EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 8
Issue: 3
194-202
Year: 2021

ASSESSMENT OF KNOWLEDGE ATTITUDE AND PRACTICE IN PATIENTS WITH CHRONIC URTICARIA

Dr. Dhan Keshar Khadka[1]*, Dr. Sudha Agrawal[2], Dr. Arpana Rijal[3] and Dr. Samir Shrestha[4]

[1]Associate Professor, Department of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences, Dharan, Nepal.
[2]Professor, Department of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences, Dharan, Nepal.
[3]Professor, Department of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences, Dharan, Nepal.
[4]Junior Resident, Department of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences, Dharan, Nepal.

***Corresponding Author: Dr. Dhan Keshar Khadka**
Associate Professor, Department of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences, Dharan, Nepal.
DOI: https://doi.org/10.17605/OSF.IO/8NAX7

Article Received on 02/01/2020 **Article Revised on 22/01/2021** **Article Accepted on 12/02/2021**

ABSTRACT

Introduction: Chronic urticaria is a chronic and debilitating disorder with high morbidity which severely impairs the quality of life of an affected individual. Identifications of knowledge attitude and practice regarding urticaria help in better management of the disorder and improve the quality of life. So, this study was conducted to assess knowledge attitude and practice of patients with chronic urticaria and to determine the dermatology life quality index (DLQI). **Methodology**: 80 patients of chronic urticaria were enrolled after written informed consent. Data on knowledge, attitude and practice were assessed using a self-administered questionnaire containing 18 questions, on knowledge, attitude and practice, which included both" yes/no", single response, multiple choice questions and multiple answer type question. Three-point Likert scale was used to categorize "Poor (<50%)", "Fair (50-75%), and "Good" (>75%) score. DLQI was assessed using Nepali version. **Results**: The mean age was 27.40±9.03 years (17-62 years). