

Original Research Article

A descriptive study on quality of life, depression and anxiety in chronic urticaria patients attending a tertiary care hospital in Bengaluru, South India

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ABSTRACT

Background: Chronic urticaria (CU) is a common skin disorder characterized by the recurrent appearance of wheals typically associated with pruritis and/or angioedema for more than 6 weeks. It has a significant impact on patient's quality of life (QoL). Hence it is of utmost importance to identify the impact of CU on the patient's life and psychiatric comorbidities associated with it. The objectives of the study were to assess the effect of chronic urticaria on the quality of life of the patient; to assess the depression in patients with chronic urticaria; to assess the anxiety in patients with urticaria.

Methods: A total of 106 patients with chronic urticaria attending allergy clinic, KIMS Hospital during November-January 2019 (3 months) were included in the study. Informed consent was obtained. Each patient was interviewed using pretested questionnaire developed using chronic urticaria on quality of life: (CU-Q2oL), patient health questionnaire-9 (PHQ-9) and general anxiety disorder-7 (GAD-7). Data was entered in Epi-info7 and descriptive statistics were used.

Results: There were 43 (40.6%) males and 63 (59.4%) females. The mean age of the patients was 36.5 ± 11.7 years. Quality of life was affected A lot in 9.5% of the patients and is somewhat affected in 38.7% of the CU patients. As much as 42.5% of them suffered from some grade of depression and 34.9% of them suffered from anxiety.

Conclusions: Chronic urticaria has a significant role in impairment of QOL and also leads to mental illnesses such as depression and anxiety.

Keywords: Chronic urticaria, Quality of life, Psychiatric comorbidities, Depression, Anxiety

INTRODUCTION

Urticaria, also called as hives, Nettle rash or wheals, is a transient eruption of circumscribed edematous and usually itchy swellings of the dermis.¹ It can be acute or chronic and with or without angioedema (larger swellings of the deep dermal, sub-cutaneous and sub mucosal tissues).^{2,3}

Chronic urticaria (CU) is a common skin disorder characterized by the recurrent appearance of wheals typically associated with pruritis for more than 6 weeks,

with or without angioedema.^{2,4} CU is present in more than 1/5th of the population and among the affected, 60% are between the age group of 20-40 years.^{1,3} Chronic urticaria is more common in females than in males.⁵ Symptoms of chronic urticaria affect a range of everyday activities, including self-care, sleep, work and academic performance and relationships with others and hence, as a result, it affects their quality of life.⁶ Many of the patients complain about feeling embarrassed and reluctant to go out in public places due to urticaria symptoms. According to a study by Engin et al in Turkey, CU patients exhibit markedly reduced physical health and psychological

health scores compared with healthy subjects.⁷ Quality of life (QoL) plays a very important role in one's life as the concept of health is not just departing from diseases but also include mental, social, economic and psychological aspects of life. Various indices and questionnaires (including both generic and specific tools for assessing skin diseases) have been used to assess QoL in CU. The chronic urticaria quality of life questionnaire (CUQ2oL) is one such questionnaire that is specific for Chronic Urticaria.⁶

Chronic urticaria is also a psycho-dermatological condition. Depression and anxiety are the most commonly found psychiatric comorbidities in CU patients.⁸ These could result due to the clinical manifestations of the disease itself; adaptation to the treatment given; insecure attachment style; lack of emotional regulation; personality traits, such as neuroticism etc.⁹ Some of them are known to get depressed overtime which may progress to a level where they develop suicidal tendencies. Some studies report that chronic urticaria patients have a sensitive personality, are depressive, can be more hysterical, and have suspicious personality traits compared to healthy controls.^{10,11} Irrespective of that, it is essential to screen CU patients for these conditions so as to treat them appropriately, which should help in the management of the chronic urticaria for better outcomes.

Hence, this study was conducted to assess the quality of life of chronic urticaria patients, to screen the depression and anxiety in patients with chronic urticaria.

