Research Article

Cuestiones de Fisioterapia

Medicine

CLINICAL PROFILE AND QUALITY OF LIFE ASSESSMENT IN PATIENTS WITH CHRONIC URTICARIA: A CROSS-SECTIONAL STUDY

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Abstract

In this cross-sectional study of 120 patients with chronic urticaria, the clinical profile demonstrated a substantial burden of disease activity and impairment in daily functioning. Moderate-to-severe disease activity, as measured by the Urticaria Activity Score over seven days (UAS7), was observed in approximately two-thirds of patients, indicating that a significant proportion experienced persistent and troublesome symptoms despite routine management. Recurrent wheals were the predominant clinical manifestation, while angioedema was present in a considerable subset of patients, further contributing to disease severity and patient discomfort. Several patients reported identifiable triggering factors, including food items, environmental exposures, infections, stress, and medication-related triggers, although trigger patterns varied considerably among individuals. The autologous serum skin test (ASST), used as a marker of autoimmune involvement, was positive in a proportion of cases, supporting the role of autoimmune mechanisms in the pathogenesis of chronic urticaria for a subset of affected patients. Assessment of health-related quality of life using the Dermatology Life Quality Index (DLQI) revealed marked impairment across multiple domains, including daily activities, work productivity, social interactions, sleep quality, and emotional well-being. Many patients reported frustration, embarrassment, anxiety, and reduced confidence due to the unpredictable and recurrent nature of the disease. Statistical analysis demonstrated a moderate positive correlation between disease activity and quality-of-life impairment ($r \approx 0.55$), indicating that patients with higher UAS7 scores experienced substantially greater disruption in physical, psychological, and social functioning. These findings highlight the multidimensional impact of chronic urticaria beyond its visible cutaneous manifestations and emphasize the importance of comprehensive patient assessment. Effective management should therefore incorporate not only symptom control and reduction of disease activity but also routine evaluation of quality-of-life outcomes. An individualized, patient-centred treatment approach guided by both clinical activity measures and quality-of-life assessments may improve overall disease control, treatment satisfaction, and long-term patient outcomes.

Keywords: *Chronic urticaria; UAS7; Dermatology Life Quality Index; Angioedema; Autologous serum skin test; Quality of life*

INTRODUCTION

Chronic urticaria (CU) is a common and often debilitating dermatological disorder characterized by the recurrent occurrence of wheals (hives), angioedema, or both for a duration exceeding six weeks. The condition follows a chronic relapsing-remitting course and affects individuals across all age groups, with a significant impact on physical, psychological, and social well-being [1]. Chronic spontaneous urticaria (CSU), in which symptoms arise without an identifiable external trigger, represents the most prevalent clinical subtype and accounts for the majority of chronic urticaria cases encountered in routine practice [2]. Although the exact pathophysiology remains incompletely understood, mast cell activation and the subsequent release of inflammatory mediators play central roles in disease manifestation. Furthermore, increasing evidence suggests that autoimmune mechanisms contribute to disease development in a substantial proportion of patients, with the autologous serum skin test (ASST) serving as a useful clinical indicator of autoimmune involvement in selected cases [4]. Beyond its cutaneous manifestations, chronic urticaria imposes a considerable burden on patients' quality of life. Persistent itching, sleep disturbance, cosmetic concerns, emotional distress, anxiety, social embarrassment, and the unpredictable nature of symptom recurrence frequently interfere with daily activities, occupational performance, interpersonal relationships, and overall psychological health. Studies have demonstrated that the quality-of-life impairment associated with chronic urticaria may be comparable to that observed in other chronic medical conditions such as diabetes mellitus, coronary artery disease, and severe atopic disorders [5]. Accurate assessment of disease severity and its impact on patients is therefore essential for effective management and treatment monitoring. The Urticaria Activity Score over seven days (UAS7) is a validated and widely accepted instrument for quantifying disease activity, while the Dermatology Life Quality Index (DLQI) provides a standardized measure of disease-related quality-of-life impairment [5,6]. Together, these tools facilitate a comprehensive evaluation of both clinical and patient-reported outcomes and support individualized treatment decisions. However, local data describing the clinical characteristics, disease activity patterns, and quality-of-life burden among patients with chronic urticaria remain limited.[6] Understanding these aspects within specific populations is important for optimizing patient-centred care and improving therapeutic outcomes. Therefore, the present cross-sectional study was undertaken to characterize the clinical profile of patients with chronic urticaria, evaluate disease activity using the UAS7, assess quality-of-life impairment using the DLQI, and examine the relationship between disease activity and quality-of-life burden. The primary objective was to assess disease activity and quality-of-life impairment, while secondary objectives included describing key clinical features such as angioedema, triggering factors, and ASST status, as well as determining whether greater disease activity was associated with greater impairment in quality of life. [7] Accordingly, the study tested the null hypothesis that disease activity is not associated with quality-of-life impairment against the alternative hypothesis that increasing disease activity is significantly associated with worsening quality-of-life outcomes.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of Dermatology at during the period of and is reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for cross-sectional studies. Prior to commencement, ethical approval was obtained from the Institutional Ethics Committee and all participants provided written informed consent. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. [8] Patients attending the dermatology outpatient department with a confirmed diagnosis of chronic urticaria, defined as the presence of recurrent wheals, angioedema, or both persisting for more than six weeks, were considered eligible for inclusion. Patients with acute urticaria, urticarial vasculitis, or those unable to

