rash. Although the clinical variability for all the conditions on the differential is notable, our patient had a history of consuming raw shiitake mushrooms, denied taking any medications, reported no repeated trauma, and had no muscular involvement or systemic symptoms, making shiitake mushroom dermatitis the most likely diagnosis.¹ Skin biopsy and blood tests were deemed unnecessary. Instead, the patient was prescribed triamcinolone cream 0.1%, counseled to avoid raw or undercooked shiitake mushrooms in the future, and told to follow-up if symptoms did not resolve. The patient's symptoms resolved, as expected.

Nakamura² first described shiitake mushroom dermatitis in 1977. The condition also is known as flagellate mushroom dermatitis or shiitake toxicoderma. It classically manifests in susceptible patients as a pruritic, linear, flagellated dermatitis within 24 to 48 hours after the consumption of raw or undercooked shiitake mushrooms (*Lentinula edodes*).³ Although the complete pathogenesis remains unclear, research suggests that either a toxic reaction or a type IV hypersensitivity reaction to lentinan causes the eruption. Lentinan is a thermolabile polysaccharide within the mushroom that is believed to increase the production of IL-1 and cause vasodilatation.⁴

Shiitake mushroom dermatitis is a clinical diagnosis based on the most common findings of a flagellate-pattern

dermatitis consisting of pruritic and erythematous papular or urticarial lesions, usually found on the trunk. Laboratory tests, skin biopsies, and allergy tests have been shown to be nonspecific and inconsistent.⁵

Shiitake mushroom dermatitis is a self-limiting condition, with the majority of symptoms resolving after one to several weeks.⁵ The mainstay of treatment is aimed at symptomatic management and usually consists of topical corticosteroids and antihistamines.³ More rapid resolution of symptoms has been reported with the use of short-term balneo-psoralen plus UVA therapy.⁶

Although a 2017 review of the literature described only 9 published cases of shiitake mushroom dermatitis within the United States as of July 2015, this number may be misleading given the possibility of more variable and subtle presentations misdiagnosed as a nonspecific dermatitis.⁵ Given this information and the fact that shiitake mushrooms continue to be a popular choice in American cuisine, this case reminds health care providers of the clinical manifestations, differential diagnosis, and management of flagellate dermatitis caused by consuming shiitake mushrooms.

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