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# Psychological status in patients with chronic urticaria

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## Abstract

**Background:** Chronic urticaria (CU) is a common dermatological disease that induces a substantial burden on individuals' life. Also if one's self-image changes (which usually happen in patients with dermatological diseases), it leads to anxiety or other various symptoms.

We aimed to compare the psychological scales in patients with CU with non-dermatological individuals with the purpose of early diagnosis and appropriate psychiatric consult.

**Methods:** In this study, psychological status of 30 patients with the diagnosis of chronic urticaria (lasting for more than 6 weeks) and 30 controls, chosen among the hospital staff were evaluated. Evaluation was carried out by using standard General Health Questionnaire (GHQ-28). Psychosomatic disorders, anxiety, depression and social functions were assessed. Data were analyzed by SPSS v. 16, and the frequency indices and Chi- Square test.

**Results:** Although from 30 patients with CU, 63.3% suffered from psychological disorders, this prevalence was estimated 46.6% in the control group. Altogether, psychological disorders in patients with CU were significantly (p=0.007) more prevalent than individuals without dermatological problems. Anxiety was the most common reported disorder.

**Conclusion:** In our study, the most prevalent psychiatric disorders included anxiety, psychosomatic disorders, social dysfunction and depression, sequentially. It seems that depression is the least significant psychiatric disorder among patients who suffer from urticaria. Also, anxiety was the most reported disorder among them, which may be considered as the primary cause of the disease or it may be secondary to the disease process. This theory clarifies the importance of dermatologists and psychiatrists cooperation.

**Keywords:** Chronic Urticaria, Psychological problems, Dermatology.

## Introduction

Chronic urticaria (CU) known as wheal, hive and nettle rash is a common dermatological disease that induces a substantial burden on individuals' life. It is defined as recurrent spontaneous onset of itchy inflammatory wheals that last more than 6 months [1-5]. It is estimated that 10-20% of individuals experience 1 episode of this disease during the life [6]. CU can be caused due to immunologic or allergic reactions, autoimmunity, infectious, systemic diseases and drugs. Although psychiatric disorders have been expressed as a risk factor, the pathogenesis has not been identified yet [7-10]. It seems that the psychological effects change the quality of life of affected individuals. This theory was proved by Gupta et al in 1999. By their study, the quality of life was evaluated by administrating a 22-item quality-of-life scale to 100 patients with CU and 96 healthy individuals [11].

Moreover, when an ailment progresses det-

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rimentally and patients must undergo treatment in a depressed manner, he/she loses the advantage of the proper utilization of his/her defenses [12]. In the other hand, if one's self-image changes (which usually happen in patients with dermatological diseases) and gives rise to undesirable manner, it leads to anxiety, fear and/or other various symptoms. Also the quality of life is affected by one's self-image [13].

According to the absence of previous studies about the relationship between CU and psychiatric disorders in Iran, we aimed to compare the psychological scales in patients involved in CU with control group. This may help in early diagnosis and proper psychiatric referral; also it is necessary to manage psychiatric disorders prior to change the life style.

## Methods

*Ethical approval*

This was a case-control study which was performed in Rasul-e-Akram university hospital. The hospital is a referral dermatology center of west, south and east of the capital city. Also lots of patients are referred to our hospital from other provinces. Verbal clarification about the aim of the study was established between the authors and the patients. All researchers respected the Helsinki declaration during all parts of the study.

*Participants*

During 1 year, all patients referred to our dermatology clinic with the diagnosis of urticaria were followed. If the disease lasted more than 6 months, the patients were recommended to be assessed for mental health by our group. A total of 32 patients aged 16 to 79 years participated in this study. Also 30 individuals from hospital staff without any dermatology diseases were enrolled as control group. There was no gender or age priority for choosing the patients but the cases of control group were matched with the patients by considering education, age and gender. Two out of 32 patients were excluded from the study because of migration.