understand or complete the study questionnaires were excluded. A total of 120 consecutive eligible patients were enrolled and evaluated. Detailed demographic and clinical information was collected using a structured case record form. Disease activity was assessed using the validated Urticaria Activity Score over seven days (UAS7), which quantifies the severity and frequency of wheals and pruritus over a one-week period. Clinical characteristics including the presence of angioedema, identifiable triggering factors, and evidence of physical urticaria were systematically documented. [9] The autologous serum skin test (ASST) was performed in selected patients where clinically indicated to identify a possible autoimmune basis of disease. Health-related quality of life was evaluated using the Dermatology Life Quality Index (DLQI), a validated questionnaire that measures the impact of skin disease on daily activities, work and school performance, personal relationships, leisure activities, and emotional well-being. The sample size was estimated based on the expected variability of DLQI scores, and approximately 118 participants were required to estimate the mean DLQI with a 95% confidence interval half-width of approximately 0.9, assuming a standard deviation of about 5; therefore, 120 patients were recruited to ensure adequate statistical precision. Data were entered and analysed using Descriptive statistics were used to summarize demographic characteristics, disease activity, clinical features, and quality-of-life measures. [10] Continuous variables were expressed as mean ± standard deviation or median with interquartile range as appropriate, while categorical variables were presented as frequencies and percentages. The relationship between disease activity (UAS7) and quality-of-life impairment (DLQI) was assessed using Pearson's or Spearman's correlation coefficients depending on data distribution. All statistical tests were two-tailed, and a p-value of less than 0.05 was considered statistically significant.

RESULTS

Clinical profile

Of 120 patients (mean age 34 ± 12 years; 74 [62%] female), 79 (66%) had moderate-to-severe disease, 38 (32%) reported angioedema, and ASST was positive in 41 (34%) (Figure 1; Table 1).

A total of 120 patients with chronic urticaria were included in the study. The mean age of the participants was 34 ± 12 years, indicating that the condition predominantly affected young and middle-aged adults. Females constituted the majority of the study population, accounting for 74 patients (62%), suggesting a higher prevalence of chronic urticaria among women. The median disease duration was 14 months (interquartile range: 8–28 months), reflecting the chronic and persistent nature of the disorder in many patients. Clinical assessment revealed that angioedema was present in 38 patients (32%), highlighting its frequent coexistence with chronic urticaria and its contribution to disease burden. Identifiable triggering factors were reported by 52 patients (43%), including dietary, environmental, physical, and stress-related factors, although trigger patterns varied between individuals. [11]The autologous serum skin test (ASST) was positive in 41 patients (34%), indicating a possible autoimmune basis for disease activity in approximately one-third of the study population. Assessment of disease activity using the Urticaria Activity Score over seven days (UAS7) demonstrated varying degrees of severity, with a substantial proportion of patients experiencing moderate-to-severe disease. Evaluation of health-related quality of life using the Dermatology Life Quality Index (DLQI) revealed a mean score of 11.6 ± 5.4, corresponding to a very large impact on quality of life. Patients frequently reported impairment in daily activities, social interactions, work performance, emotional well-being, and sleep quality due to recurrent itching, wheals, and the unpredictable nature of symptom exacerbations. Analysis of quality-of-life scores according to disease severity demonstrated a clear and statistically significant gradient. Patients with mild disease activity had a mean DLQI score of 6.8, indicating a moderate effect on quality of life, whereas those with moderate

