

Plant dermatitis

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Plant dermatitis or phytodermatitis is a fascinating subject to those interested in the study of contact Dermatitis. Lately the subject has received much attention and has been intensely studied in most countries. Sri Lanka being an island in the tropics with regional variations in climate and elevation is blessed with a large collection of flora. However no organised study of phytodermatitis has been undertaken in the country. It is indeed encouraging to note that a well designed study has been done in neighbouring India, resulting in a publication on contact dermatitis where prominence of place has been given to plant dermatitis¹.

Incidence of plant dermatitis depends on the amount of regular and prolonged exposure of the population to plants. Being an agricultural country exposure to plants is common in Sri Lanka. A clinic study in central Sri Lanka in 1985 recorded a figure of 1.63% for plant dermatitis. In addition to farmers and gardeners, those in the floral industry and housewives with small outdoor gardens are also vulnerable. Even those who come into contact with dried plants and trees like saw mill workers, carpenters and those who cook with firewood may develop phytodermatitis. Home remedies of the rural population in Sri Lanka include the use of applications of plant and plant products for minor ailments. A common example is the use of lime and fenugreek shampoo for dandruff. The pharmacopia of ayurvedic medicine which is widely practised in the country is based on plant and plant products.

Plant Dermatitis may occur as an irritant contact Dermatitis which may be either chemical or physical or as an allergic contact Dermatitis. Allergic dermatitis may be immediate or delayed. Phytophotodermatitis is where dermatitis occurs on exposure to sunlight following contact with a plant. Contact with external agents in plants like sprayed chemicals and insects may produce a Pseudo-phytodermatitis.

The site of involvement in plant dermatitis is the exposed areas of the body. One of the characteristic features which gives away the diagnosis in allergic phytodermatitis is the presence of linear and criss-cross marks corresponding to the type of contact. Another common type of dermatitis is due to pollen and dried leaves which are airborne settling on the exposed parts of the body. This type of airborne dermatitis is seen often with the compositae family and tends to be chronic with pigmentation and lichenification.

Some well known and common phytodermatitis seen in the country are summarised below.

***Girardinia glauca*; Family (f):
Urticae; Sinhala(s): *Gas Kahabiliya***

The leaves and stems of these plants contain tiny spines and hairs. On contact with the skin it produces a severe pruritus. The itching is said to be caused by penetration of the skin and injection of histamine like substances.

Mangifera Indica*; Mango; F: *Anacardiaceae

Unripe fruits and stems can cause a chemically induced cauterising type of reaction with vesicles and ulceration. This reaction is seen in both pickers and consumers.

Anacardium occidentale*; Cashew; F: *Anacardiaceae

Is another member of the anacardiaceae family which produces chemically induced dermatitis on contact with unripe fruits and the cashew nut shell. Allergic contact dermatitis is also known to occur on contact with the shell oil which is produced commercially. Shell oil has sometimes contaminated the kernel causing dermatitis².

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***Semicarpus coriacea*; F: Anacardiaceae S: Badulla**

Semicarpus coriacea is a medium sized tree with a shiny bark and large thick long leaves. Contact with any part of the tree produces an acute vesicating allergic dermatitis with linear markings. Even the dried leaves and branches are known to produce the dermatitis. The allergic nature of the plant is well known to the rural population and they are known to avoid contact.

***Titonia diversifolia*; Wild sunflower; F: compositae; S: Naththasooriya**

Titonia diversifolia is a perennial herb 2 to 3 meters tall abundant at roadsides and wasteground particularly at mid elevation. (1000-5000 feet). The flower is bright "yellow in colour, and flowering occurs from July to April. *Titonia diversifolia* is a native of tropical South America and has been introduced to Sri Lanka as a garden plant in 1851³. Those allergic to the plant develop a chronic airborne type of dermatitis with much scaling and lichenification. Being a member of the compositae family the allergen is known to occur in all parts of the plant. *Parthenium heterophilus* which is the commonest plant causing dermatitis in India is also a member of the compositae family producing a similar dermatitis. It is interesting to note that *parthenium* is also not a native of

India but has been introduced accidentally to the country, now growing in the Wild.

***Wallida Antidysenterica* F — Apocyanaceae S. Idda**

This is a very common treelet 1 to 2 meters tall found throughout the country. The waxy bright white flower is often picked to offer at places of worship⁴. The pickers develop a chronic allergic contact Dermatitis confined to the finger tips. The dermatitis which is similar to the dermatitis seen with onions and garlic may be unilateral to start with.

In addition to phyto dermatitis mentioned above a phototoxic reactions with pigmentation of the Berloque type may occur on contact with plant extracts and fruit juices applied to the body. The pigmentation is due to the presence of furocoumarins. Certain types of lemon and leaves of cassia alata (F-Leguminosae S-Aththora) are known to produce the above reaction.

References

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