

Investigation of psychopathology in patients with chronic idiopathic urticaria

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ABSTRACT

Aims: Aim of this study is, to establish the frequency of axis I and axis II comorbidity and post-traumatic stress disorder (PTSD) and coping ability of patients who admitted to allergy polyclinics of dermatology and respiratory diseases departments and who were diagnosed as chronic idiopathic urticaria (CIU).

Methods: Study population divided into three groups consisted of fifty patients each, chronic urticaria, contact dermatitis and control groups, respectively. All patients underwent SCID-I (structured clinical interview for DSM-IV axis-I disorders) and SCID-II (structured clinical interview for DSM-III-R personality disorders) for determining axis I and axis II diagnosis and trauma evaluation form for traumatic life events. Patients who showed high scores in this test also underwent SCID-I PTSD module. Coping scale (COPE) was applied in order to evaluate patients' coping ability for problems which he encounters.

Results: In our study, when axis I diagnosis were compared; major depression (48%) and anxiety disorder (48%) were significantly more frequent in CIU group than other two groups. When it came to comparison of axis II diagnosis, avoidant personal disorder (20%) and dependent personality disorder (16%) were significantly more frequent in CIU group than other two groups. Urticaria group also showed significantly higher frequency for PTSD (42%) than other two groups. Patients with CIU used religious (64%), denial (26%), substance abuse (40%), adoption (40%), emotional social support (32%) and abstaining (26%) maladaptive coping methods which were incoherent, significantly more than other two groups.

Conclusion: Probability of mental disorders is high among patients with CIU. It is important to consider existence of PTSD and coping methods for life events. Studies enrolling larger patient groups are needed for detailed investigation of cause-and-effect relationship.

Keywords: Chronic idiopathic urticaria, mental disease, comorbidity

INTRODUCTION

Chronic idiopathic urticaria (CIU) is a multifactorial disease that is closely related to emotional factors and causes skin itching, redness and blisters.¹ Association with psychological factors with chronic urticaria puts this disease in the group of psychosomatic diseases. In this group, psychological factors dominate both in the formation of the disease and in the occurrence of attacks.^{2,3} The relationship between skin and mental state has been a known fact since the 12th century, although it has not been fully named. As mentioned among the public, "breaking out in hives due to boredom", "getting gray hair due to sadness", "getting acne due to boredom" show that people are aware of a relationship between mental states and some skin diseases, even though they do not know exactly what psychosomatization is or how it happens.⁴ In recent years, scientific studies have mentioned approaches that concern more than one discipline, including spiritual, neurological,

hormonal and immune system sciences, along with new explanations about the relationship between mental state and skin.⁵

After the 1960s, studies on the importance of psychological factors gained momentum, and it was shown that Axis I diagnoses such as anxiety and depression and personality structure affect the course of chronic urticaria.^{1,6-9} Studies examining psychiatric comorbidities and personality traits in urticaria and other dermatological diseases are becoming widespread.¹⁰⁻¹² Patients with CIU transform their traumatic experiences into psychological symptoms, and this increases the likelihood of lesions occurring, although this cannot be clearly explained medically.¹³⁻¹⁶ Although the rate at which patients with CIU encounter stressful life events is similar to that of other dermatological diseases, there are few publications in the literature examining the relationship between the disease and

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the ability of these patients to cope with stressful life events. It is very important to evaluate coping skills, as coping with a chronic disease alone will provide important information about the patient's coping strategies.¹⁷

Allergic contact dermatitis (CD) is a late type (type IV) allergic reaction that occurs in a person who has previously been in contact with an allergen, and 3700 chemicals have been identified that can cause allergic CD. Apparently, psychological factors have little role in the etiology of allergic CD.¹⁸

This study aimed to evaluate if;

- The prevalence of psychiatric comorbidity is higher in patients with CIU than in the healthy control group and the CD group.
- The prevalence of post-traumatic stress disorder (PTSD) in patients with CIU is higher than in the healthy control group and the CD group.
- The ability of patients with CIU to cope with stress is weaker than the healthy control group and the CD group.

METHODS

Ethics

This study is derived from doctorate thesis of Dr. Gözde Yontar. This study was conducted in accordance with the principles of the Declaration of Helsinki. All participants were expected to give signed informed consent. Cumhuriyet University Ethics Committee approval was received from the Scientific Researches Evaluation Board (Date: 26.04.2011, Decision No: 2011-04/18), the study conducted at Faculty of Medicine Psychiatry Polyclinic.

