Personality evaluation in psoriasis

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Emotional disturbance has been considered an important factor in precipitating and perpetuating psoriasis since the 19th century. Obermayer[1] considered psoriasis a constitutional dermatosis frequently associated with neurosis.

The purpose of this study was to determine any relationship between anxiety or stress and exacerbations of psoriasis in a large group of patients hospitalized for psoriasis. The group was evaluated subjectively by questionnaire regarding their beliefs about psoriasis. Psychometric testing was performed on hospitalized psoriatic patients, and the mean scores were compared with the mean scores of a group of outpatient psoriatics and a group of patients hospitalized for other dermatologic conditions.

Materials and methods

From October 1970 to March 1971, 50 consecutive patients admitted to the Cleveland Clinic Hospital with psoriasis were selected for the study (Group 1). They were admitted for Goeckerman therapy or for liver biopsy performed to assess methotrexate therapy, or both.

A 15-question survey regarding the individual's beliefs about psoriasis and related problems was

Table 1. Outpatients with psoriasis (Group II)

Patient	Sex	Age	Duration (yr)	Body surface affected (%)
1	F	57	4	10
2	F	45	3	15
3	F	28	3	5
4	M	32	6 mo	10
5	F	67	1	10
6	F	58	6	5
7	F	35	2 mo	5
8	F	57	4	10
9	F	57	6	5
10	F	26	1	5
11	F	34	4 mo	10
12	F	22	3	5
13	M	18	2	10
14	F	24	6	10
15	M	42	5	5

Table 2. Hospitalized patients with dermatoses other than psoriasis (Group III)

Patient	Sex	Age	Diagnosis
1	M	47	Pityriasis rosea
2	M	66	Lichen planus
3	M	41	Contact dermatitis
4	M	70	Erythema multiforme
5	F	23	Contact dermatitis
6	M	48	Leg ulcer
7	F	28	Condyloma accuminata
8	F	41	Scleroderma
9	M	16	Acne vulgaris
10	M	18	Acne vulgaris
11	F	42	Discoid lupus erythematosus
12	M	49	Leg ulcer
13	F	44	Photodermatitis
14	F	18	Hidradenitis suppurativa
15	M	47	Leg ulcer

given to each patient. Forty-eight patients completed the questionnaire. All 50 patients also completed a 704-question combination of the Minnesota Multiphasic Personality Inventory (MMPI)[2] and the California Psychological Inventory (CPI),[3] from which all standard clinical scales of both tests were scored.

A group of 15 outpatients with psoriasis were also tested with the combined MMPI and CPI (Group II). These patients had limited involvement not requiring methotrexate therapy or hospitalization (*Table 1*).

Another group of 15 patients (Group III) had other dermatoses serious enough to warrant hospitalization (*Table 2*). This group was also tested with the CPI-MMPI combination. Patients who had dermatoses with obvious psychophysiologic overlays were omitted from this group.

Results

Age, mean duration of disease, and percent of body coverage using the "rule of nines" for Groups I and II are compared in *Table 3*. In body coverage the 10% range indicates those patients with limited but severe psoriasis of the scalp or palms and soles or both.

In Group I, three patients were clear of psoriasis but were hospitalized for liver biopsies. The group included 15 patients who were receiving methotrexate, 12 who never had been given the drug, 22 in whom methotrexate was discontinued, and 4 patients who

Table 3. Comparison of Groups I and II

	Average age (yr)	Mean duration (yr)	Body surface affected (%)
Group I	40.2	13.2 (4 mo–40 yr)	60 (10–90)
Group II	40.1	3.0 (2 mo–6 yr)	8 (5–15)

were receiving hydroxyurea. A modified Goeckerman regimen was prescribed for all patients. Systemically, all patients were relatively healthy. Associated diseases were present in some of them (*Table 4*).

Responses of the patients in Group I to the psoriasis questionnaire are shown in *Table 5*. Farber et al,[4] in their survey of 2,092 psoriatics, found that 40% of their patients felt that psoriasis was definitely associated with worry, and that 21% believed the condition was not related to worry. They found that 39% or 42% (depending on the phrasing of the question) of their group answered "uncertain" to this question of a relationship between worry and psoriasis. Only 1% of our patients indicated "uncertainty," but 42% indicated a "sometimes" relationship. We thus found that 80% felt that worry was either always or sometimes associated with a flare of psoriasis.

