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A gastronomic delight?

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Abstract

Lichen nitidus typically presents as shiny pin-head spots. Flagellate dermatitis (FD) exhibits a striking clinical appearance similar to whiplash marks. General dermatologists are likely to encounter this clinical appearance as a more localized presentation of phytophotodermatitis. Jellyfish stings may also cause localized linear or FD. Chemotherapeutic agents such as bleomycin, doxorubicin, docetaxel, and trastuzumab are well-recognized causes of a widespread FD and it may more rarely be seen in connective tissue disease such as dermatomyositis or Still disease. In our case, this was a presentation of shiitake mushroom dermatitis. The eruption of shiitake mushroom dermatitis occurs within hours to 7 days after eating the raw or lightly-cooked mushroom; it resolves spontaneously within 1 to 3 weeks without hyperpigmentation. In terms of management, topical steroids, emollients, oral antihistamines, and psoralen ultraviolet A phototherapy may be helpful for symptomatic relief. Re-ingestion of shiitake mushrooms is believed to be safe if they are thoroughly cooked at a temperature over 145°C to allow denaturation of the toxin. We share this case to remind clinicians of the striking features of shiitake dermatitis, to facilitate an immediate diagnosis, appropriate management, and reassurance for presenting patients.

Keywords: dermatitis, flagellate dermatitis, shiitake mushroom

Case Synopsis

A 35-year-old man presented with a 4-day history of a generalized mildly-itchy rash. He was usually fit and well, taking no regular or over-the-counter medications. He had no recent travel and no unwell close contacts. He had no hobbies of note and had not been gardening. He denied scratching his skin.

On examination, he had a widespread striking eruption over the torso and limbs (**Figure 1**). Multiple linear lesions, urticated in some areas, coalesced into erythematous plaques, giving a 'zebra-like' appearance. There was no mucosal involvement, blistering, or dermographism. During the clinic, he telephoned the restaurant where he enjoyed a tasting menu 6 days previously and was informed that pickled shiitake mushrooms comprised one of the starters.

Case Discussion

Flagellate dermatitis (FD) exhibits a striking clinical appearance. The similarity to whiplash marks explains its nomenclature (Latin flagellum means whip). General dermatologists are most likely to encounter this clinical appearance as a more localized presentation of phytophotodermatitis [1]. Typically, an individual enjoys gardening on a sunny bank holiday and presents two days later with a localized FD. Culprit plants include the umbelliferae such as hogweed and celery, but similar eruptions may also be seen following contact with citrus such as lime

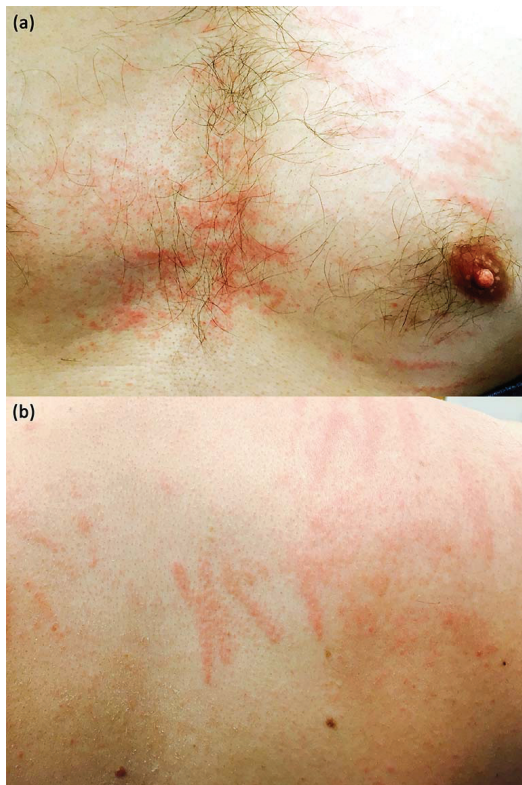


Figure 1. Photographs of the patients A) chest and B) back showing a generalised erythematous linear eruption of papules and plaques.

when making cocktails in the sun. Post-inflammatory hyperpigmentation may be very problematic in these cases [1]. Jellyfish stings may also cause localized linear or FD. Chemotherapeutic agents such as bleomycin, doxorubicin, docetaxel, and trastuzumab [2] are well recognized causes of a widespread FD and it may more rarely be seen in connective tissue disease such as dermatomyositis or Still disease [2]. Symptomatic dermatographism and dermatitis artefacta are also in the differential diagnosis.

The shiitake mushroom (*Lentinula edodes*), popular in Chinese and Japanese cuisine, is the second most commonly produced edible mushroom worldwide [3]. The association of shiitake mushrooms and FD, known as shiitake dermatitis (SD), was first described by Nakamura in 1977 [3]. Japan and China have the highest prevalence of SD. However, the growing popularity of Asian cuisine in the Western world has led to an increasing number of SD cases in the UK [3, 4].

The SD eruption occurs within hours to 7 days after eating the raw or lightly-cooked mushroom. It is benign and self-limiting, may be pruritic, and

resolves spontaneously within 1 to 3 weeks without hyperpigmentation [2-6]. The pathogenesis of SD remains unclear. Reports suggest a toxic reaction to a thermolabile polysaccharide, lentinan, which is found in fresh, powdered, or lightly-cooked shiitake mushrooms. Lentinan promotes systemic interleukin-1 secretion, leading to vasodilation, hemorrhage and rash [6].

Diagnosis is based on clinical history and examination. Typically, one sees a generalized 'zebra-like' erythematous linear eruption of papules, vesicles, or plaques, sparing the mucosal surfaces [2-6]. Investigations are usually unnecessary. Patch testing and skin prick testing are not helpful for diagnosis, suggesting a non-allergic pathogenesis. Histology is non-specific [4].

In terms of management, topical steroids, emollients, oral antihistamines, and psoralen ultraviolet A phototherapy may be helpful for symptomatic relief [5]. Our patient was treated with topical corticosteroids and the eruption resolved in 3 weeks, without post-inflammatory hyperpigmentation.

Re-ingestion of shiitake mushrooms is believed to be safe if they are thoroughly cooked at a temperature over 145C to allow denaturation of the toxin [6].

We share this case to remind clinicians of the striking features of shiitake dermatitis, to facilitate an immediate diagnosis, appropriate management, and reassurance for presenting patients.

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