

The Impact of Chronic Idiopathic Urticaria on Quality of Life in Korean Patients

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Background: Chronic idiopathic urticaria (CIU) is a relatively common disease, and yet not much is known about the causative factors or its pathophysiology, which makes it difficult to cure. Due to its chronic nature, many patients have significantly reduced quality of life (QOL). **Objective:** The purpose of this study was to assess the impact of CIU on QOL of Korean patients, and to determine whether a relationship exists between QOL and the severity of disease. **Methods:** One hundred sixty three patients with CIU, who first visited our out-patient clinic between August 2005 and July 2007, were asked to complete two questionnaires: one designed to assess the clinical features of their disease; the other on the influences of CIU on their daily lives. QOL was divided into six categories: mental status (MS), daily living activities (DLA), leisure activities (LA), self-perception (SP), treatment-induced restrictions (TIR), and social functions (SF). All of the QOL scores were recalibrated to a 0~100 scale, with 100 indicating the worst QOL, and 0 the best. **Results:** The average QOL scores obtained from the questionnaire were as follows: SP (13.1 ± 4.6), DLA (12.0 ± 4.3), MS (10.3 ± 3.3), SF (8.5 ± 3.4), LA (6.1 ± 3.0), and TIR (5.5 ± 2.6). SP was the domain that was most affected; TIR the least. There were positive correlations between pairs of the six different QOL categories ($p < 0.001$). These results demonstrate that CIU exerts an influence on many aspects of QOL. TIR was significantly affected in longer term CIU cases ($p < 0.05$), while SP, MS, DLA, SF, and SR scores did not correlate with disease duration. Disease severity was found to have a significant impact on SP, MS, SF, and LA ($p < 0.05$). In patients with concurrent physical

urticaria, DLA and SF scores were significantly affected ($p < 0.05$). **Conclusion:** Based on these results, it is suggested that CIU has a negative impact on QOL in Korean patients. Therefore, it is important to recognize the effects CIU can have on QOL and consider them in evaluating the response to treatment. (*Ann Dermatol* 21(3) 226~229, 2009)

-Keywords-

Chronic idiopathic urticaria, Quality of life, Questionnaire

INTRODUCTION

Chronic idiopathic urticaria (CIU) is a chronic and often debilitating skin disease that can have a profound influence on patients' quality of life (QOL) and the ability to perform usual daily activities¹. It is characterized by recurrent urticarial wheals of unknown cause that persist for more than 6 weeks². CIU is a relatively common disease, and yet not much is known about the causative factors or its pathophysiologic mechanisms, which makes it difficult to cure. It predominantly affects adults, and remains a major problem in terms of etiology, investigation, and management. Due to its chronic nature, many patients suffer from significant detrimental effects on their QOL, and experience symptoms of depression or anxiety³. CIU can interfere with subjective well-being and daily life, yet evaluation of the disease has focused on clinical symptoms only. Treatment is often focused on skin symptoms rather than the effects these symptoms can have on the individual's QOL, which often leads to unsatisfactory management of the disease. To date, there have been no studies using QOL assessment in Korean patients with CIU.

The purpose of this study was to assess the impact of CIU on QOL in Korean patients, and to determine whether a relationship exists between QOL and the severity of

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disease. This would allow a better understanding of the disease, and provide for a more effective way to manage it.

MATERIALS AND METHODS

Patients

One hundred sixty three CIU patients who had their first visit to our out-patient clinic between August 2005 and July 2007, were asked to complete two questionnaires designed to assess the clinical features and effects of CIU on their daily lives. CIU was defined as the daily or almost daily occurrence of spontaneous pruritic wheals of unknown cause for at least 6 weeks². All patients enrolled in our study had a history of recurrent urticarial wheals that had persisted for more than 6 weeks.

Methods

All CIU patients completed a first questionnaire that evaluated their clinical features. Symptoms were evaluated according to the urticaria severity score of Breneman et al.⁴ (Table 1). Urticaria severity was classified into mild, moderate, and severe. The presence of concurrent physical or cholinergic components was assessed, and patients were divided into idiopathic (I), cholinergic (C),

Table 1. Patient's and investigator's rating scale of symptom severity⁴

Daily events	Points*
No. of lesions	
0	0
1~10	1
11~20	2
>20	3
No. of separate episodes	
0	0
1	1
2~3	2
>3	3
Average size of lesion (inches)	
0	0
<0.5	1
0.5~1	2
>1	3
Average duration of lesions (hours)	
None	0
Up to 4	1
4~12	2
>12	3
Pruritus	
None	0
Mild	1
Moderate	2
Severe	3