*Measurements*

Tow questionnaires were considered for assessing the patients. The first one included demographic questions such as: age, sex, education, symptoms of urticaria, drug history and the treatment. The second one was a standard questionnaire known as General Health Questionnaire (GHQ-28). It consists of 28 questions about psychiatric disorders such as depression, anxiety, psychosomatic disorders and social functions. This psychological measurement scale was designed by Goldberg and Hiller in 1979 and consisted of 4 parts with 7 questions in each part [14]. It assesses individuals with somatization, anxiety and insomnia, depression and social function.

Evaluation scores were based on Likert method and the answers were scored 1, 2, 3 or 4, sequentially [15]. In this study, the score of 23 was considered as cut off point and patients with a score more than 23 were identified as a psychological patient.

*Analysis*

After gathering the data, the prevalence of psychiatric disorders were calculated in patients with CU and the control group. For the purpose of making the derivation of the statistics, the results were presented as odds ratio that is associated with an exposure. For analysis, description and comparison, we used SPSS software version 16, frequency indexes were used for description. To compare the differences, chi-square and independent Samples T-test, were used. The $p< 0.05$ was considered statistically significant.

## Results

The patients aged 16 to 79 years old. From all patients with CU, 3 of them were male. The wheals appeared at morning, in the afternoon, in the evening and at night in 9, 5, 6, and 8 patients, respectively. Two of them suffered from CU for the day and night.

In 19 patients the lesions disappeared within 24 hours. Also the wheals lasted 72 hours in 6 patients and more than 72 hours in the remaining (5 patients).



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Table 1. Different presentations of CU in the patient group.

| | The percentage | | | | |
|---|---|---|---|---|---|
| The time of appearance | Morning: 30% | Afternoon: 16.7% | Evening : 20% | Night: 26.7% | All day: 6.7% |
| The duration of wheals | Less than 24 h:63.3% | Less than 72 h:20% | More than 72 h:16.7% | | |
| Recurrence | Daily: 60% | Weekly:16.7% | Monthly: 13.3% | Irregular:10% | |
| Distribution (type of urticaria) | Ordinary urticaria:67.7% | Pressure urticaria: 16.7% | Angioedema :6.7% | | |

Table 2.The prevalence of psychiatric disorders in the patients with CU and the healthy group.

| The prevalence | Anxiety scale | Psychosomatic disorders | Depression | Disability in social functions | Total |
|---|---|---|---|---|---|
| Case | 80% | 70% | 50% | 70% | 63.3% |
| Control | 43.3% | 40% | 16.7% | 33.3% | 46.65% |
| p value | 0.003 | 0.02 | 0.006 | 0.004 | 0.007 |
| Odds ratio | 4.64 (95% CI: 1.67 - 12.87) | 3.30 (95% CI: 1.22 - 8.92) | 4.30 (95% CI: 1.51 - 12.22) | 4.28 (95%CI : 1.59- 11.52) | 1.93 (95% CI: 0.71-5.23) |

The wheals recurred daily in 18 patients, weekly in 5 patients and monthly in 4 patients. The recurrence did not follow a regular pattern in 3 patients.

The wheals were usually seen ordinarily (ordinary urticaria), although the lesions appeared in specific locations in 7 patients. Among them, pressure points such as elbow were involved in 5 patients (pressure urticaria) and lips and eyelids were involved in 2 patients (angioedema) (Table 2).

After improvement, 10 patients (33.3%) complained from bruising in the same location of the wheals. It seems that the wheals were associated with vasculitis in them.

Family history for urticaria was positive in 33.3% of patients. In addition, 36.7% of the cases with CU deteriorated by cold or hot weather and pressure.

Although out of 30 patients with CU, 63.3% have been suffered from psychiatric disorders, this prevalence is roughly 46.6% in the control group. Altogether, psychiatric disorders in patients with CU were significantly more prevalent than individuals without dermatological problems (p= 0.007, Table 1).

**Discussion**

In our study, it was found that the prevalence of psychiatric disorders in patients with CU was significantly more than the control group. Our results were similar to what was revealed previously by most of studies. In our study, 90% of patients were female. It seems that female predominance was not by chance in our study, and in real, women are more prone to CU, in our descent. Also psychiatric disorders especially depression and stresses are more prevalent among the women in our country.

In our study, the most prevalent disorders consisted of anxiety, psychosomatic disorders, social dysfunction and depression, sequentially. It seems that depression is the least significant psychiatric disorder among patients who suffer from urticaria.

