IJMA

International Journal of Medical Arts

Volume 7, Issue 10 (October 2025)

http://ijma.journals.ekb.eg/

P-ISSN: 2636-4174

E-ISSN: 2682-3780

Available online on Journal Website
https://ijma.journals.ekb.eg
Main Subject [Dermatology]

Original Article

Impact of Chronic Urticaria on Patients' Quality of Life in Damietta Governorate

Aya Adel Ezzelregal *; Hany Othman Aboelwafa; Rabie Atallah

Department of Dermatology, Venereology and Andrology, Damietta Faculty of Medicine, Al-Azhar University, Damietta, Egypt.

Article information

Received: 18-04-2025

Accepted: 04-08-2025

DOI: 10.21608/ijma.2025.342463.2171

*Corresponding author

Email: ayaezzz94@gmail.com

Citation: Ezzelregal AA, Aboelwafa HO, Atallah R. Impact of Chronic Urticaria on Patients' Quality of Life in Damietta Governorate. IJMA 2025 Oct; 7 [10]: 6141-6146. doi: 10.21608/ijma.2025.342463.2171

Abstract

Background: Chronic urticaria is characterized by the presence of recurrent wheel, with or without angioedema, occurring at least twice a week for longer than 6 weeks.

Aim of the Work: This study aimed to evaluate the impact of chronic urticaria on patients' quality of life and to assess its correlation with the severity of the disease in Damietta governorate.

Patients and Methods: This was a randomized clinical trial that included 200 patients with chronic urticarial in dermatology outpatient clinic at Damietta Faculty of Medicine from June 2023 to June 2024. All were evaluated by urticaria activity score and chronic urticaria quality of life questionnaire.

Results: Over half of patients [54%] experience work and physical activity limitations, while 46% experience sleep and free time limitations. Most patients [70%] have limitations in social relationships, 60% in eating, and 60% in falling asleep. Additionally, 76% wake up at night, 56% are tired during the day, 66% have difficulties concentrating, and 58% often feel nervous. These limitations can impact various aspects of daily life, including sleep, concentration, and overall well-being. There was a statistically significant difference between urticaria activity score and chronic urticaria quality of life questionnaire as the mean of CuQoL was higher among patients with severe urticaria in comparison to patients with mild urticarial.

Conclusion: Chronic urticaria significantly impacts patients' quality of life, particularly in those with autoimmune urticaria. The study highlights the importance of evaluating quality of life to assess disease progression and treatment efficacy. The CuQOL, a reliable and cost-effective tool, is deemed valid for research and clinical practice.

Keywords: Chronic Urticaria; Impact; Patients' Quality of Life.

INTRODUCTION

Chronic urticaria [CU] is one of the most common pruritic conditions in population [1]. Chronic urticaria is characterized by the presence of recurrent wheal, with or without angioedema, occurring at least twice a week for longer than 6 weeks [2]. Chronic urticaria, and especially CSU, is more common in women [up to 80%], but this sex difference is not apparent in children under 15 years or in the elderly [3].

Autoimmunities of type I [auto allergy with IgE autoantibodies to interleukin-24, thyroid peroxidase, double-stranded DNA and other auto allergens] or type IIb [IgG antibodies to the patient's own IgE or its high-affinity receptor – FcεRI] are considered to be pathogenic in many patients with CSU, but other mechanisms of mast cell activation and modulation and other elicitors, like non-steroidal anti-inflammatory drugs, are also involved [4]. The main factors responsible for the physical, social and emotional impact of CSU include the sudden and unpredictable appearance of wheals and angioedema, and itch, which is very distressing and has a major impact on sleep and patients' wellbeing [5].

HRQoL impairment in chronic inducible urticaria [CIndU] is determined by the required avoidance of specific eliciting triggers and the resulting interference with social and daily-life activities. People with CSU and comorbid CIndU have a significantly lower HRQoL than those with CSU alone. HRQoL scores are lower in CSU with angio-oedema [6].

