

LETTER TO THE EDITOR

Patients with psoriasis and atopic dermatitis show distinct anxiety profiles

Dear Editor,

To examine the relation between anxiety condition and psoriasis severity, 58 patients with psoriasis, 32 with atopic dermatitis and 48 healthy controls were assessed for anxiety using the State-Trait Anxiety Inventory (STAI). The data were analyzed using Statview (Hulinks, Tokyo, Japan). The Mann-Whitney *U*-test and the χ^2 -test were performed for statistical analyses. The correlation was determined by Spearman's rank correlation coefficient. The mean age of the patients with psoriasis, atopic dermatitis and healthy controls was 31.6 ± 3.3 , 29.7 ± 6.4 , and 32.2 ± 7.8 , respectively (Table 1). There was no statistically significant difference in age or sex among the three groups. All atopic dermatitis patients had been treated with topical corticosteroids, topical tacrolimus ointment, moisturizers and occasional antihistamines. The psoriasis patients were under the treatment of topical corticosteroids, topical vitamin D₃, systemic cyclosporin, etretinate and phototherapy. Severity and quality life of psoriasis patients were determined by Psoriasis Area and Severity Index (PASI) score and Dermatological Life Quality Index (DLQI) score, respectively. In the enrolled groups, we excluded subjects who had any psychiatric disorders. The study was approved by the Ethics Committee of Asahikawa Medical University, and informed consent was obtained before participation.

State-anxiety (SA) and trait-anxiety (TA) were measured using STAI, which was translated into Japanese by Iwata *et al.*¹ The atopic dermatitis patients showed higher anxiety scores than psoriasis patients and normal healthy controls. The mean scores of TA and SA were 50.9 ± 2.4 and 51.1 ± 3.3 , respectively, in the atopic dermatitis patients (Fig. 1). In contrast, anxiety scores for patients with psoriasis were not significantly higher than those of healthy controls. The mean scores of TA and SA were 42.5 ± 2.4 and 42.9 ± 3.8 , respectively, in the psoriasis patients. The mean scores of TA and SA were 41.4 ± 4.1 and 40.9 ± 4.0 , respectively, in healthy controls. There was no significant difference in STAI score between males and females (data not shown).

Dermatological Life Quality Index scores in psoriasis patients were positively correlated with TA ($r = 0.272$, $P < 0.05$) and SA ($r = 0.296$, $P < 0.05$) scores. In contrast, PASI scores did not signifi-

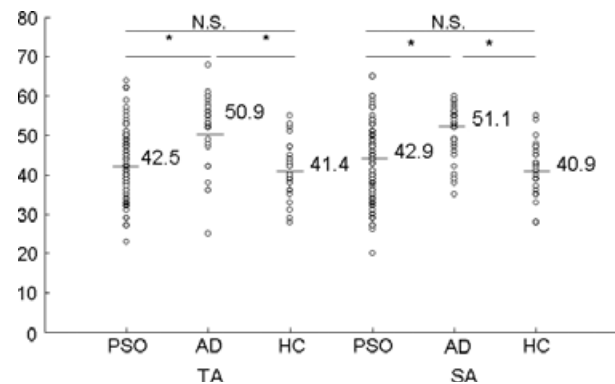


Figure 1. Trait-anxiety (TA) and state-anxiety (SA) levels in patients with psoriasis (PSO), atopic dermatitis (AD) and healthy controls (HC). The numbers indicate each average score. * $P < 0.01$, N.S. not significant.

cantly correlate with TA ($r = 0.029$, $P > 0.05$) or SA ($r = 0.164$, $P > 0.05$).

Psoriasis is a chronic disfiguring skin disorder with marked stress due to problems in body image, self-esteem, feeling of stigma and anxiety.² In the present study, while increased anxiety levels were observed in psoriasis patients compared with healthy controls, this was statistically not significant. It has been reported that younger psoriasis patients of up to 40 years of age show higher anxiety scores than those aged more than 40 years old.³ In our study, STAI scores in younger psoriasis patients (<40 years old) were significantly higher than those of healthy controls (data not shown). Different age distribution as well as ethnic distinction might explain the difference between our and previous results.

Previous studies revealed that there is no correlation between anxiety levels and psoriasis severities.^{3,4} Consistent with this, STAI scores were not correlated with PASI scores in the present study. In contrast, DLQI scores show a significantly positive correlation with STAI scores. Our preliminary results suggest that no correlation

Table 1. Background of patients and healthy controls

	Psoriasis	Atopic dermatitis	Controls
Number (male : female)	58 (31:27)	32 (20:12)	48 (25:23)
Age (average), years	17–62 (31.6 ± 3.3)	16–52 (29.7 ± 6.4)	15–45 (32.2 ± 7.8)
Duration of illness (average), years	2–31 (15.5)	4–28 (13.2)	N.D.

N.D., not determined.

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exists between PASI and DLQI scores (data not shown); the severity of psoriasis does not necessarily reflect the decreased quality of life in psoriasis patients. Thus, DLQI scores seem to be more suitable than PASI scores to evaluate the psychological state of psoriasis patients.

Previously Hashizume *et al.*⁵ reported that Japanese atopic dermatitis patients show higher anxiety scores than healthy controls. Their TA (49) and SA (50.9) scores were similar to our results (38.1 and 40.3, respectively). The anxiety level in atopic dermatitis patients correlated with immunoglobulin (Ig)E level. The average IgE level in the atopic patients was 275.3 IU/mL (normal range <249 IU/mL). The significance of IgE level in the anxiety levels of atopic dermatitis patients remains to be determined.

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