Thirty-three percent of the hospitalized group considered themselves to be consistently "high-strung," and 30 of 48 patients (62%) felt that the recurrence or worsening of psoriasis consistently made them "nervous." An additional 11 patients felt that appearance of psoriasis sometimes made them nervous; only 7 (15%) indicated no nervousness with the appearance of psoriasis.

Almost half the patients used tranquilizers at least part of the time. Fourteen of 23 patients (61%) felt that the tranquilizers helped control anxiety; 6 of 23 patients (26%) felt these drugs helped control psoriasis. Twenty patients were cigarette smokers, with a mean consumption of one pack per

Table 4. Associated diseases in hospitalized psoriasis patients

Diagnosis	No. patients
Hypertension (mild or labile)	6
Diabetes mellitus	5
Liver disease	4
Psoriatic arthropathy	4
Arteriosclerotic heart disease	3
Sociopathic personality	2
Chronic bronchitis	2
Rheumatoid arthritis	1
Heroin addiction	1

Table 5. Responses of 48 patients to psoriasis questionnaire

1. Does psoriasis tend to appear with worry?	Yes	18
	No	9
	Uncertain	1
	Sometimes	20
Does existing psoriasis worsen at times of worry?	Yes	18
	No	9
	Uncertain	1
	Sometimes	20
2. Do you consider yourself "high-strung"?	Yes	16
	No	18
	Sometimes	14
3. When psoriasis appears or worsens, do you become nervous?	Yes	30
	No	18
	Sometimes	11
4. Do you use tranquilizers?	Always	1
	Sometimes	22
	Never	25
Do you think tranquilizers help control your nerves? (23 patients)	Yes	14
	No	3
	Sometimes	6
Do tranquilizers help control the psoriasis? (23 patients)	Yes	1
	No	14
	Sometimes	5
	Don't know	3
5. Do you smoke cigarettes?	Yes	20
	No	28

How many packs per day? (20 patients)

Number of patients	Packs
5	1/2
9	1
2	11/2
4	2

Mean = 1 pack per day

Table 6. Alcohol consumption

Rating	No.	%
0	16	33
1+	12	25
2+	11	23
3+	8	17
4+	1	2

day. Twenty of the patients were consumers of moderate or heavy amounts of alcohol according to the Roenigk et al[5] classification (*Table 6*).

Discussion

In general, the results of this self-report questionnaire suggest that most psoriatic patients assume that, at least part of the time, a causal relationship exists in both directions between emotional tension and psoriatic flares. That is, they feel that emotional tension at least sometimes causes the appearance or worsening of psoriasis, and that the appearance of psoriasis at least sometimes increases tension and nervousness.

When the range of individual test results from the MMPI and the CPI is examined, no uniform "psoriatic profile" is apparent, suggesting that at least in terms of the dimensions that these tests measure, there is no typical psoriatic personality.

When the average MMPI profiles of the different groups are examined the results for both the hospitalized psoriatics and the hospitalized controls show similar mild elevation above the nonhospitalized psoriatics (*Fig. 1*). These patients are, on the average, mildly above the cultural norm. The highest average elevation on any MMPI scale of any group was T-score 63, well below what is normally considered a pathologic range. Since the MMPI measures emotional distress primarily, these results do not suggest more than the expected mild emotional upset usually found in physically ill patients. The results suggest that psoriasis is no more distressing to patients than are other dermatologic conditions.

On the CPI (*Fig. 2*), a test that measures social and interpersonal skills and comfort,[3] the hospitalized psoriatics average less social comfort, confidence, enthusiasm, and commitment than the nonhospitalized psoriatic controls, who in turn show slightly (although not statistically significant) less social confidence than the hospitalized nonpsoriatic controls. There are no appreciable differences, however, in assertiveness, self-reliance, or behavioral conformity among the groups. The patients with more severe psoriasis thus appear to be more uncomfort-