This study aimed to evaluate the impact of chronic urticaria on patients' quality of life and to assess its correlation with the severity of the disease in Damietta governorate.

PATIENTS AND METHODS

This was a randomized clinical trial included 200 patients with chronic urticarial in dermatology outpatient clinic at Damietta Faculty of Medicine from June 2023 to June 2024.

Inclusion criteria: Patients with a clinical diagnosis of chronic urticaria of all degree of severity and with any type of treatment and Patients aged 18 years old or older.

Exclusion criteria: Patients who suffered from any other major diseases that could affect their quality of life and Patients with skin diseases other than urticaria that can cause significant impairment of their quality of life.

Patients consent: A written informed consent was obtained from all participants before inclusion in the study, explaining the value of the study, plus the procedures that were conducted.

Ethical Approval: The whole study design was approved by the Local Ethics Committee, Al-Azhar University [Damietta Faculty of Medicine]. Confidentiality and personal privacy were respected in all levels of the study.

All patients were subjected to the following:

- **Full history taking:** Personal history, history of the present illness, Past history, history of medications, Previous treatments including history of peeling, vitamin A Derivatives and other drugs, family history of type 2 diabetes mellitus [T2DM] & hypertension, through general examination,
- **Dermatological examination:** Detection of Shape, size, and distribution of wheals, detection of associated angioedema if present, Physical and non-physical provocation test and detection of any associated skin disease**.**
- Laboratory investigations included CBC, ESR, CRP, ANA, BP, thyroid hormones and antibodies

Patients were asked to fill in the [cuQol] questionnaire: It is a specific questionnaire for evaluating quality of life in CU patients: It is a questionnaire that includes physical, emotional and social characteristics and aspects of the urticaria itself. It consists of 23 likert-type questions that are evaluated from 1 [never] to 5 [very much], finally obtaining a range of 0 [no quality-of-life impairment] to 100 maximum quality-of-life.].

Questioning about: In the past 14 days: a]- How much were you troubled by the following symptoms**?** 1-Itching 2-Wheals 3-Swelling of your eyes 4-Swelling of your lip;, b]-How often you were limited by your urticaria in the following**:** 5- Work 6-Physical activity 7-Sleep 8-Free time 9-Social relationships 10-Eatin; c]-How difficulties and problems that could be related to your urticaria. 11-Do you have difficulties falling asleep**?**, 12-Do you have wake at night, 13-Are you tired during the day because you didn't sleep at night**?**, 14-Do you have difficulties concentrating**?**, 15-Do you feel nervous**?**, 16-Do you feel miserable**?**, 17-Do you have to limit your food choices**?**, 18-Are you bothered by the symptoms of urticaria that appear on your body**?**, 19-Are you embarrassed to go to public places**?**, 20-Is it problem for you to use cosmetics**?**, 21-Do you have to limit your clothing choices**?**, 22-Are your sports activities limited because of your hives**?** , 23-Do you suffer side effects from medication you take for your hives?**.**

Evaluation of CU severity using urticaria activity score [UAS7]: It is a simple scoring system used to evaluate urticaria symptoms and signs. It is based on scoring the wheels and itching separately on scale of 0 to 3 over 7 days**.** The final score is calculated by adding together the daily scores, which can range from 0 to 6 over 7 days**.** This results in a maximum total score of 42**.**

Statistical Design: The collected data were coded, entered, and analyzed by computer using a database software program, IBM SPSS 23.0 for windows [SPSS Inc., Chicago, IL, USA]. Data was summarized by qualitative and quantitative measures. For relation between quantitative variables of 2 groups, independent t-test, Mann-Whitney U test and Wilcoxon rank-sum test, For relation between quantitative variables of more than 2 groups: One way analysis of variance [ANOVA] test and Kruskal–Wallis's test. For correlation between two quantitative variables, Pearson's correlation and Spearman's rank correlation test.

RESULTS

Ages ranged from 18 to 71 years with mean ± SD of 42.74 ± 15.22, [28%] of them were younger than 30 years, while [38%] were older than 50 years. [20%] of them were males and [80%] were females. [30%] of the patients were not educated, [24%] had 1ry school scholarship, [30%] had 2ry school scholarship and [16%] were high and postgraduate [Table 1].