Patients

Patients over the age of 18 who applied to the Dermatology and Allergy Polyclinics of Cumhuriyet University Faculty of Medicine Hospital, were being followed up with a diagnosis of CIU, and agreed to participate in the study were included in the study. Informed written consent was obtained from 50 patients who agreed to participate in the study and met the study criteria before the psychiatric interview at the hospital.

Criteria for inclusion in the study:

- Participants must be over 18 years of age
- Chronic idiopathic urticaria must be diagnosed in accordance with the latest Guide (2010) issued by European Academy of Allergology and Clinical Immunology/Global Allergy and Asthma European Network/European Disability Forum (EAAC1/GA2LEN/EDF)
- People who do not have malignancy, central nervous system (CNS) disease, cognitive impairment or mental retardation due to psychotic or cerebral disease
- People who were not receiving psychiatric treatment at the time of participating in the research
- People who volunteer to participate in the study

For the control group, people who were visiting the inpatient services at Cumhuriyet University Faculty of Medicine Hospital, who were over the age of 18, who were determined to have no disease through physical examination and routine examinations, who volunteered to participate in the study, and who had similar sociodemographic characteristics with the patient group were included.

Data Collection Tools

Sociodemographic Information Form: Three separate sociodemographic information forms were prepared by the researcher for CIU, CD and control groups. The information was obtained from the individuals themselves. People diagnosed with CIU should be informed about their age, gender, marital status, education level, occupation, total monthly income, family structure, how many years they have been diagnosed with CIU and the total number of attacks, whether there is a history of psychiatric diagnosis before, a history of psychiatric diagnosis in the family. Whether there was any exposure to trauma (physical, sexual abuse, accident, exposure to natural disaster, history of sudden death or fatal disease in a relative and witnessing these) were asked.

Structured clinical interview for DSM-IV axis I (SCID-I): SCID-I is a structured clinical interview scale applied by an interviewer to investigate diagnoses of Axis I disorders according to Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV). It consists of six modules. DSM-IV investigates 38 of the Axis I disorders with diagnostic criteria and 10 without diagnostic criteria. The application takes approximately 25-60 minutes. It is almost always done with the patient alone. In practice, the application booklet containing the interview questions and the scoring sheet book on which the findings are recorded are used together. The diagnosis of the patient is investigated by considering 'currently' and 'lifelong'. Even if the questions provide help, they are not considered absolute truth. A 'yes' answer should be investigated to determine whether it exceeds the threshold. Additionally, desired questions can be asked. Whether the symptoms individually exceed the threshold severity and combine to meet a diagnosis is up to the interviewer's interpretation. The Turkish adaptation and reliability study of the scale developed by Özkürkçügil et al.²⁰ in 1997.¹⁹ The inter-interviewer agreement rate for all diagnoses was found to be 98.1% and the Kappa coefficient was 0.86. Kappa coefficients for diagnostic categories range between 0.52-1.00 and all are statistically significant ($p < 0.0001$). In this study, SCID-I was also used to make a diagnostic evaluation in terms of PTSD.

Structured clinical interview for DSM-III-R personality disorders (SCID-II): According to DSM-III-R classification, it is II. It is an individually applied clinical interview method developed by Spitzer et al.¹⁹ to diagnose axis personality disorders. It evaluates individuals in terms of 12 personality disorders. These; avoidant personality disorder, dependent personality disorder, obsessive personality disorder, passive aggressive personality disorder, self-defeating personality disorder, paranoid personality disorder, schizoid personality disorder, schizotypal personality disorder, histrionic personality disorder, narcissistic personality disorder, borderline personality disorder, antisocial personality disorder. An adaptation and reliability study were conducted for Turkish population.²¹

Trauma Assessment Scale (TAS): It is a scale developed by DSM IV that evaluates the severity of PTSD symptoms determined according to DSM IV. Each item is a four-point scale ranging from zero (never or only once) to three (five times a week or more often).

Participants answer questions about a specific trauma experience. It determines the severity of trauma from none to severe. Its Turkish validity and reliability were determined by Işıkı.²²

Coping Skills Assessment Scale (COPE): It is a self-report scale. The scale begins with an explanation paragraph as follows: “With the help of this scale, we aim to investigate how people react when they encounter difficult or distressing events or problems in their daily lives. There may be many ways that people cope with the problems they face. However, try to mark the options by thinking about what you do or how you behave in general when you encounter a problem. “When choosing the options, be careful to think independently of the previous ones.” Sixty different situations are answered using four options. These answers:

