

ORIGINAL ARTICLE

The levels of depression, anxiety and quality of life in patients with chronic idiopathic urticaria

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Keywords

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Abstract

Background Chronic idiopathic urticaria (CIU) is associated with severely impaired quality of life (QoL).

Objective To determine the levels of depression, anxiety and QoL in CIU patients.

Patients and methods This study included 73 patients with CIU, and 34 healthy subjects matched for age and sex were used as controls. The levels of depression, anxiety and QoL were assessed with the Beck Depression Inventory (BDI), the Beck Anxiety Inventory (BAI) and the World Health Organization Quality of Life Assessment-Brief (WHOQOL-BREF), respectively. The reliability and validity of the Turkish versions of these instruments have been examined.

Results When compared with healthy controls, patients with CIU had significantly higher BDI and BAI scores and significantly lower physical health and psychological health subscale scores of the WHOQOL-BREF. BDI, BAI and all domains of WHOQOL-BREF were unrelated to age, duration of illness, urticaria activity score (UAS) and visual analogue score (VAS). There was a negative significant correlation between all domains of WHOQOL-BREF and BDI and BAI.

Conclusion Our data confirm that QoL is markedly reduced in CIU patients. Physical health and psychological health were found to be the areas QoL most affected in CIU patients. And also we have found that CIU patients frequently suffer from depression and anxiety. The severity of these parameters was found to be positively correlated with the extent of QoL decrease.

Introduction

Chronic idiopathic urticaria (CIU) is characterized by recurrent urticarial weals of unknown origin for 6 or more weeks' duration. It is one of the most common and frustrating diseases for both patients and physicians.^{1,2} Also it is known to greatly impact patients' quality of life (QoL).³ Recent studies have established the extent of QoL impairment and psychiatric comorbidity in CIU patients.⁴⁻⁶ CIU patients reportedly suffer considerable loss of energy, sleep disturbance and emotional upset as well as restrictions in the social life. Depression and anxiety were the most common psychiatric diagnoses found in CIU patients. These psychiatric disorders could influence QoL.^{3,4}

Here, we have used an interdisciplinary approach combining interview/questionnaire-based psychiatric and dermatological evaluations to assess the levels of depression, anxiety and QoL in CIU patients.

Patients and methods

This study is based on the responses of 73 consecutive CIU patients who completed the questionnaire form during the first days of evaluation for the identification of underlying CIU causes at our urticaria clinics.

At the beginning of the study CIU patients completed a daily record for the preceding 24 h of small (diameter < 3 cm) and large (> 3 cm) number of weals, scored as follows: 0, < 10 small weals; 1, 10–50 small weals or < 10 large weals; 2, > 50 small weals or 10–50 large weals; 3, almost covered. The severity of the itch was also graded from 0 to 3: 0 = none; 1 = mild; 2 = moderate; 3 = severe. Therefore, the urticaria activity score ranged from 0 to 42 for a week. Patients also completed a 10-cm visual analogue score at baseline, indicating the overall severity of their urticaria over the previous 2 weeks from 0 (none) to 10 (severe urticaria).

Table 1 Sociodemographic characteristics of patients and healthy subjects

	Patients		Healthy subjects		
	<i>n</i>	%	<i>n</i>	%	
Gender					$\chi^2 = 0.00, P = 1.00$
Female	43	58.9	20	58.8	
Male	30	41.1	14	41.2	
Years of education					$\chi^2 = 3.32, P = 0.19$
0–5	44	60.3	17	50.0	
6–13	20	27.4	8	23.5	
> 13	9	12.3	9	26.5	
Marital status					$\chi^2 = 0.81, P = 0.67$
Single	9	12.3	6	17.6	
Married	60	82.2	27	79.4	
Widow	4	5.5	1	2.9	
Age (years)	37.4 ± 10.8		36.1 ± 10.3		$P = 0.55$

Inclusion criteria for participating in this study were as follows: (i) we defined CIU as a 6-week or longer history of daily or almost daily itchy cutaneous weals with individual lesions lasting less than 24 h. Patients who suffered from urticaria induced by physical, allergic, infectious, drug-related or vasculitic cause were excluded from this study. Patients with pseudoallergic or autoreactive causes (autologous serum skin tests recorded positive) were also excluded; (ii) informed written consent; (iii) age between 18 and 60 years; (iv) good command of the Turkish language (patients who might not be able to read or write were excluded from the study); (v) no malignant or central nervous system disease; (vi) no cognitive impairment due to a current cerebral or psychotic illness; (vii) no current psychotherapy; (viii) no glucocorticoid therapy for CIU in at least 1 month. Antihistamines were discontinued at least 72 h prior to evaluation of questionnaire form.