As regards work limitation, more than half [54%], [56%] had sometimes limitations and physical activity limitations respectively.

[**46**%] had sometimes Sleep limitations, As regards free time limitations; most patients [70%] had sometimes limitations. As regards social relationships limitations, more than half [60%] had often limitations. As regards eating limitations, more than half [56%] had sometimes limitations. [Table 2].

As regards difficulties falling asleep, more than half [60%] had difficulties sometimes. Waking at night showed that [76%] sometimes wake at night. Tiring during the day showed that [56%] sometimes been tired during the day. As regards difficulties concentrating; [66%] had difficulties sometimes. As regards feeling nervous, [58%] often feel nervous. [Table 3]

As regards cuQoL; it ranged from 35 to 57 with mean ± SD of 47 ± 4.29. While urticaria severity score ranged from 6 to 32 with mean ± SD of 20.3 ± 6.55. Also, [22%] of the patients had mild urticaria, while [62%] of the patients had moderate urticaria and [16%] had severe urticaria. [Table 4]. There was a statistically significant difference between urticaria activity score and chronic urticaria quality of life questionnaire; as mean of cuQoL was higher among patients with severe urticaria in comparison to patients with mild urticaria [P<0.001]. [Table 5]

Table [1]: Demographic data among the studied population

Variables		All patients [n=200]
Age [years]	Mean ± SD	42.74 ± 15.22
	Min. – Max.	[18 – 71]
Age groups [n. %]	<30	56 [28%]
	30 – 39	28 [14%]
	40 – 50	40 [20%]
	>50	76 [38%]
Sex [n. %]	Female	160 [80%]
	Male	40 [20%]
Scholarship [n. %]	Not educated	60 [30%]
	Primary school	48 [24%]
	Secondary school	60 [30%]
	High and postgraduate	32 [16%]

Table [2]: Limitations Related to urticaria among studied patients

Variables [n. %]		All patients [n=200]
Work limitations	Never	12 [6%]
	Rarely	44 [22%]
	Sometimes	108 [54%]
	Often	36 [18%]
	Very often	0 [0%]
Physical activity limitations	Never	0 [0%]
	Rarely	16 [8%]
	Sometimes	112 [56%]
	Often	64 [32%]
	Very often	8 [4%]
Sleep limitations	Never	0 [0%]
	Rarely	0 [0%]
	Sometimes	92 [46%]
	Often	108 [54%]
	Very often	0 [0%]
Free time limitations	Never	0 [0%]
	Rarely	36 [18%]
	Sometimes	140 [70%]
	Often	24 [12%]
	Very often	0 [0%]
Social relationships limitation	Never	0 [0%]
	Rarely	0 [0%]
	Sometimes	80 [40%]
	Often	120 [60%]
	Very often	0 [0%]
Eating limitations	Never	0 [0%]
	Rarely	16 [8%]
	Sometimes	112 [56%]
	Often	72 [36%]
	Very often	0 [0%]

Table [3]: Difficulties and troubles related to urticaria among studied patients

Variables [n. %]		All patients [n=200]
Difficulties falling asleep	Never	0 [0%]
	Rarely	0 [0%]
	Sometimes	120 [60%]
	Often	80 [40%]
	Very often	0 [0%]
Wake at night	Never	0 [0%]
	Rarely	16 [8%]
	Sometimes	152 [76%]
	Often	32 [16%]
	Very often	0 [0%]
Tired during the day	Never	0 [0%]
	Rarely	0 [0%]
	Sometimes	112 [56%]
	Often	88 [44%]
	Very often	0 [0%]
Difficulties concentrating	Never	0 [0%]
	Rarely	12 [6%]
	Sometimes	132 [66%]
	Often	56 [28%]
	Very often	0 [0%]
Feel nervous	Never	0 [0%]
	Rarely	0 [0%]
	Sometimes	24 [12%]
	Often	116 [58%]
	Very often	60 [30%]