METHODS

It was a descriptive study conducted in Allergy clinic, Kempegowda Institute of Medical Sciences Hospital, Bengaluru from November 2018 to January 2019. Patients who were clinically diagnosed to have chronic urticaria and referred to the Allergy clinic were included in the study after obtaining informed verbal consent. Patients who presented with exacerbations, contact urticaria, urticarial vasculitis, angioedema with no urticaria, were excluded from the study. A total of 106 patients, both males and females, aged between 11 to 70 years were interviewed using pretested structured questionnaire. Institutional ethics committee approval was obtained.

Study tools

- To assess quality of life, the chronic urticaria quality of life questionnaire (CU-Q2OL) was used which is an instrument that was specifically developed to assess quality of life in patients with chronic urticaria. It is a self-administered 23-item questionnaire, where patients have to indicate, on a Likert scale with multiple options (1: not at all; 5: very much), how much they have been troubled by

each problem, with higher scores indicating worse quality of life.¹²

- To screen depression and anxiety among the CU patients, patient health questionnaire-9 (PHQ-9) and General Anxiety Disorder- 7 (GAD-7) were used after consulting with a psychiatrist.^{13,14}
- The disease severity was assessed using total urticaria severity score, an useful tool in assessing severity cross-sectionally.¹⁵

Data was entered in Epi-info 7 software and descriptive statistics like frequencies, percentages and means were used to determine the QOL, depression and anxiety.

RESULTS

Total of 106 subjects were interviewed, of which 40.6% (43) were males and 59.4% (63) were females. Average age of the participants was 35±11.7 years and median age was 35 years. Among the attendees of the clinic, 91.5% of the subjects were aged between 18 to 59 years. In this sample, 49.1% were graduate or postgraduate and 1.9% of them were illiterate and 63.2% were employed (Table 1).

Table- 1: Basic parameters of the study participants (n=106).

Variable	Frequency	%
Sex	Male	43
	Female	63
Age (years)	<18	4
	18-59	97
	≥60	5
Religion	Hindu	91
	Muslim	15
Education	Illiterate	2
	Primary school	3
	Middle school	5
	High school	28
	Intermediate	16
Occupation	Graduate or PG	52
	Unemployed	39
	Employed	67

Of the study participants, 20% had history of angioedema. Among males, angioedema was seen in 16.2% and 22.6% of the female participants. Dermographism was seen in 25.7% (27) of the study subjects. 18.6% of the male participants and 30.7% of the females had dermographism. Duration of the illness varied from 8 weeks to 10 years.

Based on the grading of the CUQ2oL scores, 50.9% of the study participants had grade-1 (A little) impact on QoL, 38.7% had Grade-2 (Somewhat), 9.5% had Grade-3 (A lot) and 0.9% had Grade-4 (Very much) impact on quality of life. On analysis of CUQ2oL, the items with

highest mean scores were pruritis (item-1) and wheals (Item-2) followed by interference with work (item-5) and sleep (item-7). Least affected were pertaining to limitations in choosing cosmetics (item-22) and clothing (item-23) (Table 2).

Disease severity, assessed by total urticaria severity score revealed that most of the patients i.e., 59.4% had moderate degree of symptoms, 36.8% had severe symptoms and 3.8% had mild symptoms.

Table 2: Mean scores of items in CUQ2OL.

Sl no	Domain	Item	Mean score	Mean score (domain)
1	Pruritus	Pruritus	82.1	74.4
2		Wheals	66.6	
3	Swelling	Eyes swelling	30.9	30.6
4		Lip swelling	30.6	
5	Impact on life activities	Interferes with work	52.3	45.8
6		Interferes with physical activities	44.7	
7		Interferes with sleep	49.1	
8		Interferes with spare time	47.2	
9		Interferes with social relationships	44.9	
10		Interferes with my eating behavior	36.8	
11	Sleep Problems	Difficulties in falling asleep	43.6	38.9
12		Wake up during the night	37.7	
13		Tired during the day	35.4	
14		Difficulties in keeping concentration	42.1	
15	Limits	Nervousness	35.5	36.8
16		Bad mood	47.6	
17		Limit in choosing food	34.5	
18	Looks	Limit your sport activities	28.2	34.7
19		Troubled by drugs' side effects	27.8	
20		Embarrassed due to symptoms	45.5	
21		Embarrassed in going to public places	45.3	
22		Problems in using cosmetics	27.3	
23		Limits in choosing clothes material	27.7	

