

PSYCHOLOGICAL FACTORS IN PSORIASIS

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ABSTRACT

This study compares the levels of anxiety, depression, alexithymia and stressful life events in 30 consecutive patients of psoriasis with equal number of age and sex matched normal controls, patients with fungal infections and patients with neurosis. Sinha's anxiety scale, Hamilton's depression rating scale, Toronto alexithymia scale and the presumptive stressful life events scale were used to measure anxiety, depression, alexithymia and stressful life events respectively. Analysis revealed that patients with psoriasis were significantly more anxious and depressed, obtained significantly higher alexithymia scores and had significantly more stressful life events as compared to normal subjects and patients with fungal skin infection. Psoriatics were significantly less anxious and depressed as compared to neurosis patients. Six patients with psoriasis were dependent on alcohol. Measures to reduce anxiety and depression and reduction of alcohol intake will not only improve subjective wellbeing of psoriasis patients but may also prevent relapses.

Key words : *Psoriasis, anxiety, depression, alexithymia, stressful life events, alcohol dependence*

Psoriasis is a chronic, relapsing cutaneous condition with a 1-2% prevalence in the general population. Both genetic and environmental factors are believed to play an important role in the pathogenesis of the disorders (Swerlick & Lawley, 1998). Psychosocial stress has been implicated by some as being important in the onset and/or exacerbation of psoriasis in 40% to 80% of cases (Gaston et al., 1987; Singh, 1994). Furthermore, psoriasis has been associated with a range of personality characteristics including anxiety (Fava et al., 1980), depression (Fava et al., 1980; Hughes et al., 1983) and increased prevalence of alcoholism (Morse et al., 1985; Chaput et al., 1985) and suicide (Sandbourne et al., 1972). Many of these studies had important methodological shortcomings like use of non standardised subjective measures for the measurement of anxiety and

depression, lack of normal control groups or control groups that were inadequately defined. In view of the methodological shortcomings of the earlier studies and the paucity of Indian studies the present work was undertaken.

MATERIAL AND METHOD

Thirty consecutive inpatients with confirmed diagnosis of psoriasis formed the patient group. Psoriasis patients were tested after their treatment was completed and they were in remission. The control group consisted of age and sex matched subjects who were free of physical and psychiatric disorders. An equal number of age and sex matched inpatients with fungal skin infections formed the hospitalised patient group, while equal number of age and sex matched neurosis manifesting with mixed

features of anxiety and depression formed the neurosis group. All subjects underwent a psychiatric interview and the following psychological tests :

1. Sinha's Anxiety Scale (SAS) (Sinha, 1968).
2. Hamilton Depression Rating Scale (HDRS) (Hamilton, 1960).
3. Toronto Alexithymia Scale (TAS) (Taylor *et al.*, 1988).
4. Presumptive Stressful Life Events Scale (PSLE) (Singh & Kaur, 1984).

Statistical analysis was performed using

chi-square test and Kruskal-Wallis one way analysis of variance by ranks.

RESULTS

Socio-demographic characteristics of the four group of subjects are given in table 1. There was no statistically significant difference among the four groups with regard to these sociodemographic variables. One patient with psoriasis gave a past history of schizophrenia, one patient was on lithium prophylaxis for bipolar affective disorder, six patients had alcohol

TABLE 1
SOCIO-DEMOGRAPHIC VARIABLES

Variables	Psoriasis patients (N=30)	Normal controls (N=30)	Fungal infection patients (N=30)	Neurosis patients (N=30)
Mean age (in years)	34.06	33.90	34.20	34.73
Range of age (in years)	12-52	12-52	20-48	20-48
Age (in years)				
up to 29	8	9	9	10
30-39	13	13	14	12
40-49	6	5	6	8
50-59	3	3	1	0
Sex		$\chi^2 = 4.99, N.S.$		
Male	28	28	29	29
Female	2	2	1	1
Education		$\chi^2 = 0.70, N.S.$		
0-5 class	4	4	2	6
6-10 class	19	20	19	17
11 class and above	7	6	9	7
Marital status		$\chi^2 = 2.91, N.S.$		
Married	27	24	26	24
Unmarried	3	6	4	6
Domicile		$\chi^2 = 1.66, N.S.$		
Rural	21	22	25	26
Urban	9	8	5	4
Family income (in rupees/month)		$\chi^2 = 3.30, N.S.$		
<Rs 3000	14	17	16	20
Rs 3000-4000	10	9	9	8
>Rs 4000	6	4	5	2
		$\chi^2 = 3.43, N.S.$		

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TABLE 2

SCORES OF THE SUBJECTS ON SINHA'S ANXIETY SCALE (SAS), HAMILTON DEPRESSION RATING SCALE (HDRS), TORONTO ALEXITHYMIA SCALE (TAS) AND PRESUMPTIVE STRESSFUL LIFE EVENTS SCALE (PSLE)

Subjects	SAS score Mean (SD)	HDRS score Mean (SD)	TAS score Mean (SD)	PSLE score Mean (SD)
1. Psoriasis patients	38.64 (10.37)	6.73 (3.76)	78.72 (12.80)	3.28 (0.36)
2. Normal controls	23.78 (9.72)	1.16 (1.35)	54.60 (6.60)	2.04 (0.51)
3. Fungal infection patients	24.04 (8.11)	2.28 (1.33)	56.52 (8.16)	2.08 (0.57)
4. Neurosis patients	62.60 (11.64)	12.12 (2.29)	62.56 (9.91)	3.46 (0.71)
Kruskal wallis one way analysis of variance results	1 vs 2 Significant	Significant	Significant	Significant
	1 vs 3 Significant	Significant	Significant	Significant
	1 vs 4 Significant	Significant	Not significant	Not Significant

dependence and one alcohol abuse. Scores on SAS, HDRS, TAS and PSLE of the four groups is given in table 2. Statistical analysis revealed that patients with psoriasis were significantly more anxious and more depressed than the fungal infection patients group as well as normal subjects. Psoriasis patients were significantly less anxious and depressed as compared to neurosis patients. Psoriasis patients obtained significantly higher scores on TAS and PSLE as compared to normal subjects and fungal infection patients but not neurosis patients.

