

• • • • •

Abstract

**Occupational Allergic Contact Dermatitis Like Erythema
Multiforme Induced by Bolivian Rosewood**

Joo-Youn Shin, Yun-Chul Hong, Jong-Han Leem, Shin-Goo Park,
Jee-Na Lee, Hwan-Chul Kim

Department of Occupational and Environmental Medicine, Inha University Hospital

Background: Woods are capable of causing allergic or irritant contact dermatitis which typically occurs on exposed areas. Because Bolivian rosewood exclusively contains the strong sensitizer R-3,4-dimethoxydalbergione, an increasing number of cases of irritant and allergic contact dermatitis has been reported.

Case report: A 49-year-old, male, wood worker, who handled a variety of woods, developed allergic contact dermatitis. A patch test confirmed a positive reaction to one of the exotic woods, Bolivian rosewood. Allergens found in Bolivian rosewood caused this patient's dermatitis, which cleared when he avoided this wood.

Conclusion: Exotic woods such as Bolivian rosewood can induce occupational contact dermatitis. Measures to lower the incidence of work-related dermatitis are needed in the workplace. Especially, when cutting or sanding woods, workers should wear proper personal protection.

Key Words: Allergic contact dermatitis, Occupational, *Machaerium Scleroxylon*, Rosewood, Wood worker

가
가

30% 가
(Adams, 1997;
Cohen, 1998).

90% , 80%가 (, 1984).
(irritant dermatitis) ,
20% (allergic contact
dermatitis) (Cohen, 1998).

75 ~ 90% (wood) (Bolivian rose-
가
, 2001).

1991 2 가 , Machaerium Scleroxylon 30
,
1997). , 1992 2000 (Hausen, 1982). 10
(가 , ,)
(,) (,)
가 , (HSE, 1997).
Machaerium Scleroxylon
가
(Hausen, 1982),
,
,
(, 2001).

가
가
(Cohen, 1998).

(, 2001; : O O (, 49)
Cohen, 1998), :

가 : 2003 8 18 가
(, 1984; , 1979), 4 ~ 5 가
, , 9 3
,
가
(, 1984). 9
, 13 9 30 S
가

2003
 11 11
 : (-), , , 가
 (-), (-). 가
 가 : 가
 :
 1
 : 1981 3 11
 2001 3 31
 , 2003 8 18
 가 S
 : 10

(papules) (plaques)
 (Fig. 1, 2). 가
 50%
 (target lesion)
 :
 (1) (dermographism):
 (2) (scratch test):
 4가
 가 20 20 1
 가 20
 (3) (patch test): 가



Fig. 1. The multiple erythematous skin lesions on neck, chest and abdomen.

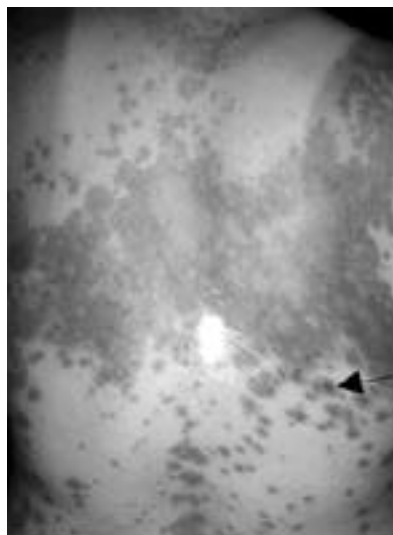


Fig. 2. The multiple erythematous skin lesions on back. (The arrow indicates 'target lesion')

4가 Bolivian rosewood, Indian rosewood, Indonesian rosewood, Maple 4가 가 petrolatum 100:1 (Finn Chamber on Scanpor tape) 48 , 96

Morado, Moradillo, Santos Palisander 가 (HSE, 1997).

(International Contact Dermatitis Research Group) 4가 48 , 96 (Table 1, Fig. 3, 4).

drome), , gione

(Organic dust toxic syndrome), (Maciejewska et al., 1993), R-3,4-dimethoxydalber

Scleroxylon Machaerium 가



Fig. 3. The patch test with Bolivian rosewood was positive(+) at day 2.



