A wide-spread flagellate dermatitis

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SUMMARY

A 45-year-old gentleman presented with an intensely itchy, widespread eruption which had been present for 5 days. He was otherwise fit and well. On examination there was a florid, erythematous, papular, flagellate rash over the trunk and limbs. The gentleman had eaten shiitake mushrooms 10 days earlier. The diagnosis was shiitake dermatitis and the rash settled spontaneously.

BACKGROUND

Shiitake dermatitis is a striking rash, more common in countries where shiitake mushrooms are eaten commonly. It can be difficult to diagnose as there is a delay between ingestion and the eruption.

CASE PRESENTATION

A 45-year-old gentleman presented with an intensely itchy, warm-feeling, widespread rash which started on the trunk (figure 1) before spreading rapidly to the limbs (figure 2). The eruption had been present for 5 days. He had no medical history of note, no previous dermatological complaints and was taking no medications. On detailed questioning he told us that 10 days earlier he had prepared and eaten a meal which included large amounts of lightly cooked shiitake mushrooms.

On physical examination the gentleman had a florid, erythematous, papular rash on a background of erythema over the abdomen, chest and limbs.

There were flagellate linear streaks where the papules had coalesced on the abdomen and the back (figure 3). There was no dermographism. Mucosal surfaces were normal.

DIFFERENTIAL DIAGNOSIS

The diagnosis here was shiitake dermatitis. Flagellate patterns of eruption have also been noted in drug reactions to bleomycin, peplomycin (a bleomycin derivative), docetaxel, dermatomyositis and adult-onset Still's disease.¹

TREATMENT

There is no treatment for shiitake dermatitis. The rash settles spontaneously.

OUTCOME AND FOLLOW-UP

The rash had cleared within 1 week.

DISCUSSION

The first case report of shiitake mushrooms (*Lentinula edodes*) causing dermatitis was described by Nakamura² in Japan, and termed as toxico-derma. The condition has since been reported in the European population.³

Shiitake dermatitis is due to lentinan which is found in shiitake mushrooms. This substance is broken down by heat so the dermatitis only occurs following ingestion of raw or lightly cooked shiitake mushrooms.⁴ Lentinan is well known for its health benefits (eg, lowering blood pressure and serum cholesterol).⁴ In Japan, lentinan is used therapeutically in cancer treatment and a flagellate dermatitis following such treatment has been well documented.⁵

There is a time delay between ingestion and eruption which can complicate the diagnosis. Garg and Cockayne⁴ describe the case of a male patient

Figure 1 Flagellate streaks on the back.

Figure 2 Rash on lower legs.

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Figure 3 Close up of flagellate streaks.

who experienced this reaction intermittently over a 16-year period before the connection and diagnosis were finally made. The postulated mechanism is via the secretion of interleukin 1 which in turn leads to vasodilation, haemorrhage and eruption. The mechanism is not due to allergy so patch testing and skin prick testing have no place.⁶

Learning points

- ▶ Shiitake dermatitis is a widespread, itchy, erythematous flagellate eruption.
- ▶ Shiitake dermatitis is due to lentinan which is broken down by heat.
- ▶ Patch testing and skin prick testing are not appropriate.
- ▶ The condition is self-limiting and requires no treatment.
- ▶ Differential diagnosis of a flagellate eruption includes chemotherapy drug reactions and connective tissue disease.

Competing interests None.

Patient consent Obtained.

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