DISCUSSION

The main finding of our study was that patients with psoriasis and significantly higher levels of anxiety and depression as compared to normal controls and also hospitalised patients with fungal skin infection. From this we can infer that the raised levels of anxiety and depression in psoriasis patients is not a transient emotional state incidental to their diseased state or to the stress of hospitalisation. Similar findings were reported by Fava et al. (1980) who found that inpatients with psoriasis (N=20) have higher levels of anxiety and depression as compared to patients with fungal skin infections. Contrary findings were reported by Schaar (1963) who in a study of 48 outpatients with psoriasis found that social anxiety scores of psoriatics did not differ from normal controls.

However, it must be pointed out that in the latter study only social anxiety was measured which could account for the contrary findings.

Patients with psychosomatic disorders of the colon have been found to have high levels of neuroticism and introversion showing dysthymic characteristics (Eysenck, 1963). Anxiety and depression are the main characteristics of dysthymic and so the present finding of high levels of anxiety and depression in patients with psoriasis is to be understood as a factor in their personality as it is in dysthymics. The significantly lower levels of anxiety and depression in psoriasis patients as compared to patients with neurosis could be due to the fact that some of the affect may have been dissipated due to symptom formation.

The finding of higher number of stressful life events in psoriasis patients as compared to normal control subjects and patients with fungal skin infections is in agreement with Seville (1977) and Fava (1980) though contrary findings were reported by Payne et al. (1985). Ametz et al. (1985) demonstrated that psoriatics experiences "significantly higher stress levels" in comparison with healthy controls when both were exposed to the same stress provoking situation. This was measured by scores on standard questionnaires and increased urinary adrenaline levels. It therefore appears that the important factor is the psychogenic distress or

"stress" experienced by the patient rather than the life event *per se*.

When assessing a patients with psoriasis, the clinician should specifically inquire whether the patients psoriasis is stress reactive. This is important as the high stress reactors, not only experience more psychologic morbidity but also experience more frequent exacerbations of their disease. Gupta *et al.* (1989) observed that high stress reactors have certain personality characteristics such as difficulty with assertion of angry feelings and a tendency to want the approval of theirs, in addition to more cosmetically disfiguring psoriasis. This personality constellation, superimposed on more disfiguring psoriasis, most likely makes these patients more vulnerable to the stresses resulting from the impact of psoriasis upon the quality of life. This psoriasis related stress may, in turn, exacerbate the psoriasis in a circular manner. The mechanisms by which psychosocial stress may exacerbate psoriasis is a matter of speculation. However, it is likely that assertiveness training that helps the patient to express anger more effectively and psychotherapy aimed at enhancing self esteem may make the psoriasis less stress reactive (Gupta *et al.*, 1989).

An important finding of the present study was that six (20%) patients with psoriasis were dependent on alcohol. Chaput *et al.* (1985) observed a higher prevalence of psoriasis among individuals who consumed more than 50 g of ethanol per day. Similarly, Morse *et al.* (1985) reported an 18% prevalence of alcoholism among psoriatics. They also found no relationship between alcoholism and duration of psoriasis suggesting perhaps that having psoriasis alone predisposes the patient to developing alcoholism. Alcoholism among psoriatics may represent an underlying depressive illness or may represent an attempt at self-medication, for example anxiety, social phobia or sleep difficulties. This has important therapeutic implications and warrants further evaluation.

The etiology of psoriasis inspite of

numerous studies remain obscure. Patients with psoriasis have been found to have decreased responsiveness of the beta adrenergic receptors in the epidermal cells, abnormalities in substance P (Farber *et al.*, 1986) and increased cutaneous blood flow (Klomp, 1984). Emotional reactions such as due to anxiety depression or life events, may adversely affect all the above mechanisms (Gupta *et al.*, 1987) and play a role in the onset and exacerbation of psoriasis. Similarly, Martin (1985) proposed that the presence of alexithymic features prevents an individual from coping effectively awareness which would permit identification of a particular event as stressful, and the tendency to use action as a primary generalised behavioural response. This ineffective coping would serve to prolong an individuals exposure to a stressor thereby adversely affecting all the above mechanisms and play a role in the onset and exacerbation of psoriasis.

Presently psoriasis is treated by topical and systemic drugs. Apart from reassurances, not much effort is made to alleviate the emotional distress of these patients. It is therefore possible that management of anxiety, depression, stress and alexithymia will not only improve the subjective well being of these patients but may decrease the incidence or relapses.

From the present study it can be conducted that patients with psoriasis have higher levels of anxiety, depression, stressful life events and alexithymia as compared to normal subjects. The high levels of anxiety, depression, stress and alexithymia may act as a factor in the onset and/or exacerbation of symptoms in the same way as in other psychosomatic disorders, the only difference being an organ vulnerability. The role of liaison psychiatry in the management of psoriasis needs further evaluation.

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