Life events and psychological distress in dermatologic disorders: Psoriasis, chronic urticaria and fungal infections

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A consecutive unselected series of 60 in-patients suffering from dermatologic disorders (psoriasis, chronic urticaria and fungal infections of the skin) was examined. Twenty patients with each illness were included. Stressful life events immediately before illness onset, levels of psychological distress, and alexithymic traits were investigated. Patients with psoriasis and chronic urticaria were exposed to stressful life situations before disease onset and suffered from psychological distress (anxiety, depression, inadequacy) significantly more than those with fungal infections. Implications for psychosomatic research and treatment are discussed.

Psoriasis and chronic urticaria are two skin conditions which have often been ascribed to stressful life situations and emotional disturbances.

Wittkower & Russel (1953) identified emotional stress as a cause of psoriasis in about 40 per cent of 72 patients; Susskind & McGuire (1959) in 70 per cent of 20 patients; and Farber *et al.* (1968) in 32–44 per cent of more than 2000 patients. Susskind & McGuire (1959) also attempted to define the degree of neuroticism in their sample by the MPI, but failed to obtained differences from the general population. Goldsmith *et al.* (1969) studied 13 patients with psoriasis and a similar group with other dermatoses through the MPI and the MMPI. Only differences in the scales of hysteria and psychasthenia of MMPI were reported. Baughman & Sobel (1971) using Cattell's 16 PF test could not observe any specific personality profile in their 252 patients. They also employed the SRSS elaborated by Holmes & Rahe (1967) for evaluating life events and concluded that stress was only a minor determinant of the severity of psoriasis in their population. Seville (1977) carried out a controlled study and recognized specific stress before the first attack in 39 per cent of 132 patients, compared to 10 per cent of the control group. A significantly better prognosis was observed in those patients assessed as having insight into stress (Seville, 1978).

As to chronic urticaria, Stokes *et al.* (1935) detected significant stress in 83 of 100 patients; and Rees (1957) in 51 of 100 patients. Reinhold (1960) detected a significant stress in about 55 per cent of 27 patients, who, however, were not entirely unselected. The same bias concerning selection was present also in the study by Kraft & Blumenthal (1959), who examined 22 patients with chronic urticaria. The MMPI used on 10 patients did not show any marked abnormality.

This literature suggests that emotional disturbances detectable on psychological testing do not seem to be present in psoriasis and chronic urticaria. Also, the above-mentioned studies dealing with stress, other than that of Baughman & Sobel (1971), have a serious flaw in that objective and standardized criteria of life events were not used. It is particularly difficult to evaluate subjective opinions in this area (Susskind & McGuire, 1959; Farber *et al.* 1968), since the validity of the patient's judgement about the course of his own illness has been questioned (Baughman & Sobel, 1970).

In our study we examined patients suffering from three different dermatologic disorders: psoriasis, chronic urticaria and fungal infections of the skin. Two of them (psoriasis and chronic urticaria) – as we previously discussed – are conditions frequently ascribed to emotional disturbances and stress, while in the other (fungal infections) psychological factors are not supposed to play a significant role (Rook *et al.*, 1972). Sainsbury (1960),

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however, in a survey of out-patients attending a general hospital, reported that patients with fungal infections associated with hyperhidrosis scored highly on neuroticism as measured by the MPI. A retrospective study of the occurrence of life events prior to illness onset is here associated with measures of psychological distress and alexithymia. Alexithymia is a relatively new concept to describe the impoverished fantasy life of psychosomatic patients with a resulting utilitarian way of thinking and a characteristic inability to use appropriate words to describe their emotions (Nemiah *et al.*, 1976).

Method

A consecutive unselected series of 60 in-patients suffering from dermatologic disorders (psoriasis, chronic urticaria and fungal infections of the skin) were studied, including 20 patients with each illness. All patients were hospitalized at the Institute of Dermatology of the University of Padua School of Medicine. All diagnoses were verified by a dermatologist (C.V.F.). The following criteria were employed. In the psoriasis group, clinical forms of nummular psoriasis with an irregular chronic course were included, but other forms such as pustular, exfoliative and guttate psoriasis were excluded. Patients with a diagnosis of chronic urticaria were considered when this was certainly not allergic, exogenous, physical, symptomatic or cholinergic and symptoms had been present for over 3 months. As to fungal infections of the skin, we examined chronic long-standing lesions of tinea pedis, tinea cruris and tinea circinata, with symptoms present for over 3 months and not associated with hyperhidrosis. The mean age of patients was 31·95 (±12·83) for psoriasis, 45·30 (±19·73) for urticaria and 40·15 (±14·06) for fungal infections. Other demographic data are summarized in Table 1. Our measure of social class was based on Goldthorpe & Hope's social grading of occupations (Goldthorpe & Hope, 1974), with Brown, Harris & Copeland's subdivision (Brown *et al.*, 1977). Although no significant differences as to sex, marital status, social class and duration of illness, by chi square, are observed, one notes that the fungal infections group is the least chronic.

