

PATCH TESTING IN CONTACT DERMATITIS OF HANDS AND FEET

M M Huda, U K Paul

Eighty clinically diagnosed cases of allergic contact dermatitis of hands and feet when subjected to patch testing, Seventy four (92.5%) cases showed positive patch test reactions to different suspected antigens. Maximum number of cases belonged to housewives and tea garden workers which showed positive patch test reaction to vegetables and soaps and detergents and pesticides, respectively.

Key Words : Contact dermatitis, Patch test

Introduction

The dermatitis produced by allergy to a locally applied agent is called contact dermatitis and the agent which produces this type of dermatitis is called contact antigen or contactant. Although in a particular individual any agent may cause contact hypersensitivity, some substances are known to be more potent contact sensitizers than others. Since a person is obliged to handle several types of agents everyday, contact dermatitis of hands and feet is a common problem.

The causes of contact dermatitis of hands and feet varies from place to place. Contact dermatitis of the hands and feet in this population is different and distinct. So, it was proposed to do a study on clinical and patch testing and to identify the possible contact allergens responsible for contact dermatitis of hands and feet in the population of this area as their life style is entirely different from other parts of this country.

Materials and Methods

Eighty clinically diagnosed cases of contact dermatitis of hands and feet were taken for this study and before patch testing with suspected antigens, all the precautions

were taken to satisfy the ideal condition for patch testing and its results.

Preparation of the antigen

- (1) For vegetables and fruits, fresh juice was used for patch testing.
- (2) Condiments were used as such after crusting them in powder.
- (3) For soaps and detergents, a 1% aqueous suspension was used.
- (4) Oils and other liquid contactants were used as such.
- (5) Solids were minced or powdered and used as such.
- (6) For metals, aqueous extract in antigen impregnated discs were used.

Patch testing

The patches were applied on the back of patient. After 48 hours, the test sites were examined for the evidence of dermatitis after taking all the necessary precautions before and after application of the patches. The results of the patches was read by two independent observers. The dermatitis reaction was then graded.¹

Results

Out of the total 10,300 cases attending dermatology department of Assam Medical College and Hospital, Dibrugarh from

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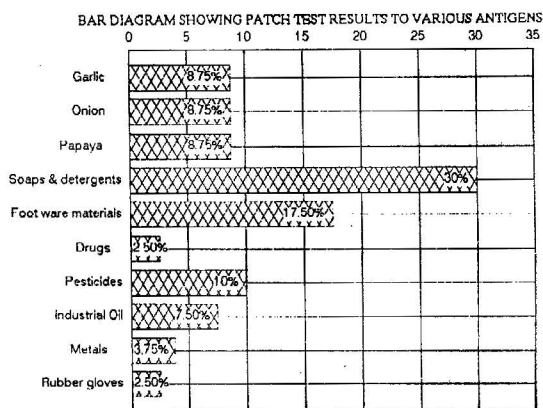


Fig. 1. Bar diagram showing patch test results to various antigens.

Oct '94-Oct '95, 397 cases had allergic contact dermatitis of all types and 80 were diagnosed to be allergic contact dermatitis of hands and feet only, of which 29 were male and 51 were female with the maximum number of cases between the age group of 21-30 years.

In the clinical pattern of dermatitis, 55 patients had allergic contact dermatitis of hands, 25 had allergic contact dermatitis of feet and no case was having allergic contact dermatitis of hands and feet together.

While patch testing, it was seen that out of 80 clinically diagnosed cases, 74 patients (92.5%) showed positive patch test reaction to various antigens in this study.

Discussion

In this study of 80 cases, the largest number of 19 (23.75%) cases were housewives which revealed contact dermatitis to vegetables and soaps and detergents. The next larger group of 14 cases (17.5%) which revealed contact dermatitis to pesticides was among tea garden workers in tea industry.

The eating habits of Indians show a great deal of regional variation. Most Indian cook their food fresh. Cooking is done chiefly by the

housewives. In this part of the country, most of the houses lack modern equipments in the kitchen, refrigerators, washing machines etc. Most of the times, most housewives are exposed to the vegetable juices while handling and cutting the vegetables and also to the detergents. Therefore, contact dermatitis to vegetables is much more common among the housewives and same is for soaps and detergents.

The tea garden workers are particularly susceptible to develop contact dermatitis of hands or feet. The peak plucking season in the tea industry is mostly in the summer monsoon from February to late October and so the temperature and humidity increase in this area and working in open sun, humid and rainy environment causing sweating, leading to increased susceptibility to develop contact dermatitis. Different pesticides are used in tea plantation for prevention and protection of tea bushes (*Barbora*). In this study, it was seen that feet were particularly susceptible to develop contact dermatitis due to pesticides because the patients were mostly bare footed. No tea garden worker showed positive patch test reaction to tea (*Cameillia sinensis*). Out of 14 tea garden workers investigated, 8 have shown positive patch test reaction in respect of the antigen pesticides. This aspects needs further evaluation.

Acknowledgement

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Reference

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CASE REPORTS

PRIMARY CUTANEOUS PHAEOHYPHOMYCOSIS

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A rare case of phaeohyphomycosis presenting with a solitary nodule on right lower leg of 2 years duration is being reported. The disease showed marked response to oral fluconazole.

Key Words : Phaeohyphomycosis, *Curvularia lunata*, Fluconazole

Introduction

Phaeohyphomycosis is an infectious disease caused by dematiaceous fungi. The causative organisms include *Alternaria*, *Curvularia*, *Exophiala*, *Phialophora* spp etc. The pathogen probably is introduced by implantation from an exogenous source as injury is a common cause. Various types described are superficial, cutaneous, subcutaneous and systemic. Subcutaneous infection begins with a firm tender nodule which may develop into a large walled or unwalled mass. The other presentations are nodules and blisters. There is no tendency towards lymphatic spread and dissemination is uncommon.

Case Report

A 20-year-old patient, fruit vendor by occupation, presented with a nodule on right leg of 2 years duration. Patient gave a history of thorn prick which was followed by a mildly painful swelling. Lesion gradually increased in size. Therapy with various antibiotics and anti-inflammatory drugs failed to elicit any response.

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On examination, the nodule was about 3 inches x2 inches in size and was firm and slightly tender on palpation. The skin over the nodule showed pigmentation and thickening and there were no signs of inflammation (Fig. 1)



Fig. 1. Leg showing nodule with pigmentation.

Skin biopsy showed fibrosis of dermis and perivascular lymphocytic infiltrate. Another biopsy specimen sent for culture and sensitivity showed growth of *Curvularia lunata* (Fig. 2), which was sensitive to ketoconazole, clotrimazole and fluconazole. Smears from the growth showed typical conidiophores bearing transversely septate four celled and slightly curved apical conidia.

Radiograph of the leg was normal and Elisa for HIV was negative. The routine