Fig. 4. The patch test with Bolivian rosewood was positive(+) at day 4.

Table 1. Patch test results

Allergen	48hr	96hr
Bolivian rosewood	positive	positive
Indian rosewood	negative	negative
Indonesian rosewood	negative	negative
Maple	negative	negative

(Chierigato et al, 1993; Correale et al, 2002; HSE, 1997; Rackett et al, 1997; Shimizu et al, 2000).

(, 2001).

가
, petrolatum

(, 2001).
Machaerium Scleroxylon

(Watsky, 1997; Hausen, 1986),
(, 2001).

가
, Machaerium Scleroxylon 4 ~ 5
, 48 96

(Hausen, 1982).

30

가 Mathias가 7
, 4가

4가 , 3가 가 (rosewood) (Mathias, 1986).

가?
가?

가
가?

가?
가?

가?
가? 7가

6가

(Estlander et al, 2001).

가 가 가

1997), 1999

가 가 28

가 , 28

1

2001). (rosewoods)
(Machaerium Scleroxyon)

가 10 가

50 (, 2001;
Adams, 1997; Cohen, 1998).

가 ,

1984 2 2 2 10
(Cohen, 1998),

: 49 가
, 가
, 가

가 2

가

:

가 ,

가

(, 1997; , 1984),

,

, 2001.

가 (18) ().

2001;155:4-16.

가

가
1997;17(4):265-82.

,

1984;4(2):194-8.

가 , 1997;1:
28-39.

Adams RM. Occupational Skin Disorders. In:
Radou J (eds) Occupational and Environmental
Medicine. 2nd ed. A Simon & Schuster compa-
ny, Connecticut Stamford, 1997. pp 273-90.

Chieragato C, Vincenzi C, Guerra L, Rapacciale
S. Occupational airborne contact dermatitis from
Machaerium scleroxylon (Santos rosewood).
Contact Dermatitis 1993;29(3):164-5.

Cohen DE. Occupational Skin Disease. In: Rom

- WN (eds) *Environmental and Occupational Medicine*. 3rd ed. Lippincott-Raven Pub, Philadelphia New York, 1998. pp 675-94.
- Correale CE, Marks JG Jr. Contact dermatitis in woodworker. *Am J Contact Dermat* 2002;13(1):42-4.
- Estlander T, Jolanki R, Alanko K, Kanerva L. Occupational allergic contact dermatitis caused by wood dusts. *Contact dermatitis* 2001;44(4):213-17.
- Hausen BM. Incidence and significance of toxic and allergic contact dermatitis caused by *machaerium scleroxylum* Tul. (pao ferro), a substitute wood for palisander (*Dalbergia nigra* All.). *Hautarzt* 1982;33(6):321-8.
- Hausen BM. Contact allergy to woods. *Clin Derm* 1986; 4: 65-76.
- HSE (the Health and Safety Executive). Toxic woods. 1997; Woodworking sheet No.30.
- Maciejewska A, Wojtczak J, Bielichowska- Cybula G, Domanska A, Dutkiewicz J et al. Biological effect of wood dust. *Med Pr* 1993;44(3):277-88.
- Mathias CGT. Contact dermatitis from use and misuse of soaps, detergents, and cleansers in the workplace, occupational medicine- state of art reviews, vol 1. Hanley and Belfus, Philadelphia, 1986. pp205-18.
- Rackett SC, Zug KA. Contact dermatitis to multiple exotic woods. *Am J Contact Dermat* 1997;8(2):114-7.
- Shimizu S, Chen KR, Pratchyapruit WO, Shimizu H. Tropical-wood-induced bullous erythematous multiforme. *Dermatology* 2000;200(1):59-62.
- Watsky KL. Airborne allergic contact dermatitis from pine dust. *Am J Contact Dermat* 1997;8(2):118-20.