

Mango dermatitis: an unusual cause of eyelid dermatitis in France

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A case of recurrent episodes of acute eyelid allergic contact dermatitis due to mango ingestion is hereby reported. Mango dermatitis is unusual in Europe but more cases might occur with the increase in international traveling.

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Case report

A 30-year-old female patient was referred for recurrent erythematous swelling of the right eyelid for 2 years associated with a discrete vesicular cheilitis (Figure 1). She also reported few occurrences of palatal mucosal damage and an isolated episode of erythematous rash of both thighs. The lesions persisted each time for one week. She was first diagnosed and treated as recurrent herpes simplex virus infection.

She had previously lived in USA between 1998 and 2005 as a teenager and had experienced at least one unexplained acute vesiculo-bullous hand dermatitis while living in New-Caledonia between 2014 and 2016 ; additionally, she reported a past history of allergic contact dermatitis to tea tree oil and to a scented shower gel. Further questioning revealed that she suspected ingestion of some exotic fruits such as mango, pine apple and passion fruit in the triggering of mucocutaneous lesions.

Patch-tests were carried out on the upper back, using IQ ultra TM patch-test chambers (Chemotechnique, Vellinge, Sweden) occluded for 2 days with Oper[®] tape (Iberhospitex, Innovative Health Technologies, Barcelona, Spain) and included the European baseline series along with additional tests from the REVIDAL group, cosmetic series, fresh mango pulp and peel, fresh pulp of pineapple and passion fruit. Tests were read at (D)2 and D3 according to the ESCD criteria [1]. Positive reactions were observed for limonene hydroperoxide 0,3%pet (+? on D2 and ++ on D3), tea tree oil 5%pet (+ on D2 and ++ on D3), with a past relevance for the first two and a current relevance for fresh mango pulp and skin (++ on D2 and D3) (Figure 2).

Discussion

Mango is a tropical fruit from the mango tree (*Mangifera indica*) that belongs to the Anacardiaceae family. This family includes of which other principal members such as poison ivy, Japanese lacquer tree, sumac, cashew and pistachio may cause well-known allergic phytodermatitis [2,3].

The delayed allergic reaction presented as an acute vesicular dermatitis linked to mango ingestion, mostly affecting eyelids, lips and the perioral area [4,5]. On the other hand, systemic contact dermatitis by ingestion of mango has been already reported with a

widespread eruption with a vasculitis appearance in one case, and an acute eczema of face, neck and upper extremities in the other case [6]. We think that in our case, it was rather a systemic contact dermatitis than a hand transfer dermatitis because of the systematic occurrence of a right eyelid dermatitis after mango ingestion and the fact that the patient always washed immediately her hands after eating mangoes.

Main allergens accounting for delayed hypersensitivity to mango are heptadecadienylresorcinol, heptadecenylresorcinol and pentadecylresorcinol. These substances are related to and may cross react with the catechol (urushiol) of the poison ivy group, which is known to cause allergic contact dermatitis, especially in American countries [7]. They are found mostly in the fruit skin, the sap, the bruised leaves and the stem [7]. Mango pulp contact reactions are rare compared to reactions to the skin of the fruit [4,8].

Our patient has been potentially sensitized to these components during her stay in United States through a contact with other plants belonging to the Anacardiaceae family for example poison oak or poison ivy or when she lived in New-Caledonia and experienced vesicular/bullous hand dermatitis.

Allergic contact dermatitis to mango is rare in Europe but more cases could occur with the increase in global travel.

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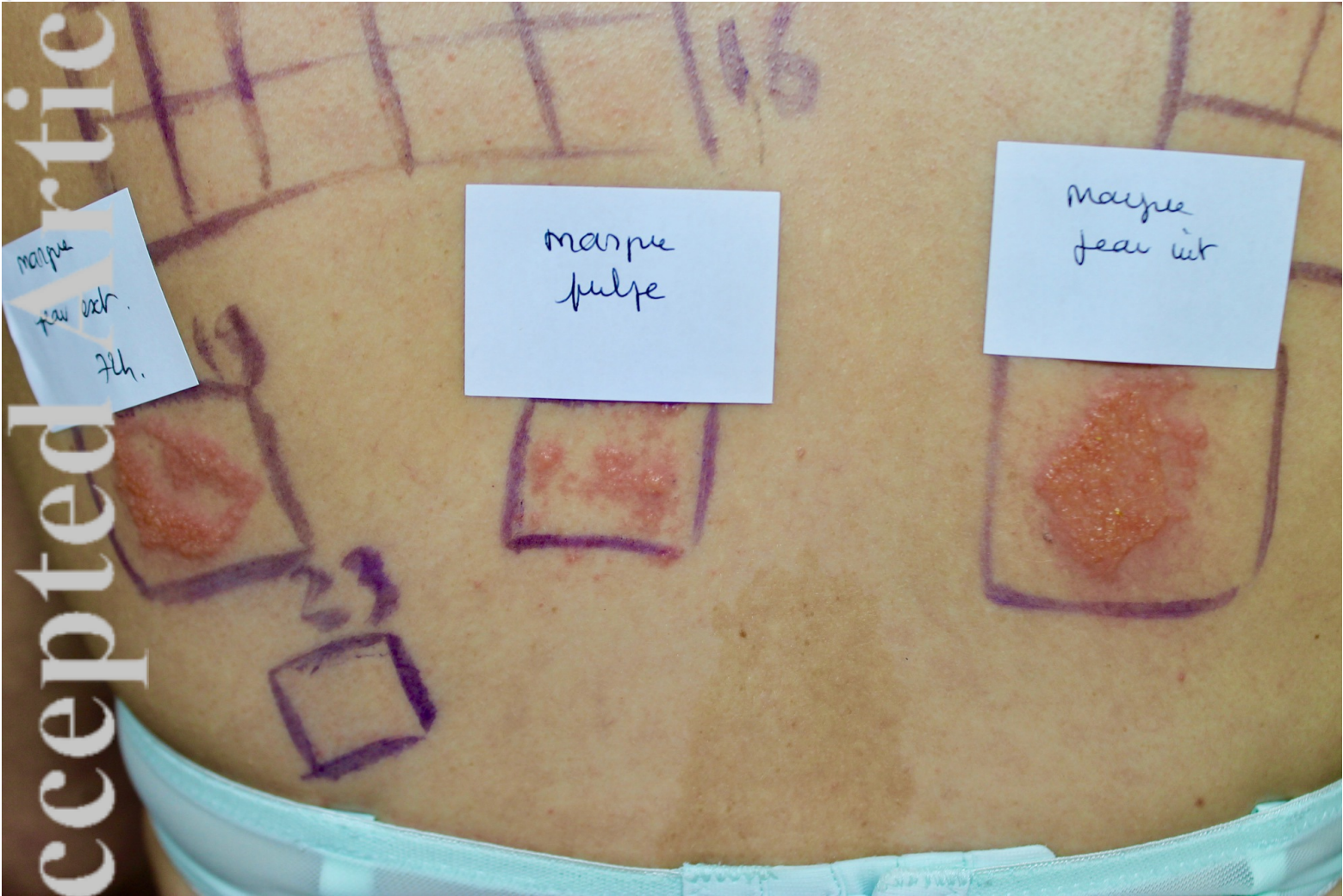
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Figure 1. Acute erythematous and edematous right eyelid dermatitis

Figure 2. Positive patch tests to pulp and skin (inner and outer part) of mango ++ on D3



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