*0: no symptoms, 1: mild urticaria (1~4 points), 2: moderate urticaria (5~9 points), 3: severe urticaria (≥10 points)

Table 2. QOL questionnaire for chronic idiopathic urticaria (translated from Korean)

1. Are there any restrictions in physical activity?
2. Are there any restrictions in household chores or (in the case of students) in studying?
3. Are there any restrictions in your choice of clothing?
4. Are there any restrictions on shaving, putting on your makeup, or in washing?
5. Are there any restrictions in eating or in your choice of foods?
6. Are there any restrictions in performing your hobbies (exercise, listening to music, gardening, outdoor activities)?
7. Do you avoid sun exposure while outdoors?
8. Has there been any difficulty in concentrating on your office work or while reading?
9. Do you have difficulty sleeping?
10. Do you feel tired?
11. Have you ever tried to cover your skin lesions with clothes or makeup?
12. Have you ever felt that people were staring at you?
13. Have you ever felt stressed?
14. Have you ever felt that you are different from other people?
15. Have you ever felt overwhelmed?
16. Have you ever felt anxious?
17. Have you ever felt that you were unhygienic?
18. Have you ever lost your confidence?
19. Have you ever felt lonely?
20. Have you ever felt uncertain about the future?
21. Are there any restrictions in your social activities, such as eating, going to the movies, shopping, or going to the hairdressers?
22. Do you feel this has affected your relationship with your spouse or your boyfriend or girlfriend?
23. Do you feel this has affected the relationship with your family and/or friends?
24. Has this affected your sexual life?
25. Has dermatological treatment affected any of your normal everyday activities?
26. Do you feel discomfort due to your treatment?
27. Do you feel an economic burden due to medical costs?

Based on the Dermatology Life Quality Index (DLQI)⁸

pressure-induced (P), and cholinergic+pressure-induced (C+P) groups. Simple dermographism was not included. A second questionnaire evaluating the patients' QOL was completed in which the questions were grouped into six different categories: mental status (MS - questions #10, 13, 15, 16), daily living activities (DLA - questions #1, 2, 5, 8, 9), leisure activities (LA - questions #3, 6, 7), self-perception (SP - questions #11, 12, 14, 17, 18, 19, 20), treatment-induced restrictions (TIR - questions #25, 26, 27), and social functions (SF - questions #4, 21, 22, 23, 24) (Table 2). The possible response to each of the questions included 5 categories according to severity: always, frequently, sometimes, almost never, and never. Each category was then assigned a score of 0 to 4, corresponding to increasing frequency. The scores were then added, and subsequently recalibrated to a 0~100 scale, with 100 indicating the worst QOL, and 0 the best. Results from the two questionnaires were matched for each patient, and were evaluated accordingly.

Statistical analysis

Spearman correlation coefficients and the Kruskal-Wallis test were used for statistical analysis. A *p* value of less than 0.05 was considered significant.

RESULTS

Seventy four (45.4%) male patients and 89 (54.6%) female patients completed both questionnaires. There were 7 patients in the mild group (4.3%), 106 in the moderate group (65.0%), and 50 in the severe group (30.7%), with an average urticaria severity score of 8.5 ± 1.9 (range 4~13). Mean age was 37.3 ± 15.3 (range 9~80), and average duration of disease was 18.6 ± 30.0 months. There were 102 patients in the idiopathic group (62.6%), 8 with concurrent cholinergic components (4.9%), 28 with concurrent pressure-induced components (17.2%), and 25 with both cholinergic and pressure-induced components (15.3%). QOL was divided into 6 categories and a 'QOL questionnaire' was used to assess the relationship between QOL and urticaria severity. The average QOL scores obtained from the questionnaire were as follows: SP (13.1 ± 4.6), DLA (12.0 ± 4.3), MS (10.3 ± 3.3), SF (8.5 ± 3.4), LA (6.1 ± 3.0), and TIR (5.5 ± 2.6). The results showed that the SP score was most affected and TIR the least. Spearman analysis of the six different categories showed a significantly positive correlation amongst them ($p < 0.05$), meaning that an increase in QOL score in one category had a high probability of leading to an increase in all of the remaining five categories.

Analysis of the relationship between disease duration and

QOL scores showed that, of the 6 QOL categories, only TIR correlated significantly with disease duration ($p < 0.05$). In other words, the longer the disease lasted, the more treatment induced restrictions were placed upon the patients, while all other parameters did not differ according to the duration of disease.

Disease severity was found to have significant effects on SP, MS, SF, and LA ($p < 0.05$); DLA and TIR were less influenced by disease severity. Of 163 patients, 61 (37.4%) were found to have concurrent physical components of urticaria, including pressure-induced or cholinergic urticaria. Interestingly, the presence of physical components was found to have a significant effect only on DLA and SF ($p < 0.05$).

