

'Chaturthy fingers' caused by *Hibiscus rosasinensis*

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doi:10.1111/cod.12875

Key words: allergic contact dermatitis; case report; *Hibiscus rosasinensis*; religious ritual.

Flowers are frequently used for religious rituals, and are recognized causes of hand eczema. We report a case of a Hindu priest with eczema of the fingertips, probably caused by handling *Hibiscus* flowers.

Case Report

A 52-year-old male, who was a priest in a temple of Lord Ganesha, presented with recurrent eczema and painful fissuring of all fingers of his right hand of 2 years' duration (Figs. 1 and 2). He was treated with topical steroids and oral antihistaminics by many physicians, but this resulted in only temporary relief. The in-depth history showed that he was engaged in a specific ritual involving the handling of *Hibiscus rosasinensis* flowers on a particular day of a month, namely on every fourth day of the lunar month (in the Hindu calendar, also known as 'Chaturthy'). He used to pluck the flowers and place them in sacred water before making the offering. A straw-coloured fluid appearing at the end of the severed stalks was the suspected allergen.

The possibility of allergic contact dermatitis caused by *H. rosasinensis* flowers was considered, and investigated with a ready-made commercially available kit (Systopic



Fig. 1. Fingertip eczema and fissuring.

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Conflicts of interests: All authors have no interests to report.

Indian patch test kit[®]) containing aluminium chambers; micropore tape was used as an adhesive. Extracts from *H. rosasinensis* flower petals, stems and leaves, and alternative materials such as turmeric, kumkum, and rice grain, which are commonly used for worship of Lord



Fig. 2. *Hibiscus rosasinensis* flower.

Ganesha, were added to the chambers. We squeezed liquid from the stalk (peduncle), leaves and flowers, and dispersed this in pet. to achieve a dilution of 1%. A drop of this preparation was placed in an aluminium chamber, to which a tiny cotton ball was added before the adhesive tape was placed on the back. The exposure time was 72 h, and reading was performed on day 4 of application; this showed a ++ reaction where *H. rosasinensis* extract had been applied. Seven control patients showed no reactions to the *Hibiscus* extract test preparation. A 7-day repeated open application test with the other three ritual

materials mentioned did not cause any reactions in the patient. The patient was advised to avoid direct contact with *H. rosasinensis*, and to use protective gloves while handling its flowers.

Discussion

Commonly used flowers for offerings in our region are lotus, *H. rosasinensis*, marigold, and rose. *H. rosasinensis* is a flowering plant native to tropical Asia, and belongs to the family Malvaceae (1). *Hibiscus* may cause skin irritation, dermatitis and immediate hypersensitivity reactions or mucosal symptoms in gardeners and greenhouse workers (2, 3). Contact dermatitis caused by *H. rosasinensis* is quite rare. In one study, only 2 of 44 subjects showed positive test reactions (3). Leaves and stems of *H. rosasinensis* contain β -sitosterol, stigma sterol, taraxeryl acetate, and 3-cyclopropane compounds, whereas flowers contain, for example, cyanidine diglucoside and flavonoids (1). Unfortunately, we do not have the resources for chemical analysis to identify the exact biochemical component of the allergen(s) in this case.

Dermatologists should be aware of this rare cause of contact dermatitis of the fingertips, to avoid delayed diagnosis. To prevent sensitization to other flowers, it would be advisable to wear gloves and use scissors to cut the stalks of flowers, and to collect flowers over a plastic sheet.

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