MARKING NUT DERMATITIS

(Semicarpsu anacardium)

(Report of two cases with review of literature)

By

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Semicarpus anacardium or Marking Nut tree grows fairly commonly in the sub-Himalayan range as medium sized tree. The leaves are abovate and rounded and flowers in yellowish green terminal pannicles. The tree bears fruit, the flesh of which is sweet and edible. The pericarp of the fruit contains bitter and powerful astringent which is universally used in India as substitute for marking ink (Chopra [2] et al-1958).

The juice of the pericarp of the nut is widely used in this country as indigenous treatment for many dermatoses in men as well as for treatment of wounds and infection in animals. Externally it is a powerful counter - irritant and vesicant and has been employed as local application in rheumatism, sprains and leprotic nodules (Chopra [2] et al - 1958 and Nadkarni [7] 1954). Livingwood et al (1943) were the first to describe contact dermatitis due to marking ink used by Dhobies for marking the clothes and coined the word "Dhobie Mark Dermatitis" because of the localisation at the marking spots. Goldsmith[3] (1943) further described a very interesting occurrence when a bottle in sealed mail pouch shipped from India for Washington by post had become partially open and its contents a thick black oil had contaminated various pieces of mail. The contaminating substance was labelled as Bhilawanol oil. Out of the 50 persons who handled the mail, 16 developed contact dermatitis. In India, Behl et al (1966) focussed attention to this important aspect of plant dermatoses. He reemphasized the existence of contact dermatitis due to Dhobie Mark dermatitis. This was noticed more commonly amongst foreign visitors who had the previous history of sensitization to Poison ivy (Rhus-toxicodendron) in their own country because of the cross sensitivity between the two plants belonging to the family of Ancardiaceae.

We came across the following two cases of contact dermatitis with generalised acute allergic reaction due to local applcation of Bhilawa used for treatment of alopecia areate.

Case 1 S. P., 45 M., report with acute allergic reaction in the form of swelling, oedema of the face, oedematous closure of the eyes and red eczematous localised patches over the beard area and the scalp for the last 4 days.

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Received for publication on 28-11-1970

On interrogation, patient gave history of having applied a paste from Bhilawa fruit over the patches of alopecia on the beard and scalp a few days prior to the complaint. To begin with the reaction was localised only at the sites of topical application but afterwards it was associated with marked oedema all over the face involving the eyeilds and lips. On examination, there were erythematous patches progressively spreading over the arms and legs distributed bilaterally. The diagnosis of contact dermatitis towards Bhilawa was made with acute endogenous allergic reaction. The patient was treated with corticosteroids, antihistaminics and showed good response. After healing of the lesions, a patch test was done with the bark of Bhilawa which showed positivity.

Case 2 K. L, 24 M., came with severe oedema over the face and chest for the last two days. This started after the patient had applied local indegenous ointment over the patch of alopecia on the beard. Apart from generalised oedema of the face there was swelling of the eye-lids and lips. Moreover he had localised eczematous reaction over the alopecia site. On interrogation, it was found that the indigenous local application was Bhilawa. Patient was treated with corticosteroids and antihistamincs. The response was good and course uneventful. Patch test to Bhilawa done subsequently was positive.

On further study of the localised area of Mahasu District of Himachal Pradesh, it was learnt from many people that Bhilawa application was often advised for treatment of various dermatoses especially alopecias. Many of them used to get reaction after its use. The degree of reaction was variable. The mild to moderate degree of localised reaction was attributed to the efficacy of the drug and the patient was not concerned about it. Only when there was acute allergic reaction in the form of the swelling that these patients sought outside help from hospital or doctors. Both the above patients were in service in the town of Simla and had gone to their village home for the week end where they applied Bhilawa. The severity of reaction manifested on coming back to the town where they reported to the hospital.

DISCUSSION

The pericarp of the Bhilawa fruit is the sensitizing substance which is supposed to contain Semicarpol – monophydroxy phenol, a dihydroxy – compound – 'Bhilawanol. C_{21} H_{32} O_2 and a tarry non – volatile corrosive residue from which no further chemical ingradient could be isolated (Kirtikar and Basu[4] – 1918). Neither Anacardic acid, cardol, catechol nor anacardol is present (Pillay aud Siddiqui[8] – 1931). The juice is a strong vesicant. In both the above cases, there was acute localised contact dermatitis with acute endogenous allergic reaction manifested by oedema and closure of the eyelids, swelling and oedema of the face, and swelling of the lips apart from erythematous patches over extremities in case No. 1. It is obvious, therfore, that the reaction to Bhilawa is not only localised but also generalisad which may be

acute. However it is found that the main brunt of the attack is always on the face whatever the site of initial local application because in one case seen earlier by us although the site of local applcation was the leg yet the face was affcted as a part of generalised allergic reaction. It is therefore important to elicit the history of Bhilawa application in such patients for prompt diagnosis and emergency treatment.

Cashewnut, mango, Bhilawa, Poison, ivy and poison oak all belong to the same family (Anacardiaceae) hence cross sensitivity between them may also occur and should be kept in mind (Merril[6] - 1944).

SUMMARY

Two cases of contact Dermatitis to Bhilawa (Semecarpus anacardium) are reported who used this substance as indigenous topical application for the treatment of alopecia areata. The relevant literature on the subject is reviewed. Apart from localised reaction, there was also acute allergic-reaction, involving the face and extremities. Patch test was found to be positive. A word of caution is thus indicated against the use of Bhilawa as an indigenous topical treatment even as marking ink for the clothes. The possibility of cross sensitivity between other members of the Anacardiaceae is emphasized.

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