1=I would never do such a thing; 2=I rarely do this; 3=I do this moderately; 4=I mostly do this. The scale consists of 60 questions and 15 subscales. Each subscale consists of four questions. Each of these subscales provides information about a separate coping attitude. As a result, high scores from the subscales provide the possibility of commenting on which coping attitude is used more by the person. These 15 coping attitudes or subscales are: 1. Positive reinterpretation and development, 2. Mental disengagement, 3. Focusing on the problem and revealing emotions, 4. Use of helpful social support, 5. Active coping, 6. Denial, 7. Religious coping, 8. Joking, 9. Behavioral letting go, 10- Withholding, 11. Using emotional social support, 12. Substance use, 13. Acceptance, 14. Suppressing other preoccupations, 15- Making plans.²³

Application of Tests

For the CIU group, 50 patients who were diagnosed with CIU in the chest diseases, allergy and dermatology outpatient clinics and who met the inclusion criteria for the study were evaluated. For the patient group with CD, 50 patients who were diagnosed with CD by applying a patch test in the dermatology outpatient clinic and who met the inclusion criteria for the study were evaluated. For the control group, 50 people who were visiting the inpatient services at Cumhuriyet University Faculty of Medicine Hospital, who were determined by medical examinations to have no disease, who met the inclusion criteria for the study, and who had similar sociodemographic characteristics with the patient group, were evaluated. Written informed consent was obtained from all participants. In the first stage of the study, sociodemographic information obtained from the participants was recorded in the form prepared by the researcher. SCID-I/SCID-II was applied to detect accompanying axis I and axis two diagnoses. In the second stage, after determining the type and severity of the traumatic experience of the patients using the Post-Traumatic Stress Diagnostic Scale, the researcher applied the PTSD module in the SCID-I to those who scored high. In the final stage, COPE was administered to patients who underwent SCID-I and SCID-II. The interviews lasted an average of 1-1.5 hours.

Statistical Analysis

Parametric variables are expressed as mean \pm standard deviation, and categorical variables are expressed as percentages and numbers. Parametric variables were evaluated with t-test in independent groups, and categorical variables were evaluated with Pearson chi-square test and Fisher's Exact test. A p value of 0.05 was accepted as the limit of statistical significance and all statistical operations were performed in the Statistical Package for Social Sciences (SPSS) 13.0 program.

The power analysis was conducted using the R 3.0.1. open-source program, with a confidence level of 95% (1- α), a test

power of 95% (1- β), and an effect size (f) of 0.342, the minimum number of patients to be included in the study is determined to be 48 in each group, totaling 144 patients.

Data Availability Statement

The datasets used and/or analyzed during the current study available from the corresponding author on reasonable request.

RESULTS

Sociodemographic Data

Fifty CIU patients, 50 CD patients and 50 people as a control group were included in the study. Of the CIU patients, 24 were women (48.0%) and 26 were men (52.0%), and the average age was 41.22 ± 13.92 years. In the control group, 24 patients were female (48.0%) and 26 were male (52%), and their average age was 43.64 ± 12.36 years. In the group with CD, 25 were women (50%) and 25 were men (50%). There was no statistically significant difference between the groups in terms of mean age and gender distribution (Table 1).

Table 1. Comparison of three groups in terms of average age and gender distribution

Groups	Age (years)	Gender				F(=0.75, $\chi^2=0.05$, $p=0.974$)
		Female		Male		
		n	%	n	%	
Chronic urticaria	41.22 \pm 13.92	24	48	26	52	
Contact dermatitis	43.64 \pm 12.36	24	48	26	52	
Control group	44.20 \pm 12.34	25	50	25	50	

When groups were compared in terms of their marital status, occupational distribution, education level, socioeconomic level and social security, presence of physical illness in their medical history, psychiatric disorder in their medical history, and psychiatric disorder in their family history, the statistical difference was found to be insignificant. When the groups were compared in terms of where they lived, the difference was found to be statistically significant. It was observed that more patients with CIU lived in cities (Table 2).

Axis and II. axis diagnostics: SCID-I and SCID-II were applied to CIU, CD and control groups to determine the first axis and second axis diagnoses. Chronic idiopathic urticaria, CD and the control group were compared in terms of axis one diagnoses (Table 3). Of the group diagnosed with CIU, 24 (48%) were diagnosed with major depression, and when the three groups were compared in terms of major depression, a significant difference in favor of CIU. Of the group diagnosed with CIU, 24 (48%) were diagnosed with anxiety disorder, and when the three groups were compared in terms of anxiety disorder, significant difference in favor of CIU was found. In the group with CIU, 18 (36%) had any two of the axis I diagnoses. Of the patients with anxiety disorders, 18 (75%) had panic disorder, 2 (8.3%) had obsessive compulsive disorder, 3 (12.5%) had social phobia, and 1 (4.1%) had specific phobia. There was 1 person (5.5%) diagnosed with major depression and obsessive-compulsive disorder, 1 person (5.5%) with obsessive-compulsive disorder and social phobia, and 1 person (5.5%) with major depression and social phobia. It was found that 18 people (36%) had only one of the first axis diagnoses. Of these 18 people, 7 (38.8%) had only major depression, 9 people (50%) had only panic disorder, 1 person had only social phobia (5.5%) and 1 person had only specific phobia (5.5%).

