

Don't miss shiitake dermatitis:

a case report

BACKGROUND

Shiitake mushrooms play a significant role in East Asian culture as a widely used culinary ingredient. With the increasing popularity of Japanese food in the UK, they are now widely available in British supermarkets. Little known, however, is the risk of a reaction from consuming raw or undercooked shiitake mushrooms, which manifests as a cutaneous eruption about 2 days after ingestion. While this reaction is well-recognised in East Asia, there is a need for UK GPs to be aware of this reaction and know how to manage it.

CASE PRESENTATION

A 62-year-old male presented with a 3-day history of paraesthesia of the hands, which evolved into an intensely pruritic, erythematous linear eruption on the trunk and limbs (Figures 1 and 2). In addition, he exhibited a coalescing papular rash on the dorsum of his hands. There was no mucosal involvement. He reported consuming raw shiitake mushrooms

2 days before the symptoms started. He was initially started on oral steroids, which were discontinued following review in the dermatology clinic. He was treated with a short course of potent topical steroids and antihistamines. As a result of the history, characteristic appearance, and absence of systemic symptoms, skin biopsy and blood tests were not performed. The patient returned to the clinic 7 days later with almost full resolution of pruritus and only mild erythema.

DISCUSSION

Shiitake mushroom dermatitis was first described by Nakamura in 1977. It is a flagellate dermatitis that is seen about 2 days after consumption of raw or incompletely cooked shiitake mushrooms in susceptible individuals.¹ In addition to their culinary uses, experimental studies have suggested that shiitake mushrooms could potentially confer therapeutic effects on blood pressure and cholesterol levels.² Lentinan, a thermo-susceptible polysaccharide derived from

Figure 1. Shiitake dermatitis (abdomen).



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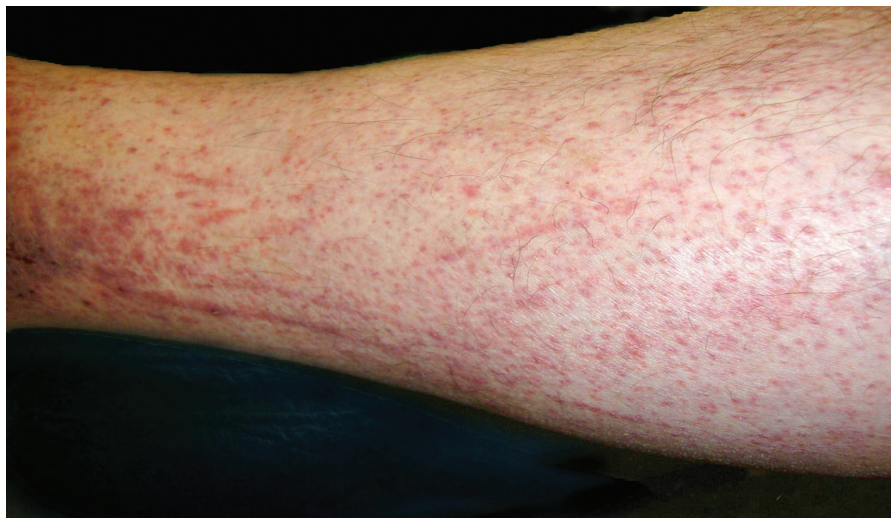
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Figure 2. Shiitake dermatitis (leg).



shiitake mycelia, may also have anti-carcinogenic properties.¹

Lentinan is also responsible for the toxic reaction in some individuals who consume raw or undercooked shiitake mushrooms. Thorough cooking ensures a thermally induced conformational change of lentinan and leads to its inactivation.³

Due to the variable clinical manifestations, the differential diagnosis includes conditions such as allergic contact dermatitis, drug eruptions, and even herpes zoster, due to reports of unusual linear vesicular lesions appearing in a dermatomal fashion.⁴

The diagnosis is usually made on clinical history and examination alone. Shiitake dermatitis is usually a self-limiting condition that resolves over several weeks and treatment with oral corticosteroids is generally not necessary. There have however been reports of rapid resolution of pruritus with short-term psoralen ultra-violet A (PUVA) phototherapy.⁵ Although systemic involvement is usually not seen in shiitake dermatitis, it is important to exclude the presence of fever, lymphadenopathy, and oedema, particularly of the face, as the possibility of an atypical 'DRESS'-like syndrome (Drug Reaction with Eosinophilia and Systemic Symptoms) has been reported.⁶

It is likely that this reaction will be seen with increasing frequency. It is important for GPs to be aware of it in order to facilitate prompt diagnosis and management, and to be able to educate members of the public about the potential side effects of raw shiitake mushroom ingestion.

AN OVERVIEW OF THE CONDITION

- A thorough food history is a vital part of the general dermatological history.

- Presence of systemic involvement should prompt routine laboratory investigations (full blood count, urea and electrolytes, and liver function tests) and referral to the dermatology team.
- Further consumption of shiitake mushrooms by susceptible individuals, especially raw or partially cooked, may lead to a further eruption and should be avoided.
- The condition is self-limiting in the majority of cases with symptomatic measures and discontinuation of the trigger, with no known long-term consequences.

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Patient consent

The patient has consented to publication of this article and the associated images.

Provenance

Freely submitted; not externally peer reviewed.

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