

CONTACT POINT

Erythema multiforme major induced by exotic wood

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Exotic woods are commonly used in the furniture and construction industry.¹ The tropical hardwood pao santo or pao ferro (*Machaerium scleroxylon* Tul.) is a known irritant of the upper airways, but there are also some dermatoses induced by this wood, namely, irritant and allergic contact dermatitis.^{1,2} However, there are few reports of tropical wood-induced erythema multiforme in the literature.¹⁻⁵

intense pruritic dermatosis progressed to the trunk and, to a lesser extent, the lower limbs.

Dermatological examination showed target lesions, some with tense bullae arranged on the margins, on the upper limbs, trunk, and lower limbs (Figures 1–3). Cutaneous detachment and erosions were present on <20% of the body surface area, particularly on the back, and the Nikolsky sign was positive. There were also erosions of the oral mucosa and oedema of the glans penis. This clinical picture suggested a case of erythema multiforme major.

CASE REPORT

A 51-year-old male construction worker with type 2 diabetes mellitus, hypertension, and dyslipidaemia, treated for several years with metformin, olmesartan/amlodipine, and atorvastatin, was admitted to the department of dermatology because of the sudden appearance of facial oedema accompanied by erythema and tense bullae with onset in the head, neck, and upper limbs, evolving during 3 days. Later, the



FIGURE 1 Target lesions on the trunk and upper limbs



FIGURE 2 Detail of the target lesion with tense bullae arranged on the margins and erosions on the right arm



FIGURE 3 Tense bullae on both upper extremities

Laboratory examinations, namely infectious serological investigations for herpes simplex virus, Epstein-Barr virus, cytomegalovirus, and *Mycoplasma pneumoniae*, gave unremarkable findings.

A skin biopsy taken from a target lesion of the left arm showed the formation of subepidermal blisters containing lymphocytes mixed with eosinophils and necrotic keratinocytes, which are aspects compatible with the clinical diagnosis of bullous erythema multiforme.

The patient was treated with prednisolone and intravenous immunoglobulins, with progressive clinical improvement. Skin and mucosal lesions completely resolved within 2 weeks.

The patient denied previous viral infection, particularly with herpes virus, or the introduction of new drugs. However, after detailed questioning, he revealed that, in the week previous to the onset of the dermatosis, he had handled a different exotic wood (pao santo/ferro; *M. scleroxylon* Tul.) at his workplace.

One month after the dermatitis had healed, patch tests with the Portuguese Contact Dermatitis Group baseline series and sawdust of *M. scleroxylon* (10% and 20% in pet.) in Finn Chambers were applied to the upper back. Strong positive bullous reactions to the tropical wood were detected on day 3, and persisted on day 7 (Figure 4). The sawdust patch test gave negative results in 20 controls. Unfortunately, the patient did not agree to a biopsy of the positive patch test reaction.

DISCUSSION

Erythema multiforme is traditionally caused by herpes simplex virus infection or drugs, but there are an increasing number of rarer causes,



FIGURE 4 Positive reactions to *Machaerium scleroxylon* (10% and 20%: +++) on day 3

such as other virus and bacterial infections, chemical compounds, neoplasms, and contact allergy.^{3,6} Few cases of contact allergy to *M. scleroxylon* as a cause of erythema multiforme have been published.^{1–5} These cases are mainly occupational in nature, and the presumed causative antigen is the R-3,4-dimethoxydalbergione present in pao ferro but not, in spite of the name, in *Dalbergia* species.² The exact pathophysiology that results in contact allergy causing erythema multiforme is still not completely clear, but a possible explanation is that the percutaneously absorbed antigen produces the formation of an immune complex that may subsequently be deposited in the microvasculature.³

Although rare, exotic woods need to be considered as potential causes of severe dermatitis such as bullous erythema multiforme major. This case also shows the importance of an active and focussed clinical interview and patch tests to find the culprit agent.

Conflict of interest

The authors declare no potential conflict of interests.

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