

CONTACT DERMATITIS OF HANDS

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Contact dermatitis of the hands was studied in 70 patients showing exclusive involvement of the hands. They were patch tested with various antigens. Forty one patients showed positive patch tests to one or more antigens. Females showed a higher rate of positivity than males. Female to male ratio was 2.72. Vegetables (68.8%) were the most common sensitizer followed by soaps and medicaments.

Key words : Hand eczema, Patch tests, Contact dermatitis.

Hand eczema is a common problem. Contact dermatitis due to vegetables, soaps and detergents is frequent in certain specific groups of persons like housewives, cooks and others. In the present study, an attempt was made to find out the common causes and to identify any new allergens in our patients.

Materials and Methods

The material comprised of 70 patients (51 females and 19 males) suspected to have contact dermatitis of the hands. These patients were subjected to a detailed clinical history and examination to identify the suspected allergens.

All patients were patch tested as described by Fisher,¹ with the antigens either supplied by Pasricha in the form of antigen-impregnated discs or antigen-containing-saucers,² or these were prepared as described by Pasricha.³

Results

Out of 70 cases, 41 were sensitive to one or more antigens. The majority (80%) of the patients were in the age group 11-40 years. The causes of positive patch test reactions in different groups are shown in tables I and II.

Table I. Occupation-wise distribution of the patients.

Occupation	Total number of cases		Number of cases showing positive patch tests with							
	Tested	Positive	Vegetables	Soaps and detergents	Metals	Rubber	Tooth pastes	Sandal wood	Kattha	Medicaments
Housewives	40	22	15	14	1	—	—	—	—	—
Medical personnel	4	4	—	—	—	—	—	—	—	4
Students	7	3	1	1	—	1	1	—	—	—
Teachers and clerical staff	6	4	1	3	—	—	—	—	—	—
Shopkeepers	9	6	1	3	—	1	1	—	1	—
Labourers	3	1	—	—	1	—	—	—	—	—
Priests	1	1	—	—	—	—	—	1	—	—
Total	70	41	18	21	2	2	2	1	1	4

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Comments

Causes of contact dermatitis of the hands vary from place to place depending upon the culture and society. Frequency of the use of

Table II. Antigens responsible for positive patch test in different patients.

Antigens	Number of cases	
	Tested	Positive
<i>Vegetables :</i>		
Garlic	42	10
Onion	42	10
Tomato	42	5
Lady's finger	42	6
Potato	42	2
Ginger	8	1
<i>Soaps and detergents :</i>		
Rin (pH 10.5)	43	8
Lux (pH 9.7)	54	8
Lifebuoy (pH 9.5)	41	7
Surf (pH 10.5)	43	7
Nirma washing powder (pH 10.5)	38	5
Pears soap (pH 8.5)	39	5
Sunlight soap (pH 10.5)	40	4
<i>Medicaments :</i>		
Penicillin	4	3
Ncomycin	4	2
Acridine	4	1
Vaseline	4	1
Furacin	4	1
Soframycin	4	1
Gentamicin	4	1
Savlon	4	1
<i>Metals :</i>		
Potassium dichromate	1	1
<i>Miscellaneous</i>		
Sandal wood	1	1
Catechu	1	1

any substance determines the antigenicity of that particular substance. Out of 70 suspected patients of contact dermatitis, positive patch test reactions were obtained in 30 females and 11 males. Housewives had the highest patch test positivity with vegetables, followed in the

order of frequency by soaps and metals. These observations are in conformity with Pasricha and Kanwar⁴ and Sinha et al.⁵ Among the drugs, penicillin and neomycin were the main offenders particularly among the medical personnel. The patients were also found to be sensitive to tooth pastes and rubber antioxidants. These observations are in accordance with Bajaj⁶ who studied this problem in neighbouring districts. Calnan et al⁷ however, reported a lower incidence of contact dermatitis of hands in housewives doing domestic work, as compared to the housewives engaged in other types of work. Our observations are in contradiction with the above statement as all our women were domestic women. The western women use gloves during most of house-hold work, while working Indian women do not do so at most of the jobs.

A few cases showed sensitivity to sandal wood, potassium dichromate and catechu (Kattha). The person showing positive patch test with sandal wood was a Hindu priest. He had erythema, oedema and fissuring of the finger tips of both the hands. Sensitivity to sandal wood has been reported earlier.⁸ The shoe factory worker, showing sensitivity to potassium dichromate presented with erythema, oedema and scaling of both the hands and finger webs. Contact dermatitis with catechu, was seen in a betel vendor. The palmar aspects of his thumb, index and middle fingers of both the hands, showed thickening and fissuring. A betel consists of a betel leaf which is coated with calcium hydroxide paste and extract of the bark of *Acacia catechu*. So far, no case of hand eczema due to catechu has been reported.

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