Table [4]: Chronic urticaria quality of life questionnaire [cuQoL] and urticaria activity score among studied patients

Variables		All patients [n=200]
cuQoL	Mean ± SD	47 ± 4.29
	Min. – Max.	[35 – 57]
Urticaria activity score	Mean ± SD	20.3 ± 6.55
	Range	[6 – 32]
Urticaria activity grades [n. %]	Mild [7 – 15]	44 [22%]
	Moderate [16 – 27]	124 [62%]
	Severe [28 – 42]	32 [16%]

Table [5]: Association of urticaria activity score with cuQoL among studied patients

Variables		Mild [n=44]	Moderate [n=124]	Severe [n=32]	*P Value	Post Hoc
cuQoL	Mean ± SD	42.4 ± 4.79	47.2 ± 2.14	52.6 ± 2.15	**<0.001**	P1<0.001; P2<0.001 P3<0.001
	Min. – Max.	[35 – 49]	[44 – 53]	[50 – 57]		

*Kruskal-Walli's test, Non-significant: P >0.05, Significant: P ≤0.05 *P-value=Comparison between the three groups, P1=Comparison between mild and moderate groups, P2=Comparison between mild and severe groups, P3=Comparison between moderate and severe groups.

DISCUSSION

In this study, the minimum age of the patients studied was 18 years, while the maximum age was 71 years and the mean age of the patients was 42.74 ± 15.22 years; 28% of them were younger than 30 years, while 38% were older than 50 years.

This was consistent with the results of the study conducted by **Ferreira *et al.*** [7], they developed the Portuguese version of the Chronic Urticaria Quality of Life Questionnaire [CU-Q2oL]. Mean [standard deviation] age was 42.6 [13.3].

In this study, there was female predominance, where 160 [80%] were females. This result was in agreement with results of the study conducted by **Dias *et al.*** [8] which consisted of 96 female patients [85.72%] and 16 male patients [14,28%]]. Also, **Ferreira *et al.*** [7] found that 81.6% were female.

In our study, 30% of the patients were not educated, 24% had 1ry school scholarship, 30% had 2ry school scholarship and 16% were high and postgraduate. **Dias *et al.*** [8] found that 37.5% had not completed elementary school, and 8.03% had completed higher education.

Ferreira *et al.* [7] found that 35% had 5 to 9 years of education. Many diseases have a prevalence standard, which is dependent on socio-economic and educational levels. With respect to urticaria, there is little data available on this issue. **Ferrer** [9] did not show a difference in the prevalence of urticaria in terms of educational level, occupation, income, residence location, and ethnic origin.

As regards duration of disease progression, 36% of the patients had less than 5 years of disease progression, while 64% of the patients had 5 years and more of disease progression. Also, **Dias *et al.*** [8] found that the mean time to disease progression was 10 years [3 months – 60 years], and the follow-up time at hospital was 4 years.

As regards causes of urticaria; [52%] of the patients had spot urticaria, while [26%] of the patients had inducible urticaria and [22%] had autoimmune urticaria. **Dias et al.** [8] found that 48.21% of patients had chronic spontaneous urticaria [CSU], 22.32% associated with physical urticaria, 28.57% had chronic autoimmune urticaria [CAU] and 23.21% had inducible urticaria alone.

In the study conducted by **Kocatürk *et al.*** [10], the mean duration of disease was [45.5] months [median: 12.0, range:2–480 months]. In the study conducted by **Zhong *et al.*** [11], the mean disease duration was 46.1 ± 18.5 months [range, 1.5–127 months].

As regards feeling miserable, none of the patients [0%] had ever been feeling miserable, 0% had rarely been feeling miserable, 6% sometimes had been feeling miserable, 48% often been feeling miserable and 46% had been feeling miserable very often. As regard been bothered by urticarial symptoms, none of the patients [0%] had ever been bothered, 0% had rarely been bothered, 12% sometimes were bothered, 64% had often been bothered and 24% had been bothered very often.

