

Quality of life Assessment in a patient with Urticaria

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ABSTRACT

Background: Chronic Urticaria is a disease with a profound effect on the quality of life and daily activities, its precise assessment is of great value. Quality of life impairment in chronic urticaria is comparable to the one found in coronary artery disease and is higher than in some other dermatologic conditions such as psoriasis, acne and vitiligo.

Aim: To determine the mean quality of life index in patients with chronic urticaria presenting in a tertiary care hospital.

Study design: Descriptive & cross sectional study

Duration: The study was carried out from 10-04-2014 to 09-10-2014

Methods: This study was conducted at Outpatient Department of Dermatology, Unit I, KEMU/ Mayo Hospital, Lahore. Chronic urticaria was diagnosed clinically based upon the episodic appearance of characteristic urticarial lesions (as per operational definition). After taking informed consent, basic demographical information was taken then each patient was requested to fill the proforma.

Results: 154 patients were included in the study. Mean age of patients was 38.46 ± 1.51 with minimum and maximum age 18 to 83 years. Gender distribution of patients showed that there were 61 male and 93 female patients. Mean duration of disease was 3.21 ± 4.96 years. Mean severity of disease was 35.50 ± 5.77 . Mean Dermatology life quality index was statistically same in male and female patients. i.e., (p-value=0.317) and significantly associated with marital status of patients. i.e. (pvalue=0.029) DLQI severity score was not significantly associated with gender and marital status of patients.

Conclusion: Our study shows that chronic urticaria has large effect on the QOL of patients with significant psychosocial limitations. The severity of chronic urticaria is more in females as compared to males and married.

Impairment of QOL is also greater in females.

Key words: Chronic urticaria, Dermatology Life Quality Index questionnaire, Quality of life index,

INTRODUCTION

Urticaria is derived from the Latin word *urtica*, nettle, referred to as hives, is a common skin disorder characterized by pale raised itchy bumps¹. The causes of urticaria include allergic, non-allergic, idiopathic and autoimmune², chronic urticaria is characterized by erythematous-edematous papules and plaques, which are pruritic, evanescent, and recurrent at irregular intervals^{4,5,6}. Life time prevalence of this disease is about 8-10%⁷.

Quality of life index (QoL) is used to evaluate and address all variables that impact an individual's life, physical, social and psychological wellbeing⁸. Dermatology life quality index (DLQI), published by Finlay and Khan in 1994 is the best known and widely used questionnaire for psoriasis and other dermatologic conditions⁸.

Urticaria has a negative impact on quality-of-life and can be cosmetically disfiguring. Patients with chronic urticaria experience many difficulties in social interactions, especially in meeting new individuals

and forming relationships. They frequently demonstrate psychological problems including poor self esteem, frustration, anger, helplessness, anxiety and depression⁷.

Many studies reported mean DLQI for urticaria patients. A study on 111 cases reported mean DLQI was 7.97 ± 5.8 ⁹. Cynthia S, et al reported mean DLQI 10.24 ± 0.63 in 50 patients¹⁰. Another study was done on 100 patients they found mean DLQI was 13.5 ± 5.3 in their patients⁵. So, in different parts of the world we can see a wide range of mean DLQI in patients with chronic urticaria ($7.97 - 13.5$)^{5, 6, 9, 11}. This wide range of mean DLQI gives unclear psychological sufferings and emotional impact of patients with chronic urticaria.

The objective of the study was to Determine the mean quality of life index in patients with chronic urticaria presenting in a tertiary care hospital.

OPERATIONAL DEFINITION

Chronic Urticaria (CU): It was diagnosed clinically, based upon the episodic appearance of characteristic urticarial lesions. Chronic urticaria is defined as hives or weals which are edematous, pruritic papules and plaques that persist for longer than 6 weeks. Severity

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of urticaria can be assessed by urticaria activity score (UAS), which is a clinical symptoms score

Quality of life (QoL): By definition, QoL is an individual's perception of his or her position in life, in relation to his or her life goals and belief system.⁹ There are ten questions and each question is scored from 0-3. Maximum Dermatology Life Quality Index score is 30 and minimum is 0. Higher score indicates poor quality of life.