Table 2. Comparison of sociodemographic characteristics of groups

Parameter		Groups							
		Chronic urticaria		Contact dermatitis		Control group		Total	
		n	%	n	%	n	%	n	%
Marital status	Single	8	16	9	18	9	18	26	17.3
	Married	40	80	40	80	39	78	119	79.3
	Divorced	2	4	1	2	2	4	5	3.3
	Total	50	100	50	100	50	100	150	100
x ² =0.49, p=0.974, p>0.05									
Occupation	Unemployed	3	6	4	8	1	2	8	5.3
	Student	4	8	3	6	3	6	10	6.7
	Official	6	12	13	26	6	12	25	16.7
	Worker	1	2	1	2	6	12	8	5.3
	Self-employment	5	10	4	8	7	14	16	10.7
	Retired	10	20	7	14	5	10	22	14.7
	House-wife	21	42	18	36	22	44	61	40.7
	Total	50	100	50	100	50	100	150	100
x ² =15.14, p=0.974, p>0.05									
Educational degree	Illiterate	1	2	4	8	3	6	8	5.3
	Elementary	18	36	12	24	17	34	47	31.3
	Juniorhigh	15	30	10	20	4	8	29	19.3
	Highschool	10	20	14	28	14	28	38	25.3
	University	6	12	10	20	12	24	28	18.7
	Total	50	100	50	100	50	100	150	100
x ² =12.18, p=0.143, p>0.05									
Settlement	Village	0	0	3	6	3	6	6	4
	Town	4	8	6	12	13	26	23	15.3
	City	46	92	41	82	34	68	121	80.7
	Total	50	100	50	100	50	100	150	100
x ² =10.62, p=0.031, p<0.05									
Socioeconomical status	Low income	1	2	2	4	4	8	7	4.7
	Average	46	92	43	86	40	80	129	86
	High income	3	6	5	10	6	12	14	9.3
	Total	50	100	50	100	50	100	150	100
x ² =3.41, p=0.490, p>0.05									
Social security insurance	None	1	2	1	2	2	4	4	2.7
	Present	49	98	49	98	48	96	146	97.3
	Total	50	100	50	100	50	100	150	100
x ² =0.51, p=0.490, p>0.05									
History of organic disease	Negative	33	66	35	70	42	84	110	73.3
	Positive	17	34	15	30	8	16	40	26.7
	Total	50	100	50	100	50	100	150	100
x ² =4.56, p=0.110, p>0.05									
History of psychiatric disease	Negative	47	94	47	94	48	96	142	94.7
	Positive	3	6	3	6	2	4	8	5.3
	Total	50	100	50	100	50	100	150	100
x ² =0.26, p=0.876, p>0.05									
Family history of psychiatric disease	Negative	45	90	47	94	43	86	135	90
	Positive	5	10	3	6	7	14	15	10
	Total	50	100	50	100	50	100	150	100
x ² =1.77, p=0.411, p>0.05									

Chronic idiopathic urticaria, CD and the control group were compared in terms of second axis diagnoses. In CIU group, 10 people (20%) were diagnosed with avoidant personality

disorder and when the three groups were compared in terms of avoidant personality disorder, the statistical difference in favor of CIU was found to be significant. In addition, 8

Table 3. Comparison of three groups according to I. and II. axis diagnoses

Diagnoses	Chronic urticaria		Contact dermatitis		Control group		X ²	p
	n	%	n	%	n	%		
Axis I diagnoses								
Major depression	24	48	8	16	11	22	14.14	<0.001
Anxiety disorder	24	48	4	8	4	8	31.78	<0.001
Axis II diagnoses								
Obsessive-compulsive personality disorder	5	10	2	4	1	2	3.433	0.180
Avoidant personality disorder	10	20	1	2	2	4	12.296	0.002
Dependent personality disorder	8	16	1	2	2	4	8.437	0.015
Antisocial personality disorder	3	6	2	4	1	2	1.042	0.594

people (16%) were diagnosed with dependent personality disorder, and when the three groups were compared in terms of dependent personality disorder, the statistical difference was in favor of CIU (Table 3). In CIU group, no second axis diagnosis was found in 32 people (64%), only 10 people (20%) had a second axis diagnosis, and 5 people (50%) had obsessive compulsive personality disorder and 2 people (20%) had avoidant personality disorder, and 3 people (30%) were found to have antisocial personality disorder. Lastly, 8 people (15%) had any two of the second axis diagnoses. It was determined that all of these patients had avoidant personality disorder and dependent personality disorder.