Each patient had a semistructured research interview covering stressful life events occurring in the 6 months immediately preceding the symptomatic onset of dermatologic illness, which was accurately determined. The life events recorded derived from the long scale of Paykel, including 61 events (Paykel *et al.*, 1976). All patients, during their hospital stay, were given two questionnaires in an Italian form. One was the Kellner–Sheffield Symptom Rating Test (SRT), a 30-item self-rating scale of distress (Kellner & Sheffield, 1973). The SRT (here used in the original paper-and-pencil version) is designed to measure changes in the symptoms of neurotic patients participating in experiments in therapeutics such as drug trials. The test scores discriminate significantly between psychiatric patients and normals (Kellner & Sheffield, 1973). It includes four subscales: anxiety, depression, somatization

Table 1. Demographic data and duration of illness

	Psoriasis ($n = 20$)	Chronic urticaria ($n = 20$)	Fungal infections ($n = 20$)
Sex			
Male	13	11	9
Female	7	9	11
Marital status			
Married	13	11	16
Single, divorced	4	9	3
Widowed	3	0	1
Social class			
Working class	14	11	14
Middle class	6	9	6
Duration of illness			
Less than 1 year	6	9	12
1–5 years	8	8	7
More than 5 years	6	3	1

and inadequacy. These subscales have satisfactory correlations with other specific scales measuring these traits, like the Taylor MAS or the Zung Depression Self-rating Scale (Kellner & Sheffield, 1973). The other questionnaire was a preliminary form of the Schalling–Sifneos Personality Scale (here used by kind permission of Dr Sifneos), a 20-item self-rating questionnaire for evaluating alexithymic traits, whose definitive form and validation is in progress.

The statistical significance of differences among groups was evaluated through chi-square and *t* tests, when appropriate.

Results

The first comparison among these dermatologic patients concerns stressful life events. We found that 16 out of the 20 patients with psoriasis (80 per cent), 18 of those with chronic urticaria (90 per cent) and 10 of those with fungal infections (50 per cent) reported at least one event listed in Paykel's scale before illness onset. The differences among groups were significant ($P < 0{\cdot}05$) by chi-square test. Patients with psoriasis reported a total of 29 events (with a mean of 1·45 per patient), those with urticaria a total of 46 events (with a mean of 2·30) and those with fungal infections a total of 17 (with a mean of 0·85). Applying the American scaling of this scale of events (Paykel *et al.*, 1976), there was a mean of 14·83 per patient in psoriasis, a mean of 25·22 in urticaria and of 8·67 in fungal infections.

A second comparison among the three illnesses involves the severity of psychological distress, as measured by SRT (Kellner & Sheffield, 1973). This scale, in the form here used, gives a total score whose range is between 0 and 120. Kellner & Sheffield (1973) give a mean total score of 49·82 (±27·21) per patient for new neurotic out-patients in the US, and a total score of 11·88 (±13·64) for normals. We obtained a mean total score per patient of 18·50 (±11·04) in psoriasis, 22·25 (11·75) in chronic urticaria and 11·00 (±6·92) in fungal infections. The differences by *t* test are significant between psoriasis and fungal infections ($P < 0{\cdot}01$) and between urticaria and fungal infections ($P < 0{\cdot}01$). A one-way analysis of variance revealed statistically significant differences among groups in the subscales of anxiety ($F = 4{\cdot}47$, d.f. = 2, $P < 0{\cdot}05$), depression ($F = 5{\cdot}51$, d.f. = 2, $P < 0{\cdot}01$) and inadequacy ($F = 5{\cdot}11$, d.f. = 2, $P < 0{\cdot}01$). Table 2 shows the mean score per item and per patient for each of the four subscales of SRT in the three groups.

Table 2. Psychological distress: Mean scores per item and patient for SRT subscales

Subscale	Psoriasis	Chronic urticaria	Fungal infections	P^a
Anxiety	0·76	0·91	0·48	$P < 0{\cdot}05$
Depression	0·52	0·72	0·28	$P < 0{\cdot}01$
Somatization	0·50	0·66	0·38	n.s.
Inadequacy	0·67	0·65	0·32	$P < 0{\cdot}01$

[a] By one-way analysis of variance.