Table 3: Distribution of study subjects based on GAD-7 and PHQ-9 scores (n=106).

GAD-7				PHQ-9			
Score	Grade	Frequency	Percentage (%)	Score	Grade	Frequency	Percentage (%)
0-4	No anxiety	69	65.1	0-4	No depression	61	57.6
5-9	Mild	19	17.9	5-9	Mild	24	22.6
10-14	Moderate	12	11.3	10-14	Moderate	08	7.6
>15	Severe	6	5.7	15-19	Moderately severe	10	9.4
				20-27	Severe	03	2.8
Total		106	100	Total		106	100

On screening with PHQ-9, 57.6% of the patients did not suffer from depression, 22.6% were mildly depressed and 2.8% were severely depressed due to chronic urticaria. Similarly, GAD-7 revealed that 5.7% had severe anxiety, 17.9% were mildly anxious and 65.1% were not anxious due to urticaria symptoms (Table 3).

DISCUSSION

Chronic urticaria, which is characterized by itching and rashes all over the body, affects quality of life to significant level which requires holistic approach for

better understanding of the disease impact. Assessment of quality of life, anxiety and depression level will help in better management of the disease.

The present study had 67.9% of the study subjects between 20 to 40 years age group and mean age of the study participants was 36.5±11.7 years. The average age of study participants was 43 years in a study by Godse et al in India in the year 2006.¹⁶ It was observed that mean age of the study subjects was 46 years in a study by Andrade et al from Portugal in 2016.¹⁷ Literature in the Indian context also mentions that most of the patients are

between the age group of 20 to 40 years which is similar to the present study findings.¹

Most studies on quality of life concerning chronic urticaria have used generic questionnaires or those for dermatological diseases, such as the DLQI (dermatology life quality index), which can be used for any dermatological diseases. CU-Q₂OL is a valid and specific instrument to evaluate the quality of life in Chronic Urticaria patients. It is also well validated in Indian Patients.¹⁸ In this study all of the participants had some form of impairment. Among them 11% had severe impairment of quality of life. Most of the study subjects had trouble with pruritis and wheals as indicated by their mean scores of 82.1% and 66.6% respectively. Similar findings were observed by Godse et al from Mumbai.¹⁶

Literature suggests that there are higher levels of depression and anxiety among Chronic Urticaria patients when compared to healthy participants. A study done by Barbosa et al in Portugal estimated the prevalence of anxiety among CU patients as 47.3%, whereas this study showed the prevalence of anxiety among the CU patient to be 34.9%.⁹ A study by Sheehan-Dare RA et al in UK in the year 1990 estimated the burden of depression among CU patients to be 32.4%,¹⁹ where as in this study the burden was found to be 42.4%. Similar results were observed by Songul at in which 48% of the study subjects had anxiety and 48% had depression.²⁰

Hence, chronic urticaria has a major role in impairment of quality of life and it also leads to mental illnesses such as depression and anxiety. There are very few studies done in Indian context regarding QoL and psychiatric comorbidities of chronic urticaria. Therefore, it is recommended to conduct studies involving larger samples to define the predictive factors that affect the quality of life in different parts of India. The diagnosis of depression and/ or anxiety should be confirmed by specialist and managed appropriately.