PTSD comorbidity: SCID-I was applied to CIU, CD and control groups to determine the diagnosis of PTSD. 21 (42%) of CIU group were diagnosed with PTSD. When they were compared in terms of PTSD diagnosis, the statistical difference was found to be significant in favor of the group with CIU (Table 4). When the coexistence of major depression and PTSD was investigated, it was found that 12 of 24 patients (50%) with major depression in the group with CIU were diagnosed with PTSD. When the coexistence of another anxiety disorder and PTSD was investigated, 9 of 24 anxiety disorder patients (37.5%) in the urticaria group were also diagnosed with PTSD.

Table 4. Comparison of three groups according to post-traumatic stress disorder

Group	n	Post-traumatic stress disorder		Total
		Negative	Positive	
Chronic urticaria	n	29	21	50
	%	58.0	42.0	100.0
Contact dermatitis	n	46	4	50
	%	92.0	8.0	100.0
Control group	n	46	4	50
	%	92.0	8.0	100.0
Total	n	121	29	150
	%	80.7	19.3	100.0

$\chi^2=24.70$, $p<0.001$

Coping skills: The COPE test was applied to evaluate the coping skills of the three groups. The distribution of the 15 coping skills included in this test was compared between individual groups (Table 5). More in the CIU group compared to the other two groups; 6 people (12%) who cope actively, 4 people (8%) who focus on the problem and reveal their emotions, 4 people (8%) who use useful social support, 4 people (8%) who cope with the problem by making plans, 4 people (8%) who

cope with the problem by making a religious coping. It was determined that there were 32 people (64%) who used it as a drug abuse method, 13 people (26%) who denied it, 14 people (28%) who used substances and 20 people (40%) who accepted it. It was determined that there were 16 people (32%) who used emotional social support and 13 people (26%) who tried to cope by holding back against the problem. The statistical difference was insignificant compared to the other groups, but both coping strategies were seen more frequently in the group with CIU. There were 5 (10%) people in the CIU group who coped with the problem by reinterpreting it positively, and although the difference was statistically insignificant, it was found to be less common than the other two groups. There were eight people (16%) each who used mental and behavioral letting go methods, and there were three people (6%) who joked, but when the three groups were compared, the statistical difference was found to be insignificant.

Table 5. Comparison of three groups according to coping skills

Coping skill type	Chronic urticaria		Contact dermatitis		Control group		x ²	p
	S	%	S	%	S	%		
Active coping	6	12	23	46	23	46	17.013	<0.001
Religion	32	62	19	38	19	38	9.054	0.011
Denial	13	26	4	8	6	12	6.881	0.032
Acceptance	20	40	7	14	10	20	9.974	0.007
Emotional social support	16	32	7	14	9	18	5.323	0.070
Planning	4	8	12	24	19	38	12.596	0.002
Holding back	13	26	7	14	10	20	2.25	0.325
Drug abuse	14	28	8	16	4	8	7.072	0.029
Use of helpful social support	4	8	24	48	21	42	21.156	<0.001
Joking	3	6	1	2	3	6	1.199	0.549
Mental letting go	8	16	6	12	8	16	0.426	0.808
Positive reinterpreting	5	10	11	22	13	26	4.446	0.108
Behavioral letting go	8	16	7	14	9	18	0.298	0.862
Focusing on problem	4	8	13	26	7	14	6.174	0.046

$p<0.05$ is considered significant

Among the patients diagnosed with major depression in the group with CIU, 17 (70.8%) people used religion as a coping method, 11 (45.8%) people accepted it, 9 (37.5%) people denied it, and 7 (33.3%) people used the withdrawal method. It was determined that there were 4 (16.7%) people who used substances, 6 (25%) people who were mentally indifferent, and 5 (20.8%) who were behaviorally indifferent. There were

no patients in the group diagnosed with major depression who used methods such as planning, active coping, positive reinterpretation and focusing on the problem.