As regards having problems using cosmetics, 14% never had problems, 20% had problems rarely, 6% sometimes had problems, 52% had problems often and 8% had problems very often. As regards sports activities limitations; 12% never had limitations, 78% had rarely limitations, 10% sometimes had limitations, none of the patients 0% had often limitations and none of the patients 0% had very often limitations.

Dias *et al.* [8] found that seventy-five percent of the patients were not doing sporting activities and only 16% indicated chronic urticaria as the reason for this. Of the 28 patients who played sports, 42.8% mentioned that urticaria interfered a little, somewhat, or too much in sporting activity-related quality of life. Of the 13 patients who were not practicing sports due to urticaria, 69% reported that urticaria affected much or very much.

Chronic urticaria has a significant impact on quality of life, especially as regards sleep and energy, which is consistent with our results **Heng *et al***.[12].

In our study, urticaria severity score ranged from 6 to 32 with mean ± SD of 20.3 ± 6.55. **Dias *et al.*** [8] evaluated disease activity by UAS score being 1.04 ± 1.61 [0-6].

Our study showed a statistically significant difference between urticaria activity score, and age groups as means of urticaria activity score was higher among patients older than 50 years in comparison to patients younger than 30 years [P=0.001]. Also, there were statistically significant differences between urticaria activity score and each of scholarship, urticarial causes and time of disease progression. **Ferreira *et al.*** [7] found that CU-Q2oL was not able to discriminate based on age or education.

In our study, there was a non-significant association between urticaria severity score and sex.

Dias *et al.* [8] showed that patients aged 41-60 years were patients with autoimmune urticaria were more impacted in dimension III, compared with patients suffering from chronic spontaneous urticaria and inducible urticaria alone. Women were more affected in all dimensions but not in a statistically significant manner. Patients with higher severity scores [group 3] experienced a greater impact on quality of life in the total score, and in dimensions II and III.

Ferreira *et al.* [7] found that CU-Q2oL differentiated well between males and females, with females always having higher QoL impairment. However, it was not able to discriminate based on age or education.

In the current study, there was a statistically significant difference between urticaria activity score and chronic urticaria quality of life questionnaire as mean of cuQoL was higher among patients with severe urticaria in comparison to patients with mild urticaria [P<0.001].

Młynek *et al.* [13] found that Disease duration did not-significantly predict any CU-Q2oL score. Sex significantly predicted itching/ embarrassment and limits looks, whereby women were more severely affected on both scales. Younger subjects were more affected by CU on functioning and itching/ embarrassment, while older patients were more severely affected on sleep and swelling/eating.

Ferrer [9] did not observe any significant difference between patients' occupation and CU-Q2Ol and depending upon rural or urban residence.

Our study showed a statistically positive correlation of chronic urticaria quality of life questionnaire with age and urticaria activity score. **Sabroe *et al*.**[14] concluded that patients with positive autologous serum skin tests were more affected than those with negative tests.

Metz *et al.* [15] revealed the highest disease severity and worst quality of life measured by DLQI in patients with positive autologous serum skin tests.

Dias *et al.* [8] demonstrated a strong correlation with the quality-of-life impact. Patients with more severe disease showed greater degree of impairment, especially in dimension II [itching/impact on daily activities].

Conclusion: Chronic urticaria significantly impacts patients' quality of life, particularly in those with autoimmune urticaria. The study highlights the importance of evaluating quality of life to assess disease progression and treatment efficacy. The CU-QOL, a reliable and cost-effective tool, is deemed valid for research and clinical practice.

Financial and Non-Financial Relationships and Activities of interest: None.