Table 3. Alexithymic scores

Illness	$\bar{X}$	SD
Psoriasis	24·75	7·24
Chronic urticaria	25·65	5·82
Fungal infections	25·85	4·92

The third and last comparison among groups involves alexithymia, as measured by the self-rating questionnaire. Analysis of the total scores per patient does not reveal significant differences by *t* test among groups (Table 3). A one-way analysis of variance per item does so in two cases. Interestingly enough the two items are very similar. The first states: 'I think it is not worthwhile discussing how one feels. I prefer to act.' Patients suffering from chronic urticaria report a higher score on this item than those with psoriasis and fungal infections ($F = 3{\cdot}17$, d.f. $= 2$, $P < 0{\cdot}05$). The second item states: 'I prefer taking action rather than thinking.' Patients with urticaria again are differentiated ($F = 6{\cdot}42$, d.f. $= 2$, $P < 0{\cdot}01$). These differences as to tendency to act (a characteristic alexithymic trait) may be due to chance. They would confirm however the observations made by Shoemaker (1963), who identified some kind of symptomatic activity (e.g. excessive physical work, premature acceptance of responsibilities, etc.) as the outstanding behavioural characteristic of people suffering from chronic urticaria.

Discussion

The concept of psychogenesis of organic disease is no longer tenable (Engel, 1977). Psoriasis cannot be considered any more a psychodermatosis in the old sense, namely one in which we can clearly describe the psychogenesis of the disease (Musaph, 1976). It, as well as chronic urticaria and fungal infections, can be caused by several factors, one of which may be psychosocial (Whitlock, 1976). Many authorities – notably Engel (1977) – state in fact that social and psychological factors are codeterminants of health and illness and propose a biopsychosocial model of illness to provide room for the doctrine of multicausality of all disease. Moreover Lipowski (1977) remarks that the relative contribution of psychosocial factors varies from disease to disease, from person to person, and from one episode to another of the same illness in the same person. It is one of the tasks of psychosomatic research – according to Lipowski (1977) – to try to determine the extent of this relative contribution in various disorders and in individual patients. This exactly clarifies the aims and the limits of this research.

Patients suffering from psoriasis and chronic urticaria seem to be more exposed to the kind of stressful life events listed in Paykel's scale (Paykel *et al.*, 1976) in the 6 months immediately prior to illness onset than those with fungal infections. Although our groups were unselected and formed a consecutive series, the percentages of patients reporting at least one event (80 per cent in psoriasis and 90 per cent in urticaria) are higher than those found in previous reports. This is probably due to the fact that the investigation of stressful life events is more accurate with Paykel's semi-structured research interview and scale than with other methods previously employed. One may question the accuracy with which people can be expected to remember precisely what happened before illness onset in distant retrospect. This may be true especially for those patients whose duration of illness is over 5 years (about 16 per cent of the sample). If failures to recollect life events are to be expected, they should mainly concern however patients with psoriasis and chronic urticaria, since the fungal infections are the least chronic conditions. Incidence of life events prior to disease onset in psoriasis and urticaria thereby may have been underestimated.

As to psychological distress in the form of neurotic symptoms, this was present in a significantly higher grade in patients suffering from psoriasis and chronic urticaria than fungal infections. Previous investigations employing the MPI (Susskind & McGuire, 1959; Goldsmith *et al.*, 1969), the Cattells's 16 PF (Baughman & Sobel, 1971) and the MMPI (Kraft & Blumenthal, 1959; Goldsmith *et al.*, 1969) had failed to obtain significant and substantial differences between patients with psoriasis or chronic urticaria and control groups. The fact is not surprising because of SRT sensitivity, which, for instance, is

reported to discriminate more accurately than the neuroticism scale of MPI (Kellner & Sheffield, 1973). It is worth mentioning that the differences in psychological distress here reported may be a consequence of the disabling forms of illness examined and that all the patients have been hospitalized because of their dermatoses and thereby may not be representative of the larger group of patients with these diseases who are never hospitalized because of their skin lesions. Anyhow clinical management should reflect these differences. Two controlled studies (Lester *et al.*, 1962; Sanger, 1970) reported good results with psychotropic drugs in a number of skin disorders. According to Lester *et al.* (1962), tranquillizers and antidepressants are more effective when the disorder of affect is conspicuous. Obviously the basis for drug selection lies in an understanding of the particular affect state of the patient involved. The SRT, because of its anxiety, depression, somatization and inadequacy subscales, is very suitable for this screening purpose. Its routine use in patients suffering from psoriasis and chronic urticaria is thereby strongly recommended.

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