Among patients diagnosed with anxiety disorder in the group with CIU, 16 (66.7%) used religion as a coping method, 6 (25%) denied it, 10 (41.7%) accepted it, and 7 (29.2%) used the withdrawal method, 9 (37.5%) people used substance abuse, 4 (16.7%) people used the mental letting go method, and 3 (12.5%) people used the behavioral letting go method. There was only one person (4.2%) who coped actively, and one person each who reinterpreted it positively, focused on the problem and found a solution, and made a plan. There were no patients in this group who used helpful social support.

DISCUSSION

In this study, it was planned to investigate whether there are differences in the SCID-I and SCID-II diagnoses, the presence of PTSD, and the patients' ability to cope with the problem in patients with CIU, by comparing them with the CD group and the control group. The probability of major depression and panic disorder in the group with CIU was statistically significantly higher than the other groups. The likelihood of avoidant personality disorder and dependent personality disorder in the group with CIU was statistically significantly higher than the other groups. The diagnosis of PTSD was statistically significantly higher in the group with CIU. The patients in the group with CIU used adaptive coping skills such as active coping, focusing on the problem and revealing emotions, use of useful social support, and planning, significantly less than the other two groups. Compared to the other two groups, the group with CIU used non-adaptive coping strategies such as acceptance, religious coping, substance use (smoking), denial, and holding back in the face of the problem. It was determined that the patients diagnosed with major depression and panic disorder in the group with CIU used adaptive methods such as active coping, focusing on the problem, positive reinterpretation, and planning significantly less than the other two groups.

Although it has been known since the 1930s that many factors such as personality traits, unconscious conflicts and psychosocial stress play a significant role in the development of urticaria, psychiatric evaluation is still performed in very few of these patients in dermatology and allergy outpatient clinics.⁶ Recently, in addition to psychiatric comorbidities, the diagnosis of PTSD in patients with CIU has also been emphasized. The diagnosis of PTSD is often overlooked due to inappropriate screening during psychiatric evaluation and the reluctance of the traumatized individual to seek treatment.²⁴ Two publications examining this relationship have been found in the literature, and it is noteworthy that only one of them is a research article, other than a case report.^{25,26}

In the study, no difference was observed between the groups in terms of sociodemographic characteristics, but when the groups were compared according to where they lived, it was noteworthy that more individuals with CIU lived in cities. The most likely explanation for this situation is that the number of patients was low due to difficulties in providing transportation from the city center, districts and villages during the winter months when individuals with chronic urticaria were included in the study.

In the study of Özkan et al.²⁷ in 2007, 60% of CIU patients received a psychiatric diagnosis. 40% of these are depression, 12% are anxiety disorder, 2% are bipolar disorder, and the remaining 17% are a previous psychiatric illness. In Staubach et al.'s²⁸ study, 25 out of 100 chronic urticaria patients were diagnosed with anxiety and 11 with depression. According to a study published in 1996, at least one third of urticaria patients have depressive symptoms.⁹ In a review, it was found that somatization, anxiety and psychotic disorder were significantly higher in patients with urticaria.¹² Chronic skin conditions, which are often overlooked because they are not life-threatening, can actually cause very significant psychosocial disorders. Skin diseases, along with psychiatric symptoms, also cause significant deterioration in the quality of life. Itching in chronic urticaria negatively affects patients.³⁰ As a result, the most common psychopathologies we encountered in the psychiatric examination results of chronic urticaria patients in our study were anxiety disorder and depression. However, it is not surprising to see psychiatric symptoms or comorbidities in patients with chronic urticaria, which has a chronic course and can seriously impair the patient's quality of life.

The answer to the question of whether psychiatric comorbidity develops due to chronic urticaria or creates a predisposition for chronic urticaria has not been fully clarified.³¹ In our study, avoidant and dependent personality disorders were detected at a higher rate in patients with CIU than in the control group and the group of CD patients. In a study, a higher rate of obsessive-compulsive personality disorder and avoidant-dependent personality disorders were found in the CIU group compared to the control group. In the same study, no significant difference was found in schizotypal, schizoid, borderline and antisocial personality disorders compared to the control group.³² In a study which authors compared personality disorders in patients with CIU, avoidant personality disorder was detected at a significantly higher rate in cases in which an urticaria attack occurred following a certain event that caused extreme stress and anxiety.³³ In their study using the well-standardized Minnesota multiphasic personality inventory (MMPI) test, researchers divided patients with urticaria into two main categories: the group with more passive-dependent personality disorders and the group with aggressive features.⁸ In our study, avoidant and dependent personality disorders were found more frequently in the group with CIU than others, which complies with literature.^{29,34} The concerns of people with avoidant and dependent personality disorders about not being accepted, being criticized, and being excluded create extreme stress and anxiety in individuals. Since these people's low self-esteem and hypersensitivity to exclusion restrict their interpersonal relationships, they live away from society and stay away from social support. As a result of personality characteristics, the inability of patients to cope with a chronic illness and the negative social consequences of the disease and the scarcity of support resources may be the reasons why we detected avoidant and dependent personality disorders in CIU group at a higher rate than others.

