

Contact dermatitis from radiata pine

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Sawdust from radiata pine trees which are grown extensively throughout South Australia causes various forms of contact dermatitis. The various forms are described in nine cases which illustrate that the early diagnosis of industrial dermatitis is necessary to prevent the condition from becoming chronic. A chance association between colophony in radiata pine sawdust and colophony in adhesive plaster, which caused contact dermatitis when used in patch testing, led to the discovery of these cases.

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Radiata pine (*Pinus radiata*), a native tree of North America, was first planted in South Australia in 1876. The tree made exceptional progress and the extensive forests now present in the State are the basis for many industries. Radiata pine timber is used in the building industry, for box making, as fencing posts and in furniture manufacture. Since other patch test materials have not been found quite as efficient in South Australia as colophony-containing Elastoplast® patches (T. J. Smith & Nephew Limited), these are used except in known cases of elastoplast allergy. In 1972 a gardener with contact dermatitis of his hands and forearms, as well as a widespread patchy dermatitis, was patch-tested and proved allergic to the elastoplast patches. After questioning he revealed that he used radiata pine sawdust for packing flowers. An increased awareness of radiata pine sawdust as a source of plaster reactions and of colophony and wood turpentine sensitivities led to the discovery of several cases which are recorded in Table 1.

Discussion

The clinical appearances of the dermatitis were determined by the nature and periodicity of the work the individual was performing at the time of contact. Acute widespread dermatitis, which caused blistering and swelling, occurred when the sawdust was freshly produced by a school boy in a woodwork class and by a home gardener while he was felling a tree. The sawdust employed as industrial packing was old and was used over the course of several days causing a generalized discoid dermatitis. When the sawdust was used for cleaning floors it was used for short periods only and dermatitis was confined to arms and forearms, but might occasionally occur on the face. The clerk who used the sawdust for cleaning oil from a home garage floor had patchy dermatitis on his back and chest from contact while he lay under his car. The carpenter who had suffered for 22 years presented with a severe lichenified dermatitis of the exposed areas which re-

Table 1. Reactions and sensitivities to radiata pine sawdust

	Sex	Age	Occupation	Radiata pine source	Period of disability	Distribution	Positive patch tests
1.	M	38	Gardener	Industrial packing	10 years	General	Plaster reaction
2.	M	19	Fitter and turner	Sawdust for cleaning floors	1 year	Hands, arms and face	Plaster reaction
3.	M	13	School boy	Woodwork classes	Acute	General	Plaster reaction
4.	M	56	Carpenter	Factory	22 years	Exposed areas mainly	Plaster reaction
5.	M	68	Home gardener	While felling a tree	Acute	General	Wood turpentine
6.	M	62	Factory worker	Sawdust for cleaning floors	1 year	Hands, arms	Wood turpentine
7.	M	22	Clerk	Home garage	6 months	Hands, fore-arms, back, chest	Wood turpentine
8.	M	38	Storeman	Sawdust for cleaning floors	10 years	Hands, fore-arms	Radiata pine sawdust
9.	M	46	Fork-lift driver	Industrial packing	4 weeks	General	Colophony and radiata pine sawdust

sembled a "compositae weed dermatitis" (Burry et al. 1973a). All cases were male, the significance of which can only be confirmed by further improbable evidence that females are never involved.

Contact dermatitis from radiata pine reported previously (Burry et al. 1973b) occurred in workers who were regularly handling timber so that the diagnosis had been expected. In the present series the diagnosis was unexpected except in case 4, since contact with the sawdust occurred on one occasion only in two cases and rarely or intermittently in the others. A chance association between colophony in elastoplast and colophony in radiata pine sawdust led to a greater awareness on my part, which was necessary for the diagnosis of the other cases since none of the patients had suspected radiata pine sawdust. It is not always possible to know the exact environment of an individual patient, which is important for the early diagnosis of the source of industrial contact dermatitis if chronic dermati-

tis is to be avoided. I had visited a factory 2 years previously searching for the cause of industrial dermatitis in one patient in whom the diagnosis was made in retrospect, but the box containing the sawdust used for cleaning floors was concealed in a cupboard and I was denied the essential clue.

References

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