

Plant contact dermatitis in devotees

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Introduction

Contact dermatitis is an eczematous reaction resulting from the interaction of an external substance with the skin. About a third of contact dermatitis is due to plants¹. Contact dermatitis due to various parts of plants among people who come in contact with plants in their day to day life is well known. Contact dermatitis due to plants such as *Titania diversifolia* has been reported before in Sri Lanka². This plant called 'Natthasooriya' or 'Walsooriyakantha' in Sinhala, it is a member of Compositae family². Some other Sri Lankan plants known to produce contact dermatitis include *Wallida antidysentesica* (Idda in Sinhala) belonging to the family Apocyanaceae and *Semicarpus caribaea* (Badulla in Sinhala), *Mangifera indica* (mango), *Anacardiae acidientia* (cashew), all three belong to the family Anacardiaceae³. Contact dermatitis to following three flowers has not been documented before.

Ervatamia divaricata - ("Wattusudda") (Fig. 1) is a common flowering plant in Sri Lanka. It belongs to family Apocyanaceae. (Same family as "Idda"). The flower is bright white and is often picked to offer at places of worship by both the Buddhists and the Hindus. *Nyctanthes arbor-tristis* - ('Sepalika') belongs to the family Oleaceae and is also a commonly used flower by devotees. *Mirabilis jalapa* ('Hendirikka') belongs to family Nyctaginaceae. This flower is used for offerings by some devotees.



Figure 1. *Ervatamia divaricata* - (Wattusudda)

Some devotees who pick these flowers develop chronic contact dermatitis confined to the finger tips. During a period of nine months, twelve cases were seen at the Dermatology Unit, Karapitiya, Galle.

Objective

To confirm the clinical suspicion of contact dermatitis to flowers, in patients suspected to have had contact prior to developing dermatitis.

Method

All patients who presented with finger tip dermatitis to the Dermatology Unit during the period from September 1999 to June 2000 were inquired about contact with flowers. All those who gave a positive contact history were included in the study. Patch testing was performed using extracts of suspected flowers, its latex, leaves, bark and any other potential allergens, wherever there was a suggestion. The initial reading of the test was made 48 hours after application on the patient (Fig. 2). Final reading was done after 96 hours.

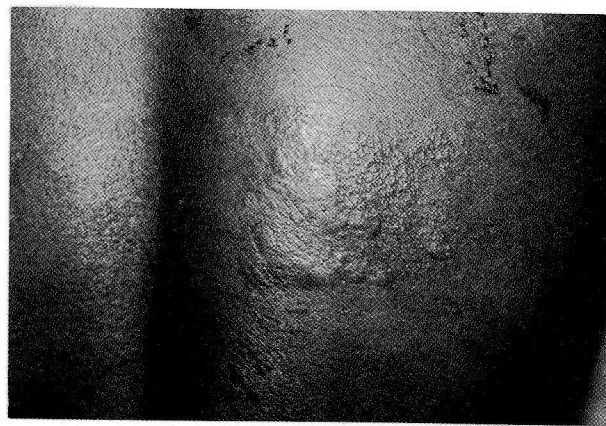


Figure 2. A positive patch test for 'Wattusudda' after 48 hours.

Results

There were a total of twelve patients in this study. Seven were females and five were males. Their ages

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ranged from 22-83 years. The majority were over 40 years. Eleven were Buddhist devotees and there was only one Hindu devotee. All Buddhist devotees had contact with flowers while picking up flowers for offerings. The Hindu devotee, a man of 22 years, the youngest in the study developed contact dermatitis, due to exposure he had, while making garlands to be offered at Hindu temples.

Out of 12, 11 patients had contact mainly with "Wattusudda" and 10 of them showed positive patch tests to "Wattusudda". One lady showed a positive patch test to "Hendirikka" flowers which she was offering along with "Wattusudda" (Table 1). The patient who had a strong contact history with "Sepalika" had a positive patch test for "Sepalika".

Table 1. Patch test results

Name of plant	Number with positive patch tests
<i>Ervatamia divaricata</i> ("Wattusudda")	10
<i>Mirabilis jalapa</i> ("Hendirikka")	01
<i>Nyctanthes arbortristis</i> ("Sepalika")	<u>01</u>
	12

Discussion

The vast number of plant species, the multitude of substances that plants contain, and, the fact that a patient may have been exposed to several plants make the study of plant dermatitis difficult. The patient can be exposed not only to the plant itself but also to its derivatives⁴. Plant contact dermatitis is a delayed hypersensitivity reaction to a plant allergen. Once a predisposed individual has become sensitised, the potential to react persists indefinitely and the dermatitis will recur if the patient is re-exposed to the allergen. The plants responsible for sensitisation may vary depending on the local flora.

The clinical features vary depending on the source⁵. *Semicarpus caribaea* ("Badulla") dermatitis is an acute dermatitis, either papulovesicular or vesiculobullous in morphology and streaky or patchy in configuration. Chrysanthemums and other compositae dermatitis is a chronic lichenified eczema of the exposed parts simulating an airborne contact dermatitis, whereas flower contact dermatitis is a chronic dry hyperkeratotic eczema of the finger tips.

First patient of the series is a 58 year old lady from Tissa, referred from a medical unit with finger tip ulceration affecting fingers of both hands. She was referred to the author as a suspected case of vasculitis. As her lesions were confined to finger tips and mainly to thumb and index fingers, the possibility of contact dermatitis due to some thing she was regularly picking up was considered. Detailed history elicited that she was in the regular habit of picking up "Wattusudda" flowers for her daily offerings of worship. Patch test was performed using extracts of "Wattusudda" flowers, its latex, leaves and bark. Patch tests became strongly positive for extract of "Wattusudda" flowers. This was the start of search for the rest of the cases in this study. In all cases of "Wattusudda", and "Hendirikka" identification of causative plant, confirmation by positive patch test and advice on avoidance of contact led to complete resolution of the dermatitis. In the case of "Sepalika", dermatitis gradually spread to the exposed areas of the body. Resolution was not complete until she finally got rid of the plant from her home. A possible explanation in this case is air-borne contact dermatitis.

Conclusion

Plant contact dermatitis to various flowers seems to be much more common than what is recognized. A high degree of clinical suspicion is important in detecting these patients. Once the diagnosis is confirmed, avoidance of contact with the causative flowers will completely clear the dermatitis.

References

1. Perera WDH, Ragunathan R. Epidemiology of Skin Diseases in Sri Lanka - Proceedings of the International Workshop on Dermatology in basic health services, 17th World Congress of Dermatology Berlin, May 1987: 39-45.
2. Perera WDH, Ragunathan R. Contact dermatitis to *Titania diversifolia*. Book of abstracts, Sri Lanka Medical Association Annual Academic Sessions 1985.
3. Perera WDH. Plant Dermatitis. *Sri Lanka Journal of Dermatology* 1995; 1: 2-3.
4. Claude Benezra. Clinical aspects of plant contact dermatitis *Plant Contact Dermatitis* 1985: 3.
5. Anthony du Vivier. Contact Dermatitis - Atlas of Clinical Dermatology 2nd ed: 4.10.