

PHYTOPHOTODERMATITIS AFTER GARDENING

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Abstract

Phytophotodermatitis, otherwise known as ‘Strimmer’s Rash’ is an unusual cause of a widespread rash. We present a case of phytophotodermatitis, which was initially misdiagnosed as chickenpox; the correct diagnosis was made after further careful history taking and illustrates the importance of taking a thorough history when presented with what appears to be a spot diagnosis.

Introduction

‘As a rule, the more bizarre a thing is, the less mysterious it proves to be.’
– Sherlock Holmes [1]

Phytophotodermatitis is an unusual cause of a rash which is induced, as the name suggests, by exposure to plant juices and sunlight. It is self-limiting. It may easily be misdiagnosed as other rashes such as chickenpox. We present a case of phytophotodermatitis in an otherwise fit healthy male.

Case Report

A 29 year old otherwise healthy soldier presented to his medical centre with an erythematous rash which was beginning to blister; this was initially diagnosed by a unit MO and treated as chickenpox. He was stood off duties. The diagnosis was questioned when he re-attended two days later as the rash was non-pruritic and had an unusual distribution confined to the anterior chest and upper arms only (Figures 1 & 2). The patient also had a probable history of chickenpox as a child and was systemically well. A further detailed history revealed that two days before the rash started he had been strimming a large area of weeds whilst bare-chested and reported some minor skin irritation from plant contact that day. The weather had been good that weekend and he had spent some of the next day sunbathing. The diagnosis was changed to one of phytophotodermatitis and he was treated symptomatically and allowed back to work.



Figure 2. Close-up view of the blistering rash.



Figure 1. Chest and arm distribution of the patients maculopapular rash.

Discussion

This is phytophotodermatitis (strimmer’s rash). During strimming, plant matter is sprayed everywhere. Some plants’ juices contain natural psoralens of the furocoumarin family and these are absorbed into exposed skin. In the UK, Giant Hogweed (*Heracleum mantegazzianum*) is particularly implicated [2,3], but many plants and plant products have been identified as causing phytophotodermatitis including cow parsnip (*H. sphondylium*), parsnip (*Pastinaca sativa*), celery (*Apium graveolens*), fig (*Ficus carica*) and bergamot lime oil (*Citrus bergamia*). Circumoral phytophotodermatitis has been reported from sucking lemons or limes [4]. Forearm and hand lesions have been reported from accidental skin contact with lime juice, especially in bartenders in outside bars (so-called ‘lime disease’)[5,6].

When the skin is exposed to sunlight, UVA (between 320-380nm) strikes the psoralen and energy is absorbed. This raises the psoralen from the ground state to an excited state. As it returns to the ground state the energy is released as heat, fluorescence and/or phosphorescence. Two separate toxic reactions lead to cell death. Firstly, an anaerobic reaction in which the excited psoralens bind to RNA and DNA, and secondly, an aerobic reaction in which the excited psoralens cause cell membrane damage and oedema [5].

The rash typically appears between 24-72 hours after exposure. The affected area can have a very clear line of demarcation where unaffected skin has been protected by clothing; such as an ‘inverse’ stocking distribution if the patient was barelegged but wearing socks at the time of exposure to the psoralen [7].

Treatment is symptomatic with vigilance for secondary infection as the blisters burst. As the rash subsides it usually leaves areas of localized hyperpigmentation; this may take some weeks to fade [6].

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