REFERENCES

1. Kanokvalai K, Chuda R, Kanyalak M, Suphattra T, Phumithep P. Clinical Manifestations, Treatment, and Clinical Course of Chronic Urticaria in Elderly: A Systematic Review J Asthma Allergy. 2022; 15:1455–1490. doi: 10.2147/JAA.S379912

2. Zuberbier T, Altrichter S, Bauer S. S3 Guideline Urticaria. Part 1: Classification and diagnosis of urticaria - German-language adaptation of the international S3 Guideline. J Dtsch Dermatol Ges. 2023;21[1]:81-93. doi:10.1111/ddg.14906

3. Gonçalo M, Gimenéz-Arnau A, Al-Ahmad M, Ben-Shoshan M, Bernstein J A. The global burden of chronic urticaria for the patient and society. Br J Dermatol. 2021; 184 [2]: 226-236. doi: 10.1111/bjd.19561.

4. Zuberbier T, Aberer W, Asero R. The EAACI/GA²LEN/EDF/WAO guideline for the definition, classification, diagnosis and management of urticaria. Allergy. 2018;73[7]:1393-1414. doi:10.1111/all.13397

5. Donnelly J, Ridge K, O'Donovan R, Conlon N, Dunne P J. Psychosocial factors and chronic spontaneous urticaria: a systematic review. BMC Psychol. 2023; 11:239. doi: 10.1186/ s40359-023-01284-2

6. Kumaran M, Singh S, Mehta H, Parsad D.Decoding the variability in clinical and laboratory profiles of Chronic Inducible Urticaria vs. Chronic Spontaneous Urticaria - a retrospective study from a tertiary care center. Arch Dermatol Res.2024 316[10]:703. doi: 10.1007/ s00403-024-03447

7. Ferreira PL, Gonçalo M, Ferreira JA. Psychometric properties of the portuguese version of the chronic urticaria quality of life questionnaire [CU-Q2oL]. Health Qual Life Outcomes. 2019;17 [1]:190. Published 2019 Dec 30. doi:10.1186/s12955-019-1266-y

8. Dias GA, Pires GV, Valle SO. Impact of chronic urticaria on the quality of life of patients followed up at a university hospital. An Bras Dermatol. 2016; 91 [6]: 754-759. doi:10.1590/abd1806-4841. 20165071

9. Ferrer M. Epidemiology, healthcare, resources, use and clinical features of different types of urticaria. Alergológica 2005. J Investig Allergol Clin Immunol. 2009;19 Suppl 2:21-26.

10. Kocatürk E, Weller K, Martus P, et al. Turkish version of the chronic urticaria quality of life questionnaire: cultural adaptation, assessment of reliability and validity. Acta Derm Venereol. 2012;92[4]:419-425. doi:10.2340/00015555-1199

11. Zhong H, Song Z, Chen W. Chronic urticaria in Chinese population: a hospital-based multicenter epidemiological study. Allergy. 2014;69 [3]: 359-364. doi:10.1111/all.12338

12. Heng JK, Koh LJ, Toh MP, Aw DC. A study of treatment adherence and quality of life among adults with chronic urticaria in Singapore. Asia Pac Allergy 2015;5[4]:197-202. doi:10.5415/ apallergy.2015.5.4.197

13. Młynek A, Magerl M, Hanna M. The German version of the Chronic Urticaria Quality-of-Life Questionnaire: factor analysis, validation, and initial clinical findings. Allergy. 2009; 64 [6]: 927-936. doi:10.1111/j.1398-9995.2008.01920.x

14. Sabroe RA, Seed PT, Francis DM, Barr RM, Black AK, Greaves MW. Chronic idiopathic urticaria: comparison of the clinical features of patients with and without anti-Fcepsilon RI or anti-IgE auto-antibodies. J Am Acad Dermatol. 1999; 40 [3]: 443-450. doi:10.1016/s0190-9622[99]70495-0

15. Metz M, Giménez-Arnau A, Borzova E, Grattan CE, Magerl M, Maurer M. Frequency and clinical implications of skin autoreactivity to serum versus plasma in patients with chronic urticaria. J Allergy Clin Immunol. 2009;123[3]:705-706. doi: 10.1016/j.jaci.2008.11.040

IJMA

International Journal of Medical Arts

Volume 7, Issue 10 (October 2025)

http://ijma.journals.ekb.eg/

P-ISSN: 2636-4174

E-ISSN: 2682-3780