

Significance of Patch Test in Contact Dermatitis

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Contact dermatitis is a common condition. This allergic reaction of the skin is mediated by delayed hypersensitivity and occurs to a substance which comes in contact with the surface of the skin. Patch test is a very simple technique and helps in confirming the actual cause of the disease. Our study included randomly selected 36 known cases of contact dermatitis recruited from department of Dermatology Mayo Hospital Lahore who were patch tested with allergens of European standard series. Out of 36 patients, 19 presented a positive patch test and in 17 patients the patch test was negative. 11 patients (60%) showed sensitivity to 5% nickel sulphate, 4 patients (20%) presented a hypersensitive patch test to 5% nickel sulphate and 0.5% potassium dichromate simultaneously. One patient had sensitivity to 1% formaldehyde while 3 patients (16%) showed hypersensitivity to 8% fragrance mix. Out of 17 patients with negative patch test results 14 patients (82%) reported sensitivity to sunlight and their dermatitis aggravated and worsened in summers. 3 patients (18%) gave no history of sunlight sensitivity. In the light of our results we advocate patch test performance in every patient of contact dermatitis in order to prevent further exposures of the patient to causative agent.

KEY WORDS*: Contact dermatitis, patch test.

Contact dermatitis accounts for 4-7% of all dermatological consultations¹. This eczematous reaction results from an interaction of an external substance with the skin². It shows a polymorphic pattern of inflammation of skin characterized by acute phase, erythema, vesiculation and pruritis, signifying that it is of external origin³. Contact dermatitis can persist for months after exposure and can be verified by closed patch testing⁴. Patch test is a very simple technique and helps in confirming the actual cause of the disease. It was first devised by Jadassohn in 1896 and later brought into use by Bloch⁵. When used intelligently, the patch test can be of inestimable value in managing dermatologic patients and at the same time solve many difficult clinical problems⁶.

Patients and Methods

Thirty six randomly selected known cases of contact dermatitis from department of Dermatology Mayo Hospital Lahore were patch tested using closed Al patch tests applied on the back. The patches remained in place for 48 hours and the patients were instructed to keep them dry and undisturbed for the allotted time. The criteria for positive patch test was interpreted on the method recommended by North American Contact Dermatitis Group (NACDG) as:-

- ? doubt ful reaction; faint erythema only.
- + weak (non vesicular) positive reaction.
- ++ strong (vesicular) positive reaction.
- +++ extreme positive (bulbous reaction).

Results

Out of 19 patients which showed positive patch test 60%

had sensitivity to 5% nickel sulphate as showed in the bar diagram. 20% represented with a hypersensitivity patch test (++) both to 5% nickel sulphate and 0.5% potassium dichromate. 16% showed sensitivity to 8% fragrance mix and only one patient had sensitivity to 1% formaldehyde.

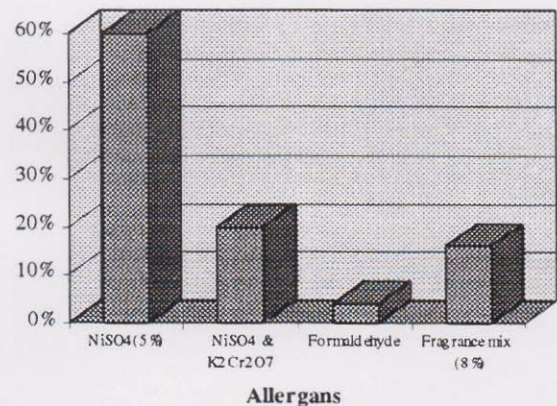


Fig 1: Percentage Distribution of patients with positive patch test (n=19)

In table I among 17 patients with negative patch test 14 patients (82%) reported sensitivity to sunlight and 3 patients (18%) gave no indication of sunlight sensitivity.

Table I: Percentage distribution of sunlight sensitivity in patients with negative patch test.

Patients tested	Patch test		Sunlight sensitivity	
	-ve	+ve	-ve	+ve
N = 17	17/17 (100%)	14/17 (82%)	3/17 (18%)	

Discussion

A positive patch test presupposes prior sensitization, thus in a patient with contact dermatitis a positive patch test must never be disregarded. Our study interprets that majority of patients are sensitive to 5% nickel sulphate and the results are in accordance with the studies reported in 1972⁷. The patients who showed no sensitivity to allergens gave a definite history of being sensitive to sunlight dermatitis in a chronic relapsing condition that can have considerable effects on the lives of sufferers⁸. The patients found sensitive to various allergens on patch test must be educated about the presence of that particular allergen in commonly used things.

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