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Title

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Permalink

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Journal

Dermatology Online Journal, 21(8)

Authors

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Publication Date

2015

DOI

10.5070/D3218028442

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Letter

Flagellate shiitake mushroom dermatitis

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Dermatology Online Journal 21 (8): 17

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Abstract

An 84-year-old woman presented with 5 days of a pruritic skin eruption that formed arciform and linear patterns. She was diagnosed with flagellate shiitake mushroom dermatitis related to shiitake mushroom consumption the day prior symptom onset.

Keywords: shiitake mushroom dermatitis, toxicoderma

Case synopsis

An 84-year-old woman presented to the dermatology clinic five days after the onset of a pruritic skin rash on her neck, trunk, and extremities. Treatment with methylprednisolone for three days provided no relief in her symptoms. Past medical history was non-contributory and there was no history of environmental allergies. Physical examination demonstrated slightly edematous, erythematous, non-blanching plaques in arciform and linear patterns arranged as parallel streaks on the proximal upper extremities, neck, and left lower extremity (Figures 1, 2, 3). Scattered petechiae were also noted on the extremities in proximity to the plaques.

Further questioning revealed that the patient had ingested shiitake mushrooms at an Asian restaurant one day prior to the onset of the eruption. She was diagnosed with flagellate shiitake mushroom dermatitis and was advised to avoid eating under-cooked shiitake mushrooms in the future.

Initially described in the Japanese literature in 1977 [1], the disorder is caused by a thermolabile polysaccharide toxin called lentinan, which is extracted from the shiitake mycelia. The flagellate, erythematous eruption is usually pruritic and occurs 24 to 48 hours after ingesting large amounts of raw or partially cooked shiitake mushrooms [2, 3].

Patch testing, skin prick testing, and histopathologic analysis are usually non-diagnostic, therefore a diagnosis is usually made by physical examination and historical ingestion of shiitake mushrooms. The eruption will spontaneously resolve in 1 to 4 weeks and can be prevented by thoroughly cooking shiitake mushrooms or avoiding ingestion [3, 4].



Figure 1. Erythematous, edematous arciform and linear streaks on the left lower extremity with petechiae.



Figure 2. Pruritic, linear, non-blanchable, erythematous, and edematous streaks on the right shoulder.



Figure 3. Grouped pruritic, erythematous, edematous linear streaks in an arciform pattern on the posterior neck.

References

1. Nakamura T. Toxicoderma caused by shiitake (*Lentinus edodes*). *Jpn J Clin Dermatol.*, 1977 31(2): p.65-68.
2. Girard C, Bessis D. Flagellate dermatitis. Shiitake dermatitis (toxicoderma). *Arch Dermatol*, 2010 146(11): p.1301-6. [PMID: 21079072].
3. Wang A, Barr K, Jagdeo J. Shiitake mushroom-induced flagellate erythema: A striking case and review of the literature. *Dermatol Online J.* 2013 19(4):5. [PMID: 24021365].
4. Lippert U, Martin V, Schwertfeger C, Junghans V, Ellinghaus B, Fuchs T. Shiitake dermatitis. *Br J Dermatol.* 2003 148(1):178-9. [PMID: 12534625].