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REFERENCES

1. Prasad PS. Urticaria. Indian J Dermatol Venereol Leprol. 2001;67(1):11–20.
2. World Allergy Organisation. Urticaria and Angioedema: Synopsis. 2014: 1–7. Available from: [https://www.worldallergy.org/education-and-](https://www.worldallergy.org/education-and-programs/education/allergic-disease-resource-center/professionals/urticaria-and-angioedema-synopsis)

- programs/education/allergic-disease-resource-center/professionals/urticaria-and-angioedema-synopsis. Accessed on 15 April 2019.
3. Bajaj A, Yadav S, Upadhyay A. Chronic urticaria: An overview. Indian J Dermatol. 2009;51(3):171.
4. Sandeep S, Vibhanshu G, Syed Suhail Amin MT. Chronic urticaria. Indian J Dermatol. 2011;56(6):622–8.
5. Deacock SJ. An approach to the patient with urticaria. Clin Exp Immunol. 2008;153(2):151–61.
6. Jáuregui I, Frutos FJO De, Ferrer M, Sastre J, Bartra J, Labrador M, et al. Assessment of Severity and Quality of Life in Chronic Urticaria. J Invest Allergol Clin Immunol. 2014;24(2):80–6.
7. Engin B, Uguz F, Yilmaz E, Özdemir M, Mevlitoglu I. The levels of depression, anxiety and quality of life in patients with chronic idiopathic urticaria. J Eur Acad Dermatology Venereol. 2008;22(1):36–40.
8. Staubach P, Dechene M, Vonend A, Metz M, Magerl M, Breuer P, et al. Quality of life in patients with chronic urticaria is differentially impaired and determined by psychiatric comorbidity. Br J Dermatol. 2006;154:294–8.
9. Barbosa F. Chronic idiopathic urticaria and anxiety symptoms. J Health Psychol. 2011;16(7):1308–47.
10. Alan S, Canan F, Karakaş AA, Geçici N. Temperament and character profiles of patients with chronic idiopathic urticaria. Postep Dermatologii i Alergol. 2015;32(3):167–72.
11. Uguz F, Engin B, Yilmaz E. Axis I and Axis II diagnoses in patients with chronic idiopathic urticaria. J Psychosom Res. 2008;64(2):225–9.
12. Baiardini I, Pasquali M, Braidò F, Fumagalli F, Guerra L, Compalati E, et al. A new tool to evaluate the impact of chronic urticaria on quality of life: Chronic urticaria quality of life questionnaire (CU-Q2oL). Allergy Eur J Allergy Clin Immunol. 2005;60(8):1073–8.
13. Kroenke K, Spitzer RL, Williams JW. The Patient Health Questionnaire PHQ-9: Validity of a brief depression severity measure. J Gen Intern Med. 2001;16:606–13.
14. Robert L Spitzer, Kurt Kroenke, Janet B W Williams, Bernd Lowe. A Brief Measure for Assessing Generalized Anxiety Disorder. Arch Intern Med. 2006;166(10):1092–7.
15. Calculation of total urticaria severity score . Indian Journal of Dermatology. Available at: http://www.e-ijid.org/viewimage.asp?img=IndianJDermatol_2015_60_1_102_147836_t1.jpg. Accessed on 09 April 2019.
16. Godse K. Quality of life in chronic urticaria. Indian J Dermatol. 2009;51(2):155.
17. Andrade G, Dias C, Oliveira S, Levy S, Baiardini I. Impact of chronic urticaria on the quality of life of patients followed up at a university hospital. An Bras Dermatol. 2016;91(6):754–9.

18. Pherwani A, Gadhia S, Bansode G. The impact of chronic urticaria on the quality of life in Indian patients. *Indian J Dermatol*. 2012;57(2):110.
19. Sheehan-Dare RA, Henderson MJ, Cotterill JA. Anxiety and depression in patients with chronic urticaria and generalized pruritus. *Br J Dermatol*. 1990;123(6):769–74.
20. Tat TS. Higher Levels of Depression and Anxiety in Patients with Chronic Urticaria. *Med Sci Monit*. 2019;25:115–20.

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