Current and lifetime PTSD diagnosis was detected in 21 (42%) people in the group with CIU, and this rate was found to be significantly higher. However, 50% of patients with CIU and major depression are also diagnosed with PTSD. Additionally, concurrent PTSD was detected in nine (37.5%) of the patients with CIU and anxiety disorder. There are very few publications in the literature investigating the relationship between PTSD

and CIU. In one of these, the group with CIU was compared with the control group, and the PTSD rate was found to be significantly higher. In addition, significant impairment in social functioning, somatic complaints, and an increase in anxiety and depression scores were detected in these patients. The study emphasized that a more detailed investigation of the cyclical disorders in the neurology, immune system and endocrine system seen in PTSD will help us understand the formation of urticaria. It was argued that neuroticism is effective in the development of psychiatric comorbidity. It has been emphasized that the addition of major depression or anxiety disorders to the coexistence of PTSD and chronic urticaria can be explained by the negative effect of neuroticism. It has been mentioned that the development of urticaria in patients with PTSD is closely related to personality traits.²⁵

In 2012, Gupta et al.²⁶ published five case examples evaluating the coexistence of CIU and PTSD. It is interesting that in each of these cases, the urticarial attacks occurred after life events that reminded the patients of their previous trauma. Although resistance to treatment developed, after the diagnosis of PTSD was made, pharmacotherapy was applied to the patients along with trauma-oriented psychotherapy, and they reported that they did not observe any urticaria attacks at the end of a one-year follow-up.

In PTSD, psychogenic exacerbation and increased activity of the sympathetic nervous system may trigger urticaria and angioedema. Overstimulation of the central nervous system can manifest itself as “common urticaria” that occurs during sleep. Patients describe waking up with nightmares and intense anxiety, and consult a doctor with the presence of itching and urticaria. Sometimes they talk about complaints that specifically symbolize their traumatic experiences, such as constant itching of the stab wound.^{35,36} Traumatic experience and subsequent PTSD are the main source of stress for the patient. It is also known that the frequency and severity of attacks of previously diagnosed urticaria patients increase with stressful life events. Considering that PTSD may significantly affect individuals’ ability to cope with stressful life events, it is not surprising that the association of urticaria and PTSD was found to be statistically significantly higher in our study than in the other two groups.

Information about the mechanism underlying the relationship between urticaria and PTSD is based on experimental observations. It is thought that the intense stress that comes with PTSD causes allergic and inflammatory skin diseases by triggering or increasing the local neuro-immuno-endocrine response in the skin.^{37,38} According to this theory, if stress management can be achieved, the biological response in the skin can also be controlled. In order to control stress, individuals have been tried to reduce the inflammatory response by teaching techniques such as relaxation exercises, hypnosis and individual stress management.³⁹

In the case report of a couple who developed chronic urticaria, life events that caused stress in the couple who developed chronic urticaria and ways of coping were discussed. They emphasized that, as a result of stressful living conditions, both of them had psychological strains that led to a psychiatric diagnosis as dysthymic disorder, as well as the discharge of emotions through the skin in the form of chronic urticaria. They emphasized that various problems may arise in both individuals as a result of interaction between spouses, and that the loss of

boundaries within the family and the perception of themselves as extensions of each other may lead to the development of urticaria symptoms in both individuals. They mentioned that spouses can be influenced by each other and develop common coping methods or reactions such as urticaria, and that they can gradually become similar to each other in various ways in order to create harmony in their marriage, and in this way, they try to create an equal and therefore safe environment.⁴⁰

In our study, the distribution of 15 coping skills in the coping skills scale was compared between individual groups. It was observed that the patients in the group with CIU used adaptive coping skills such as active coping with the problem, focusing on the problem and revealing emotions, use of useful social support and planning, significantly less than the other two groups. It was revealed that in the patient group with CIU, people used non-adaptive coping methods such as acceptance, religious coping, substance use (smoking), denial, and holding back in the face of the problem. It was also observed that these people had a clear tendency to use emotional and social support, but they were far from coping with the problem by reinterpreting it positively. It is noteworthy that the patients we found to be diagnosed with major depression and panic disorder in the group with CIU seek emotion-focused solutions rather than adaptive methods such as active coping, focusing on the problem, positive reinterpretation, and planning.