disease activity exhibited a substantially higher mean DLQI score of 11.9. The greatest impairment was observed among patients with severe disease, who had a mean DLQI score of 16.4, reflecting a very large to extremely large impact on daily functioning and psychological well-being. Furthermore, correlation analysis demonstrated a significant positive relationship between disease activity and quality-of-life impairment ($r \approx 0.55$, $p < 0.001$), indicating that increasing disease severity was associated with progressively greater deterioration in patient-reported quality of life. These findings underscore the considerable clinical and psychosocial burden of chronic urticaria and emphasize the importance of assessing both disease activity and quality-of-life outcomes during routine patient management.

Table 1: Clinical profile of patients with chronic urticaria (n = 120).

Variable	Value
Age (years), mean ± SD	34 ± 12
Female, n (%)	74 (62)
Disease duration (months), median (IQR)	14 (8–28)
Angioedema, n (%)	38 (32)
Identifiable trigger, n (%)	52 (43)
ASST positive, n (%)	41 (34)

Quality of life and its correlation with activity

Mean DLQI was 11.6 ± 5.4, indicating a very large effect on quality of life, and correlated with UAS7 ($r \approx 0.55$, $p < 0.001$; Figure 2).

Table 2: Quality of life by disease severity.

Severity (UAS7)	Mean DLQI	p
Mild (n = 41)	6.8	<0.001
Moderate (n = 48)	11.9	<0.001
Severe (n = 31)	16.4	<0.001

Figure 1. Disease severity distribution (UAS7) in chronic urticaria

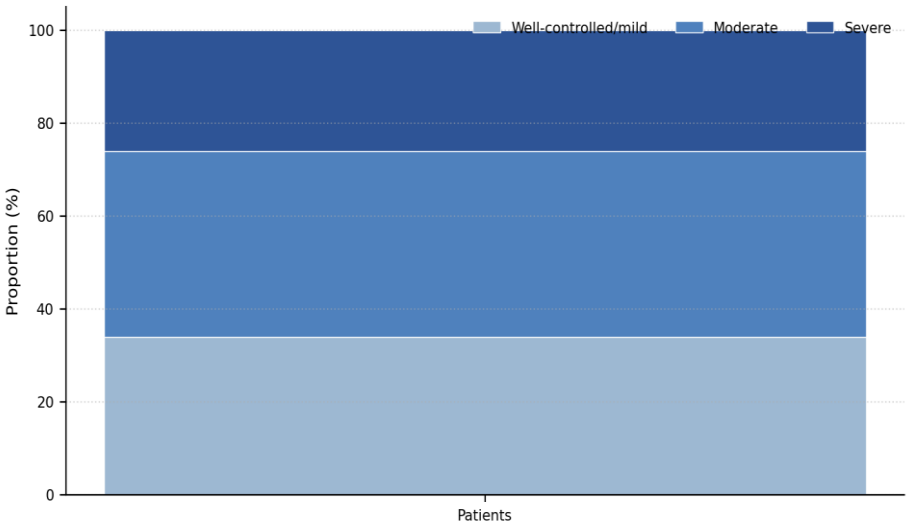

Figure 1. Disease severity distribution (UAS7) in chronic urticaria.

Figure 2. Disease activity (UAS7) versus quality-of-life impairment (DLQI)

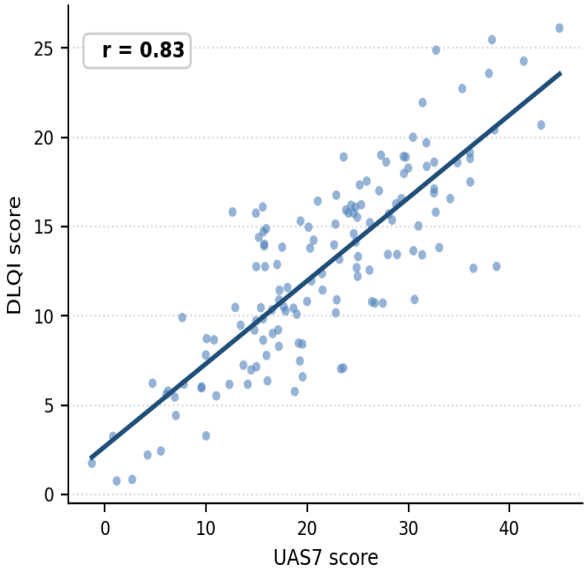

Figure 2. Disease activity (UAS7) versus quality-of-life impairment (DLQI) with linear regression line.