MATERIALS AND METHODS

This descriptive cross sectional study was conducted at the Outpatient Dermatology Unit, KEMU/ Mayo Hospital, Lahore. Study was carried out from 10-04-2014 to 09-10-2014. Total of 154 patients were taken in this study using 95% confidence level, $d=0.1$ and expected mean DLQI score 10.24 ± 0.63 in patients with urticaria¹¹, Non-probability purposive sampling technique was used. • Patients of either sex more than 18 years of age were included.

Exclusion criteria

Patients having other dermatoses on face, hands and feet e.g. acne, melasma, nevi, hirsutism vitiligo and postinflammatory hyper and hypopigmentation assessed by history and clinical examination

Patients suffering from diseases as cancer, liver, renal, cardiac diseases, hypertension and diabetes.

Methodology: All the data was collected from patients meeting inclusion criteria. One hundred and fifty four patients of either sex were enrolled. Chronic urticaria (CU) was diagnosed clinically, based upon the episodic appearance of characteristic urticarial lesions (as per operational definition). The researcher herself collected and recorded the data. After taking informed consent, basic demographical information was taken, then each patient was requested to fill the performa. This questionnaire comprises of ten questions inquiring the degree of life quality compromise during last week. Patients were inquired about extent of symptoms; disease related anxiety; impact of skin disease on job or studies, daily activities and household chores; inter- personal difficulties and disturbance due to treatment itself. Higher score indicates poorer life quality and vice versa.

Data analysis technique: All the collected data was entered and analyzed using SPSS version 18. The qualitative data like gender, marital status and severity of DLQI presented the form of frequency (%). Mean \pm SD was used for quantitative data like age, duration of chronic urticaria and mean DLQI. Data was stratified for severity, duration of disease and marital status, to address the effect modifiers. Independent sample t-test was applied to compare the mean DLQI in relation to gender (male vs.

female) and marital status (unmarried vs. married). Chi-square test used to compare the Severity of Dermatology Life Quality Index with gender and marital status. A p value of ≤ 0.05 was considered as significant.

RESULTS

This study had the mean age of patients was 38.46 ± 1.51 with minimum and maximum age 18 & 83 years respectively. There were 61 male patients with mean age 39.98 ± 1.68 maximum and minimum 18 to 83 years and 93 female patients with mean age 37.44 ± 1.38 maximum and minimum of female patients 18 to 80 years respectively. A total of 115 patients were married and 39 patients were unmarried. Mean duration of disease was found to be 3.21 ± 4.96 years. Minimum and maximum duration of disease was 0.17 and 30 years respectively. Mean severity of disease was 35.50 ± 5.77 . Minimum and maximum severity of disease was 28 and 42 respectively. Mean Dermatology Life Quality Index was 6.42 ± 2.58 . Minimum and maximum value for Dermatology Life Quality Index was 2 and 20 respectively. Mean Dermatology Life Quality Index among male and female patients was 6.16 ± 2.15 and 6.59 ± 2.82 respectively. Among male patients, minimum and maximum Mean Dermatology Life Quality Index was 2 and 12 and among female patients, it was 2 and 20. P-value showed that Mean Dermatology Life Quality Index was statistically insignificant in male and female patients i.e., (p-value= 0.317) (Table-1).

Among married and unmarried patients Mean Dermatology Life Quality Index was 6.66 ± 2.64 and 5.69 ± 2.26 respectively. Among married patients minimum and maximum Mean Dermatology Life Quality Index was 4 and 20 while among unmarried patients minimum and maximum Mean Dermatology Life Quality Index was 2 and 15. According to p-value Mean Dermatology Life Quality Index was statistically different among married and unmarried patients. Among married patients Mean Dermatology Life Quality Index was high as compared to that of unmarried patients. i.e. (p-value= 0.042) (Table-2).