DISCUSSION

There have been numerous studies on the impact of CIU on QOL, some incorporating the use of assessment tools such as the World Health Organization QOL Assessment-Brief (WHOQOL-BREF)³, or the Dermatology Life Quality Index (DLQI)⁵⁻⁸. It is important to note that all studies done so far show that the overall impact of CIU on QOL is substantial. For example, QOL impairment in CIU patients was found to be similar to that in acne patients, and higher than that in patients suffering from vitiligo⁷. O'Donnell et al.¹ studied 142 patients with CIU using an internationally validated QOL instrument and compared them to 98 patients with coronary artery disease. Upon evaluation, the scores for energy, social isolation and emotional reactions were similar in both groups, showing that the degree of QOL impairment in CIU is comparable to that of coronary artery disease.

Our results show that the longer the duration of disease, the more patients felt that treatment was restricting their lives. Long-term treatment can be increasingly frustrating with time because there is no defined duration. Also, disease severity had a significant effect on QOL categories associated with outward appearances or social activities, such as SP, MS, SF, and LA. Some patients in our study had concurrent physical components of urticaria, namely cholinergic or pressure-induced urticaria, or a combination of both. A study by Poon et al.⁷ showed that CIU subjects with concurrent pressure urticaria and cholinergic urticaria showed the greatest QOL impairment. Our study also evaluated the influence of concurrent physical components on QOL and found there was a significant and detrimental effect of the physical components on DLA and SF. However, because patients tend to avoid situations that are likely to induce symptoms, the effect on QOL of these components could have been underestimated. On

the other hand, because this study was carried out in a university hospital setting, many of the patients had already been diagnosed with CIU, and had received treatment in a number of institutions, with discouraging results. Thus, many of the patients were likely to have more severe or more refractory cases of CIU, which suggests that the urticaria severity score and the QOL scores were overestimated.

Measurement of QOL is becoming increasingly important for evaluating the overall effectiveness of therapy and the impact of the symptoms of CIU on individuals. Grob et al.⁹ suggested that skin disorders can be characterized by a specific QOL profile, and profiles could be compared by dermatologists, helping them obtain a more objective view of QOL measurements. Because QOL questionnaires may be appropriate in one cultural setting but not valid in another, further studies are needed to assess international QOL tools in Korean CIU patients.

In conclusion, our results suggest that CIU has a significant negative impact on QOL of Korean CIU patients. It is therefore important to recognize these effects and utilize them in evaluating responses to treatment.

REFERENCES

1. O'Donnell BF, Lawlor F, Simpson J, Morgan M, Greaves MW. The impact of chronic urticaria on the quality of life. *Br J Dermatol* 1997;136:197-201.
2. Zuberbier T, Bindslev-Jensen C, Canonica W, Grattan CE, Greaves MW, Henz BM, et al. EAACI/GA2LEN/EDF guideline: definition, classification and diagnosis of urticaria. *Allergy* 2006;61:316-320.
3. Engin B, Uguz F, Yilmaz E, Ozdemir M, Mevlitoglu I. The levels of depression, anxiety and quality of life in patients with chronic idiopathic urticaria. *J Eur Acad Dermatol Venereol* 2008;22:36-40.
4. Breneman D, Bronsky EA, Bruce S, Kalivas JT, Klein GL, Roth HL, et al. Cetirizine and astemizole therapy for chronic idiopathic urticaria: a double-blind, placebo-controlled, comparative trial. *J Am Acad Dermatol* 1995;33:192-198.
5. Lennox RD, Leahy MJ. Validation of the Dermatology Life Quality Index as an outcome measure for urticaria-related quality of life. *Ann Allergy Asthma Immunol* 2004;93:142-146.
6. Shikhar R, Harding G, Leahy M, Lennox RD. Minimal important difference (MID) of the Dermatology Life Quality Index (DLQI): results from patients with chronic idiopathic urticaria. *Health Qual Life Outcomes* 2005;3:36.
7. Poon E, Seed PT, Greaves MW, Kobza-Black A. The extent and nature of disability in different urticarial conditions. *Br J Dermatol* 1999;140:667-671.
8. Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI)—a simple practical measure for routine clinical use. *Clin Exp Dermatol* 1994;19:210-216.
9. Grob JJ, Revuz J, Ortonne JP, Auquier P, Lorette G. Comparative study of the impact of chronic urticaria, psoriasis and atopic dermatitis on the quality of life. *Br J Dermatol* 2005;152:289-295.