The questionnaire form was also completed by 34 healthy subjects (no history of urticaria or other skin diseases or psychosomatic/psychiatric morbidity) recruited from hospital staff. These control subjects were matched with CIU patients in age and sex (Table 1).

The levels of depression, anxiety and QoL were assessed with the Beck Depression Inventory (BDI),⁷ the Beck Anxiety Inventory (BAI)⁸ and the World Health Organization Quality of Life Assessment-Brief (WHOQOL-BREF),⁹ respectively. The reliability and validity of the Turkish versions of these instruments have been examined.^{10–12} We also used a semistructured interview form developed by the investigators to determine demographic characteristics.

WHOQOL-BREF is a self-rating scale that is used to determine level of QoL and that is abbreviated version of the WHOQOL-100 QoL assessment. It includes 27 questions classified in four domains: physical health includes

questions on daily activities, treatment compliance, pain and discomfort, sleep and rest, energy and fatigue; psychological health consists of items for self-esteem, positive and negative feelings, body image and physical appearance, personal beliefs and attention; social relationships composed of questions related to social support, personal relationships and sexual activity; and environment examining financial resources, physical security and safety, health and social care and their availability, opportunities for acquiring new information and skills, and participation in and opportunities for recreation and transport. Each item is scored from 1 to 5, and higher scores of total indicate better QoL.

The BDI is a self-rating scale consisting of 21 items of depression. Each item has scores ranging from 0 to 3 on this scale. The higher point of total BDI scores, the higher the level of depression.

The BAI is self-rating scale used to determine level of anxiety in subjects. Similar to BDI, it has 21 items scored from 0 to 3. The higher points of this scale reflect higher level of anxiety.

Statistical analysis

The study data were analysed using SPSS (Statistical Package for the Social Sciences), version 13.0, for Windows. For comparisons between patient and control groups, chi-squared (χ^2) test was used in categorical variables and Mann-Whitney *U*-test was used in continuous variables. The connection of WHOQOL-BREF subscale scores with age, duration of illness, BDI, BAI, urticaria activity score (UAS) and visual analogue scale (VAS) scores were tested by Spearman correlation analysis in patient group. All significant levels were two tailed and set at the 0.05 level.

Table 2 BDI, BAI and WHOQOL-BREF scores of the study sample, mean $\pm$ SD

	Patients (n = 73)	Healthy subjects (n = 34)	z	P
BDI	10.56 $\pm$ 7.90	4.42 $\pm$ 4.91	-4.713	0.001
BAI	14.28 $\pm$ 11.58	3.82 $\pm$ 3.11	-6.514	0.001
WHOQOL-BREF				
Physical health	66.54 $\pm$ 18.73	77.74 $\pm$ 11.08	-3.271	0.001
Psychological health	65.22 $\pm$ 18.53	72.25 $\pm$ 12.64	-2.128	0.033
Social relationships	62.00 $\pm$ 21.56	69.42 $\pm$ 17.94	-1.910	0.056
Environment	62.73 $\pm$ 13.96	62.65 $\pm$ 9.48	-0.371	0.711

Table 3 The correlation coefficients related to BDI, BAI and WHOQOL-BREF scores in patients (n = 73)

	Age (r)	Disease duration (r)	UAS (r)	VAS (r)	BDI scores (r)	BAI scores (r)
BDI	0.31	-0.10	-0.05	-0.06		
BAI	-0.14	0.24	-0.01	-0.01		
Physical health	-0.16	-0.21	0.14	0.07	-0.72*	-0.53*
Psychological health	-0.01	-0.05	0.07	0.09	-0.73*	-0.55*
Social relationships	0.11	-0.11	0.03	0.06	-0.67*	-0.43*
Environment	-0.05	0.12	0.06	0.08	-0.55*	-0.36*

* $P < 0.01$.

Results

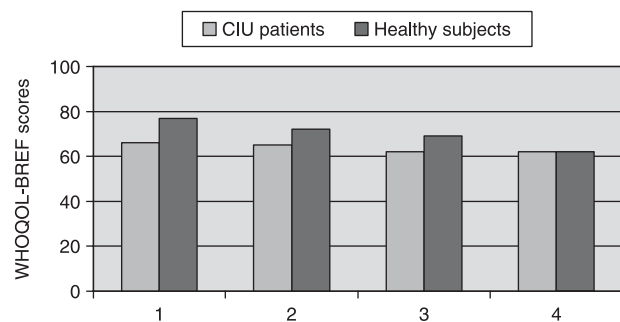
As shown in Table 1, there is no significant difference with respect to sociodemographic characteristics between the groups of patient and healthy control. The mean duration (months) of illness, UAS and VAS scores was 11 (range 3–60), 22 (range 8–36) and 6.2 (range 4.6–9), respectively, in patients with CIU.