Regarding the severity of DLQI scores in male patients 20 patients had DLQI score between 2-5, 38 had score between 6-10 and 3 patients had DLQI score between 11-20. Among female patients, 28 had a DLQI score between 2-5, 58 patients had a score between 6-10 and 7 patients had a score between 11-20 respectively. No statistically significant association was seen between DLQI score and gender of patient. i.e. (pvalue= 0.790) (Table-3).

Among married patients, there were 32 who had a DLQI score of 2-5, 74 patients had a score

between 6-10 and 9 patients had a DLQI score between 11-20. While among unmarried patients, 16 had a score between 2-5, 22 patients had a score between 6-10 and only 1 patient had a DLQI score between 11-20 (Table-4).

Duration of disease of patients was seen in relation to the Urticaria Activity Score. A statistically significant association was seen between duration of disease and Urticaria Activity Score i.e. (p-value=0.014) (Table-5).

DLQI score was seen in relation to the duration of disease. No statistically significant association was seen between duration of disease and DLQI severity. i.e., (p-value=0.585)

Table 1: Descriptive statistics for dlqi score in relation to gender of patients

	Male	Female
N	61	93
Mean	6.16	6.59
Standard Deviation	2.15	2.82
Minimum	2	2
Maximum	12	20

P value= 0.317 (Insignificant: p-value>0.05)

Table 2: Descriptive statistics for dlqi score in relation to marital status of patients

	Married	Unmarried
N	115	39
Mean	6.66	5.69
Standard Deviation	2.64	2.26
Minimum	4	2
Maximum	20	15

Pvalue= 0.042 (Significant: p-value<0.05)

Table 3: Everity of dermatology life quality index in relation to gender of patients

DLQI-Score	Male	Female	Total
2-5	20(32.8%)	28(30.1%)	48
6-10	38(62.3%)	58(62.4%)	96
11-20	3(4.9%)	7(7.5%)	10
Total	61	93	154

Chi-Square Test=0.471 P-value= 0.790 (Insignificant: p-value>0.05)

Table 4: Severity of dermatology life quality index in relation to marital status of patients

DLQI-Score	Married	Unmarried	Total
2-5	32(27.83%)	16(41.03%)	48
6-10	74(64.35%)	22(56.41%)	96
11-20	9(7.83%)	1(2.56%)	10
Total	115	39	154

Chi-Square Test=3.164 p-value= 0.206 (Insignificant: p-value>0.05)

Table 5: Urticaria activity score in relation to duration of disease

Duration	AUC		Total
	<30	>30	
<1 Year	22(46.81%)	23(21.50%)	45
1-3	18(38.30%)	53(49.53%)	71
4-6	5(10.64%)	16(14.95%)	21
7-10	0(0.00%)	9(8.41%)	9
>10 Yeas	2(4.26%)	6(5.61%)	8
Total	47	107	154

Chi-Square Test= 12.56 p-value= 0.014 (Significant: p-value < 0.05)

DISCUSSION

Chronic urticaria affects 15-20% of the population once or more during a lifetime.¹⁰ Like many other skin diseases, chronic urticaria can also affect the patient's QoL to a great extent.^{110, 111} This study was done mainly to bring out the impact of the disease in different domains of the patient's life. Dermatology Life Quality Index (DLQI) questionnaire was used to assess the impact of chronic urticaria in several dimensions.

Study mean age of patients was 38.46±1.5 years. However Maria Regina Cavariani Silvare in his study reported mean age of patients with chronic urticaria as 41.8 years⁴. Mean age of patients in this study is in line with an Indian study in which mean age of patients with chronic urticaria was reported as 36.06 years. Mean age of this study is also in line with the results regarding age reported by Ana Paula Fusel de Ue in which he reported mean age of patients with chronic urticaria as 39.8 ± 12 years¹¹.

