Letters to the Editor

Case Letters

Fingertip eczema to pooja flowers: Allergic contact dermatitis to Tabernaemontana divaricata and Tecoma stans

Sir,

A 46-year-old woman presented with hyperkeratotic eczema and painful fissuring of the thumb, forefinger and third finger of the right hand (her dominant hand) of several months duration [Figure 1a and b]. Her lesions used to subside with the application of topical corticosteroids, but would reappear on stopping them. Detailed questioning revealed that she was in the habit of plucking certain flowers (crape jasmine and yellow bell) for her daily morning pooja ritual [Figure 2]. The possibility of allergic contact dermatitis to the flowers was considered and she was investigated accordingly. She was patch tested on the upper back with the Indian Standard Series (ISS) - allergens supplied by Systopic Pharmaceuticals, New Delhi, manufactured by Chemotechnique Diagnostics (Sweden), as well as with the concerned flowers and tubular base. Both the single “pinwheel” form and the double-flowered form of the crape jasmine were tested. These patches were applied using aluminum chambers on micropore tape (Systopic Pharmaceuticals, New Delhi, India) and removed after 2 days. Readings were interpreted as recommended by the International Contact Dermatitis Research Group. Prick testing with the flowers was also carried to rule out type I hypersensitivity, with histamine and saline as positive and negative controls respectively. On day 2, ++ reactions were seen on the sites tested with the flowers and the pedicle of the pinwheel variety [Figure 3], while the sites tested with the Indian Standard Series showed no reactions. The day 4 reading also showed ++ reactions to the flowers [Figure 4]. Prick tests using the flowers were negative.

Since using the flowers was part of her daily routine, she was advised either to avoid using the flowers, or to cut them using scissors. She chose to use other flowers for her ritual. Her lesions subsided completely with topical corticosteroids.

Fingertip eczema with painful fissuring involving the dominant hand is likely to be cumulative insult dermatitis, but when strictly localized to the thumb, forefinger and third finger, it points to...
The yellow bell (Tecoma stans, family Bignoniceae) belongs to the trumpet vine family and is a perennial flowering shrub native to North Central and South America, which is now well established in India [Figure 2]. This plant has medicinal uses and the flowers are popular as pooja flowers in Tamil Nadu, but contact dermatitis has not been reported. Numerous monoterpene alkaloids, iridoid glycosides, indolic compounds and the novel monoterpene alkaloid, 5-hydroxy-skytanthine hydrochloride have been identified from the fruits and flowers.[6] However, the allergens have not been characterized, as allergy to the yellow bell appears to be very rare. Plucking both these flowers daily for pooja could have resulted in sensitization in our patient. In cases of allergic contact dermatitis to flowers, it is often difficult to determine the exact allergen responsible for the patient’s symptoms as patients may not be interested in further testing with individual allergens. To prevent sensitization to other flowers, using a pair of scissors to cut the stalk would be advisable for those engaged in the pooja ritual at home, temples or sacred places.

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Floral offerings are an essential component of the pooja ritual, both at home as well as in temples and sacred places. For daily use during pooja, flowers grown in the garden are ideal. The crape jasmine (Tabernaemontana divaricata, family Apocyanaceae), a native of India now distributed worldwide, is a succulent evergreen shrub, with pure white flowers having a yellowish tubular base. There are two forms, the single “pinwheel” form and the double-flowered form [Figure 2].[3] About 66 alkaloids (tryptamines, 2-phenylethylamine, ephedrine, aporphines, ibogaine, L-DOPA, protoberberine alkaloids, tetrahydro-β-carbolines, and tetrahydroisoquinolines with monoamine oxidase inhibitor activity) have been obtained from Tabernaemontana divaricata and find use in the treatment of neurodegenerative disorders like myasthenia gravis and Alzheimer’s disease.[4] The exact nature of the allergens is not yet fully characterized, as allergy to the plant or its flowers is very rare.[5]
Tattoo inoculation lupus vulgaris in two brothers

Sir,

Tattooing is widely prevalent among various races across the world for ornamental, religious and traditional purposes.[1] There is an increased trend of tattooing among the young population that puts them at risk for many infective and noninfective disorders.[2] We report an uncommon occurrence of tattoo inoculated cutaneous tuberculosis presenting as lupus vulgaris in two siblings who responded to standard antitubercular therapy.

Two brothers aged 15 (Case 1) and 12 years (Case 2) presented to the dermatology outpatient department of Guru Teg Bahadur Hospital, Delhi, with complaints of skin lesions at the tattoo site for 2 months. Both had been tattooed around 5 months back at a religious fair at the same sitting with the same needle and ink. After 3 months, both developed scaling and painless thickening at the tattoo site which gradually progressed beyond the tattoo margin. There were no other significant complaints in either of them or in any other family members.

On examination of Case 1, a single erythematous plaque measuring 7.2 × 5.1 cm involving the tattoo over the dorso-lateral aspect of left hand was seen. The centre of the plaque showed atrophy and minimal scaling [Figure 1a]. There were no other abnormalities on examination.

Examination of Case 2 revealed a single erythematous plaque present over the dorso-lateral aspect of right forearm measuring 2.5 × 1.5 cm. The plaque surface extended beyond the A shaped tattoo and showed atrophy [Figure 1a]. He also had significant epitrochlear and axillary lymphadenopathy that on fine needle aspiration cytology showed reactive changes. His systemic examination was unremarkable.

We considered the possibilities of tattoo inoculated lupus vulgaris, subcutaneous mycosis, borderline tuberculoid leprosy, tattoo sarcoid and granulomatous dermatitis. In both brothers, the chest X-rays, ultrasonography of the abdomen and hematological investigations were unremarkable except for an elevated erythrocyte sedimentation rate. Screening for human immunodeficiency virus, hepatitis B antigen and hepatitis C antibodies were also negative. The Mantoux test revealed an induration of 15 and 18 mm after 2 days in Case 1 and 2, respectively.

Skin biopsy from both cases revealed similar findings: hyperkeratosis, acanthosis, a dense inflammatory infiltrate comprising predominantly of mononuclear cells present throughout the dermis and foci of granulomatous infiltrate [Figure 2a and b]. There was also evidence of secondary granulomatous vasculitis and exogenous pigment consistent with tattoo. Examination of periodic acid-Schiff, silver nitrate and Fite-faraco stained slides failed to reveal any organisms. In Case 2, tissue sent for mycobacterial culture grew *Mycobacterium tuberculosis* and polymerase chain reaction (PCR) was positive for 173 bp of mycobacteria. Culture for fungus and atypical mycobacteria were negative in both cases.