When compared with healthy controls, patients with CIU had significantly higher BDI and BAI scores and significantly lower physical health and psychological health subscale scores of the WHOQOL-BREF. Although no significant difference was found in terms of social relationship domain of WHOQOL-BREF between the groups, the patient group had tendency to lower social relationship score compared with the control group ($P = 0.056$). Both groups have similar environment subscale score of WHOQOL-BREF (Table 2, fig. 1).

As a results of Spearman correlation analysis, BDI, BAI and all domains of WHOQOL-BREF were unrelated to age, duration of illness, UAS and VAS in patient group. There was a negative significant correlation between all domains of WHOQOL-BREF and BDI and BAI (Table 3).

Discussion

QoL questionnaires may be appropriate in one cultural setting and may not be valid in another. Revalidation may be necessary in a new environment.¹³ We used WHOQOL-BREF as a reliable and valid instrument for our population to determine QoL. Our study shows that CIU patients

**fig. 1** Patients with CIU exhibit differentially impaired QoL (i.e. physical health and psychological health are predominantly affected). 1-Physical health, 2-Psychological health, 3-Social relationship, 4-Environment.

endure pronounced QoL impairment. We found that CIU patients exhibit markedly reduced physical health and psychological health subscale scores compared with healthy subjects. As we found no social relationship domain of QoL between the groups, the patient group had lower social relationship score compared with the control group. Both groups had similar environment subscale score of QoL.

It is important to point out that all studies done so far, including ours, show that the overall effect of CIU on patients' QoL is substantial. For instance, QoL impairment in CIU patients was found to be similar to acne patients and higher than in patients suffering from vitiligo.¹⁴ In a prospective study of adult patients with CIU, psoriasis or

atopic dermatitis, the physical discomfort associated with CIU was greater than that of psoriasis. In addition, daily living restrictions were greater in CIU than psoriasis.³ A Turkish QoL questionnaire-based scores of the patients with vitiligo, acne vulgaris, urticaria, hirsutismus and psoriasis were higher than the mean scores of those with isolated skin lesions such as benign skin tumours and verruca.¹³ In addition, the total score was higher for urticaria than for acne vulgaris, lichen and contact dermatitis.

In this study, we found higher levels of anxiety and depression in patients with CIU compared with healthy controls. These findings are consisted with those of previous studies conducted on patients with chronic urticaria.¹⁵ Moreover, most of these patients experience a stressor event within the 6 months before the onset of the cutaneous manifestation.¹⁶ We think that anxiety and depressive symptoms secondary to stressful life events may precipitate emergence of urticarial symptoms in susceptible subjects.

The fact that QoL was associated with levels of anxiety and depressive symptom rather than urticarial symptoms is one of the most important results of the present study. Similar to our results, Staubach *et al.*⁴ reported psychiatric morbidity but no disease-related factors (e.g. duration and cause of CIU and the absence or presence of angio-oedemas were associated with reduced QoL levels in patients with CIU). In addition to CIU, it has been reported that depressive symptoms have negatively effect on QoL in patients other chronic medical illness such as Behçet's disease,¹⁷ multiple sclerosis,^{18,19} chronic obstructive pulmonary disease,²⁰ and rheumatoid arthritis.²¹ For this reason, successful treatment of psychiatric disturbances may increase QoL of patients with CIU.

The majority of our patients were female. This result was consisted with Baiardini *et al.*'s group²² which had been offered a new QoL questionnaire for CIU. Our data confirm that CIU severely impacts QoL and that the QoL areas physical health and psychological health are preferentially affected in CIU patients. Out of all factors tested for influence on QoL, depression and anxiety in CIU patients, i.e. age, duration of illness, UAS and VAS was found to be unrelated. Interestingly, the severity of urticaria (UAS and VAS values) does not appear to be a prerequisite for a lower scores of QoL and higher scores of depression and anxiety.

These findings show the importance of the detection of the levels of depression, anxiety and QoL in CIU patients by using BDI, BAI and WHOQOL-BREF as screening instruments. We need further interdisciplinary scrutiny combining dermatological and psychiatric evaluation on disease activity and QoL impairment in CIU patients with depression and anxiety levels.

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