There are only a few publications which investigate the stress coping skills of patients with CIU. One of these is the research conducted by Chung et al.⁴¹ in 2010. In this study, in which other allergenic diseases were taken as the control group, it was revealed that the group with CIU used emotion-oriented coping skills, not adaptation-oriented, in the face of stress. It has been observed that people’s use of emotion-focused strategies triggers the emergence of psychological symptoms and causes more serious urticaria attacks. It has been emphasized that patients should reduce subjective evaluation of their situation and emotion-oriented approach in order to ensure their physical and spiritual well-being.

Coping attitudes have an important role in adapting to challenging situations. “coping” is defined as all of the cognitive, emotional and behavioral reactions of the individual to resist and resist events or factors that create stress for him/her. Therefore, there is a close relationship between coping attitudes and the degree of challenging experiences. For example; effective coping attitudes protect the person against cognitive, environmental and biological factors that cause anxiety. Coping attitudes can vary depending on a wide variety of factors such as age, gender, culture and disease, and are specific to the individual.²³ While problem-solving-oriented coping attitudes reduce psychological distress, emotionally focused approaches can increase it. However, whether coping attitudes are adaptive or not varies depending on the nature of the stressor.²³ Although emotionally focused attitudes are beneficial in responding to some stressors, they are usually accompanied by severe psychopathology and impairment in functionality.^{42,43} Studies indicate that there is a relationship between emotionally focused coping attitudes and anxiety and depression levels.⁴³⁻⁴⁵ The use of emotionally focused coping attitudes also poses a risk for the development of mood disorders.⁴⁶ Perceiving life events as negative creates a deficiency in coping skills. As a result, passive coping skills gain dominance while active skills are used to a lesser extent.⁴⁴ It has been stated that negative cognitive evaluations facilitate

the development of mental disorders. It can be said that differences in interpreting stressors will create a tendency to develop different coping skills. This also means that there is an individual sensitivity factor for that individual.⁴⁵

Presence and level of social support systems is vital in coping. Social support is one of the important variables in the continuity of healthy behaviors. Low social support has been associated with lower levels of health. Quality of life is equally effective.⁴⁶ In a study where stress and CIU were evaluated together, it was found that the social support resources of these people were significantly lower than the control group.⁴⁷ The lack of social support resources may negatively affect the way these patients cope. When coping with a chronic illness is considered a major source of stress, patients' ability to cope with stressful life events may be negatively affected. It has been previously discussed that using non-adaptive coping methods poses a risk factor for psychiatric disorders. So, it can be concluded that emotion-focused coping methods in CIU patients increase the comorbidity of psychiatric disorders in the disease. The use of non-adaptive coping methods in patients with CIU may negatively affect patients' ability to cope with a disease such as PTSD, which seriously affects the quality of life and causes mental and physical symptoms, and the social consequences of the traumatic experience. As a result, it can be concluded that there is a risk that the number of attacks will increase and become more severe in PTSD patients with urticaria. It is clear that when CIU itself, stress factors, non-adaptive coping methods and the presence of psychiatric comorbidity come together, the quality of life of patients can be seriously affected. Impairment in quality of life may negatively affect patients' functionality. Since the negative impact on functionality is also a source of stress, a vicious cycle may occur, especially in patients who are resistant to treatment.

Psychiatric disorders, psychosocial stress factors, difficult life events, and traumatic experiences of urticaria patients presenting to dermatology and allergy clinics should be carefully considered. Considering that fighting a chronic disease may negatively affect patients' evaluation and insight of their situation, detailed information should be given about the disease and its negative consequences.

Limitations

Due to the use of a cross-sectional examination method in this study, a cause-effect relationship between CIU and PTSD could not be established. In order to elucidate the possible relationship between them, studies with larger sample sizes and long-term follow-up are needed. The fact that the rates of obsessive-compulsive disorder and obsessive-compulsive personality disorder were not significant in the CIU group and that the results were not compatible with the literature may be due to the insufficient number of patients for comparison. In addition, when comparing the coping skills of the patients, the fact that the personality characteristics and important life events of the CIU group were not examined in detail can be considered a limitation.

CONCLUSION

We suggest that treatment strategy should focus on detailed trauma history of patient and also support adaptive coping skills to overcome problems in cases resistant to medical treatment.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Cumhuriyet University Ethics Committee (Date: 26.04.2011, Decision No: 2011-04/18).

Informed Consent

All patients signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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