In this study it was observed that Female patients dominated male patients. i.e., 93(60.39%) females vs. 61(39.61%) male. Male to female ratio was 2:3. Maria Regina Cavariani Silvare in his study also reported Female predominance i.e. 86 females and 14 male.6:1 ratio.⁴ These results regarding female dominance are consistent with the results of this study. Ana Paula Fusel de Ue in his study reported that majority of the patients with chronic urticaria (72.6%) were females¹².

These results are also consistent with the results of this study. An Indian study reported that their study population of chronic urticaria patients comprises of 58% male and 48% female patients. These results are contrary to the results of this study regarding gender distribution. However Cynthia S reported almost same percentage of male and female chronic urticaria patients in her study which is contrary to the results of this study¹³. It has been observed in our

study that females are more conscious about their facial appearance as compared to males which might be the reason for their coming to the hospital in greater number even for mild to moderate urticaria.

There were 45 patients whose duration of disease was <1 years, 1-3 years duration of disease was seen in 71 patients, 21 patients duration of disease was 4-6 years, 9 patients told that they had this problem for 7-10 years and 8 patients duration of disease was >10 years. It was also observed that duration of disease was significantly associated with AUC but it was not significantly associated with DLQI score. Ana Paula Fusel de Ue in his study reported the mean duration of diseases in between 6 weeks till 5 years. This time interval is quite less as compared to this study as in our study patients with more prolonged duration of disease was observed^{11,2}. Mean duration of diseases was 6 years reported by Maria Regina Cavariani Silveira⁴ in his study. This duration of disease was also less when compared with the duration of this study. This difference in duration of disease is probably because of lack of treatment facilities, non affordability and poor compliance leading to longer duration of disease of patients.

However a significant difference in married and unmarried patients was observed. i.e. [Married: 6.66 vs. Unmarried: 5.69] (p -value=0.029). In one study conducted by Silveira et al, showed the same results as our study in which chronic urticaria was more common in married females. The reason could be that middle age females are usually married.¹⁵

In our study mean DLQI score was 6.42 ± 2.58 . In male and female patients mean DLQI score was 6.16 ± 2.15 and 6.59 ± 2.82 . Although mean DLQI score among male patients was low as compared to female patients but difference was not statistically significant. Mean DLQI score of this study was lower to the mean overall DLQI score reported by Ana Paula Fusel de Ue (10.4 ± 7.7)¹⁶. Mean DLQI score reported by Cynthia S¹⁰ was 10.24 which is also high as compared to the mean DLQI score of this study. Quality of life was severely affected among 23(46%) patients and moderately affected in 21(42%) patients. Symptoms like itching and embarrassment due to constant itching was the major factor that has contributed to the poor QOL. However, females were affected more compared to males when symptoms and feelings were analysed which was found to be statistically significant¹⁹.

Maria Regina Cavariani Silveira from Brazil reported the mean DLQI score as 13.5 ± 5.3 ⁴. This score of 13.5 was very much high when compared to the mean DLQI score of this study which was 6.42 ± 2.58 . The reason could be better health

awareness, medical facilities, increase literacy rate among these patients who are more aware of their symptoms and are more concerned about the effects of those on their daily activities. Ayşe Serap aradağ reported mean DLQI score as 8.73 in his study²¹. However Ayşe Serap Karadağ mean score was not that much high as that of DLQI score reported in this study.

In this study DLQI index categories showed that 48(31.17%) patients DLQI score was 2-5 showing small effect on patients life, 96(62.34%) patients had score 6-10 showing moderate effect and 10(6.49%) patients had DLQI score 11-20 showing very large effect on patients life. It was also observed that DLQI index categories had no significant association with gender and marital status of the patients.

CONCLUSION

Our study shows that chronic urticaria has moderate effect on the QOL of patients with significant psychosocial limitations. The severity of chronic urticaria is more in females as compared to males and married. Impairment of QOL is also greater in females.

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