DISCUSSION

In this cross-sectional study, chronic urticaria was found to impose a considerable burden on affected individuals, with quality-of-life impairment closely associated with the level of disease activity. Approximately two-thirds of patients experienced moderate-to-severe disease activity, highlighting the persistent and clinically significant nature of the condition in a substantial proportion of cases. In addition, nearly one-third of patients exhibited angioedema and/or a positive autologous serum skin test (ASST), findings that are consistent with the recognized clinical heterogeneity and autoimmune spectrum of chronic urticaria reported in previous studies [12-13]. The observed positive correlation between UAS7 and DLQI scores demonstrates that increasing disease activity is accompanied by progressively greater impairment in patients' physical, emotional, and social well-being. Persistent pruritus, recurrent wheals, sleep disturbance, cosmetic concerns, and the unpredictable occurrence of symptoms can significantly disrupt daily activities, occupational productivity, interpersonal relationships, and psychological health. These factors collectively contribute to the substantial quality-of-life burden experienced by patients with chronic urticaria [3]. The identification of ASST-positive patients is particularly important because autoimmune mechanisms may influence disease severity, prognosis, and responsiveness to therapy, thereby providing valuable information for individualized treatment planning [14]. The findings of the present study support the routine use of validated assessment tools such as the UAS7 and DLQI in clinical practice to facilitate objective monitoring of disease activity and patient-reported outcomes. Incorporating both measures into routine evaluation may enable clinicians to adopt a more patient-centred approach, optimize therapeutic decisions, escalate treatment appropriately, and assess response to therapy in accordance with current guideline-based stepwise management strategies [15,17]. The study possesses several strengths, including the use of standardized and validated instruments for assessing disease activity and quality of life, as well as the comprehensive characterization of important clinical and autoimmune features. Nevertheless, certain limitations should be acknowledged. The cross-sectional design precludes determination of causal

relationships, while the single-centre setting may limit the generalizability of the findings to broader populations. Furthermore, ASST is not a definitive marker of autoimmunity, and information regarding disease duration and triggering factors may be subject to recall bias. Future prospective and longitudinal studies are warranted to evaluate changes in disease activity and quality of life over time, investigate treatment-related outcomes, and explore the role of additional autoimmune biomarkers in predicting disease severity and therapeutic response. Such research may contribute to a more precise understanding of chronic urticaria and support the development of personalized management strategies. Overall, the present study demonstrates that chronic urticaria is associated with significant quality-of-life impairment that closely parallels disease activity, underscoring the importance of integrating both clinical and patient-reported outcome measures into routine management to improve patient care and long-term outcomes.

CONCLUSION

Chronic urticaria was associated with a substantial and clinically meaningful impairment in quality of life, affecting multiple aspects of patients' daily functioning, emotional well-being, social interactions, and overall health status. The study demonstrated a significant positive relationship between disease activity and quality-of-life burden, indicating that patients with more severe and frequent symptoms experienced greater disruption in their personal and professional lives. Persistent pruritus, recurrent wheals, episodes of angioedema, sleep disturbances, and the unpredictable nature of disease exacerbations collectively contributed to reduced quality of life and increased psychological stress. These findings emphasize that the impact of chronic urticaria extends beyond visible skin manifestations and should be evaluated from both clinical and patient-centred perspectives. The results support the routine use of validated assessment tools such as the Urticaria Activity Score over seven days (UAS7) and the Dermatology Life Quality Index (DLQI) to guide treatment decisions, monitor therapeutic response, and facilitate individualized patient management. Integrating measures of disease activity and quality of life into routine clinical practice may enable timely treatment escalation, improve symptom control, enhance patient satisfaction, and ultimately achieve better long-term outcomes. Furthermore, recognition of the quality-of-life burden associated with chronic urticaria may encourage healthcare providers to adopt a more holistic management approach that addresses both physical symptoms and psychosocial concerns. Although the present findings provide valuable insights into the clinical and functional impact of chronic urticaria, further longitudinal and multicentre studies are warranted to better understand the temporal relationship between disease activity and quality of life, evaluate the effects of different therapeutic interventions over time, and identify predictors of sustained disease control and improved patient-reported outcomes. Such investigations will contribute to the development of more effective, personalized, and evidence-based management strategies for patients with chronic urticaria.

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