Also, previous studies were representative for changes of quality of life in these patients [16]. Although we did not measure the quality of life, the absence of mental health can change the quality of life during the time.

In our study, we did not find any relationship between demographic factors (sex, age, family history, past medical history and different clinical presentations of urticaria) and psychiatric disorders.

If an individual believes that he/she is worthless due to his/her disease, it reflects negative self-image and induces adverse emotions such as anger and depression. Although patients with chronic diseases are assumed to rise to adverse emotions [17,18],

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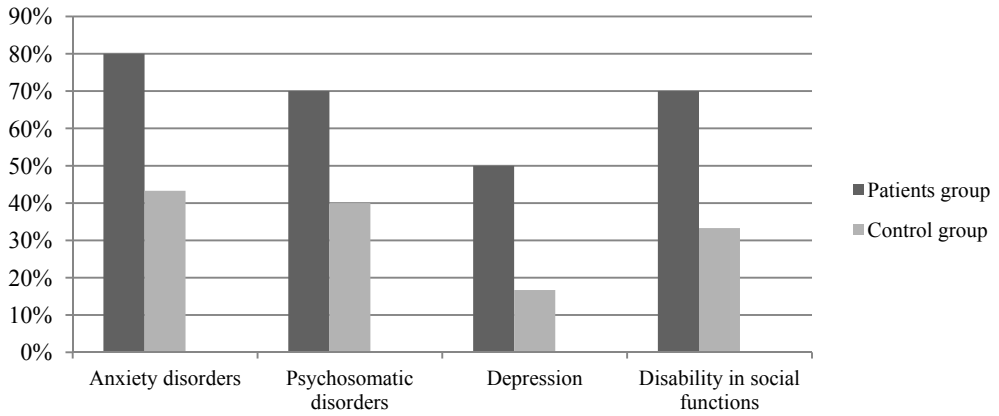



Fig 1. Distribution of the results of psychological assessment in patients with CU versus the control group.

anxiety and disability in social functions have been more prevalent among patients in this study.

Unpleasant physical complaints (e.g., pruritus, or painful skin), and the requirement of administrating various drugs such as ointments, result in many changes in the patient's life. All of them give rise to significant mental maladjustment [19, 20]. People with skin problems must deal with their own emotional reactions at first, and then, get by restrictions everyday life and manage their social/ familial function [12].

Since urticaria is not often accompanied by cosmetic problems in most of patients, the chief complaints have not been based on their own appearance in this study. This concept rationalizes the low prevalence of depression among our patients in comparison with other mental disorders. Also, since wheal is defined as pruritic lesions, it can motivate anxiety and social dysfunction among our patients.

In another study in 2006, the prevalence of anxiety and depression was studied among Japanese patients by using manifest anxiety scale and self-rating depression scale. The results showed that psychiatric disorders were more prevalent in patients with CU [16]. In another study in Turkey in 2007, by using Minnesota multiphasic personality inventory, it was found that the symptoms of depression, hysteria, paranoid personality, schizophrenia and hypochondria was significantly more common among patients with CU [21].

By Potocka, et al. in 2009, patients with visible skin diseases frequently comprehend these changes as unattractive. This conception causes aversion in others. By their opinion, this alienation affects patients' self-image, self-acceptance, and social functions [13]. In 2009, Młynek, et al. confirmed that sleep and mental health of patients are significantly affected by German version of CU [22].

In 2010, in Pakistan, the prevalence of depression was found 66.6% among adult males with CU. Based on their own recommendations, patients with dermatological diseases should be tested for depression with the purpose of early diagnosis and soon psychiatric consult [23].

Recent studies confirmed functional and organic relations between peripheral nerve system (PNS) and mast cells. Also local skin productions of mast cells affect neural secretions [24]. In 2010, these findings and clinical viewpoints in recent studies motivate more investigations about the organic/ mental origination of CU.

**Conclusion**

According to our results, the cooperation of dermatologists and psychiatrists can improve patients' health with dermatological disorders. Preventive management and psychological consult should be considered in dermatological patients even in outpatients.

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