

Occupational allergic contact dermatitis due to teak wood

Sir,

Plants are one of the major causes of contact dermatitis in India; parthenium being the commonest.^[1] Though dust from tropical hardwoods such as teak can cause both Type I and Type IV allergy, contact dermatitis due to teak has rarely been reported. Various procedures such as sawing, machining, sanding and turning of wood produce fine dust which may results in skin and mucosal symptoms.^[2]

A 52-year-old timber merchant presented with itchy skin lesions over the face, back and extremities of one year duration. A school teacher for 20 years, he quit this job five years back to look after the saw

mill, which was a family business. Four years into this business, he developed itchy vesicular lesions, initially on the face and subsequently on other areas of the body. He gave history of exposure to a variety of saw dust and developed occasional nasal symptoms in the form of nasal discharge and sneezing. There was no history of photosensitivity. Examination revealed erythematous – hyperpigmented papules and plaques over the forehead, cheek, chin, neck, upper and lower back and antero-lateral aspect of the leg [Figure 1]. A provisional diagnosis of air-borne contact dermatitis was made and the patient was hospitalized for detailed evaluation. Patch testing was done with Indian standard series (ISS), parthenium (1 and 3%) and various saw-dust brought from his work place ‘as is’. A positive reaction was observed with teak wood dust at 48 and 72 hours [Figure 2]. His dermatitis improved remarkably during the period of hospital stay. He was treated with topical steroids and advised to avoid contact with teak wood dust. However, he did



Figure 1: Erythematous papules and plaques on the face and neck



Figure 2: Positive patch test reaction to native teak dust (at 72 hours)

not heed to the advice and presented two months later with relapse of dermatitis.

Occupational allergic contact dermatitis due to teak wood (*Tectona grandis*) was first reported in England in 1905.^[3] In a furniture factory in Norway, 18.8% of workers showed allergic skin reactions to native teak dust. Allergic contact dermatitis was diagnosed in 12.5% and 6.3% were found to have latent allergy, confirming that teak is a fairly potent sensitizer.^[4] Estlander *et al.* tested their patients with moistened teak dust.^[5] However, Krogh showed that native teak dust is a better material for patch testing when compared to moistened teak dust as the latter resulted in false positive (irritant) reaction.^[6] We used moistened teak dust for patch test; we believe that positive reaction in our patient represents true allergic reaction as the test was negative in five controls who were not exposed to teak wood dust.

It is difficult to obtain the various individual compounds of dust isolated in sufficient amount for patch testing. Teak dust contains a complex mixture of several substances such as tectoquinone, lapachol, anthraquinone dehydrotectol, among others; lapachol was the common sensitizer. However, it must be remembered that lapachol is also found in other tropical woods such as Jacaranda which may result in cross reactions.^[5,6]

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