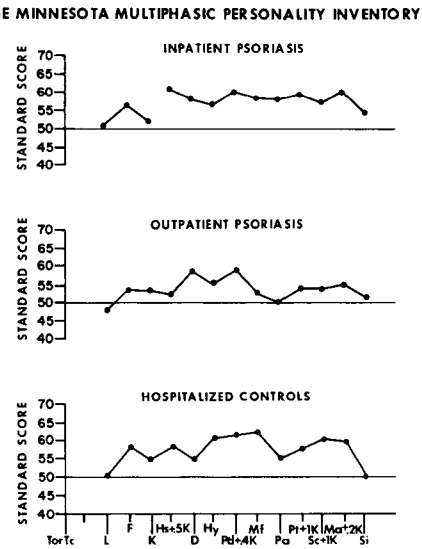

Fig. 1. Minnesota Multiphasic Personality Inventory. The standard score 50 represents the cultural norm.

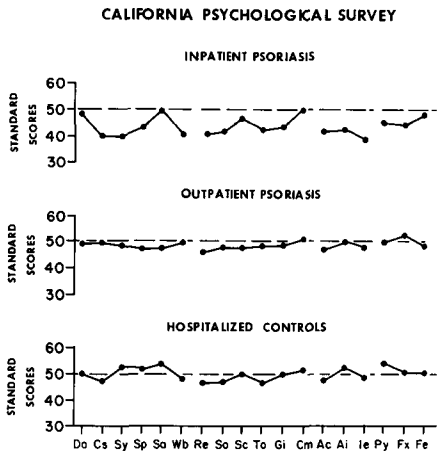

Fig. 2. California Psychological Inventory. The standard score 50 represents the cultural norm.

able in and distrustful of social situations than patients in the other two groups, without being less assertive or less controlled. This pattern of social discomfort without a reduction of assertiveness or an increase in impulsive behavior can give rise to a variety of psychophysiologic symptoms secondary to sustained emotional tension.

These results confirm the findings of Farber et al[4] that approximately 40% of psoriatic patients relate their symptoms to emotional stress. Farber et al reported an additional 40% of patients who were uncertain as to whether or not emotional factors played a part in onset or worsening of symptoms. In our study a comparable proportion of patients felt that emotional stress sometimes, rather than always, played a part in symptoms. We suspect that the "uncertain" group of Farber et al may also contain a large proportion of patients who used that answer to reflect an infrequent rather than uncertain relationship between stress and symptoms.

A subjective survey by Savin[6] showed that 50% of patients with severe psoriasis related their condition to worry, with emphasis on self-consciousness and depression caused by the psoriasis. Our results suggest that approximately 80% of patients with severe psoriasis judge emotional factors a possible cause of psoriatic flares at least part of the time.

We interpret the MMPI-CPI test results as supporting the judgment of the patients. There is evidence of an emotional reaction to the symptoms themselves, but this reaction appears to be comparable to and no worse than reactions of other patients to other similarly severe skin conditions, which are not thought to have a psychophysiologic origin. Depression and anxiety do not seem more characteristic of psoriatics than of other comparably ill patients. At the same time, the patients with severe psoriasis show test evidence of more social discomfort and distrust than control patients with other comparably distressing dermatologic conditions, and more than those with mild psoriatic problems, while showing comparable levels of assertiveness and self-control. These characteristics tend to be productive of chronic emotional tensions that in physiologically susceptible individuals may often give rise to psychophysiologic symptoms. There is no typical personality structure associated with the psoriatic patients, since this same test profile is often found in patients without psoriasis but with other psychophysiologic disease.

In contrast, Goldsmith et al[7] found significant increases on the psychasthenia and hysteria scales in MMPI testing of only 13 hospitalized psoriatic

patients. The larger sizes of our sample groups probably explains this discrepancy. Using the Maudsley Personality Inventory, Goldsmith et al found no significant difference between psoriatics and a control group. Susskind and McGuire[8] used this inventory and found no significant increase of psychoneurosis in psoriasis patients.

When these several findings are taken together, it seems reasonable to conclude that psoriasis reflects a physiologic predisposition that can be activated by a nonspecific chronic emotional tension level that is generated more by interpersonal stress than by anxiety or depression.

Summary

Hospitalized patients with psoriasis were studied subjectively by questionnaire regarding their beliefs about psoriasis, and objectively by psychometric testing. They were objectively compared with a group of outpatients with milder psoriasis and a group of controls. No typical psoriatic test profile was detected, although psoriasis can be activated by a nonspecific emotional tension level.

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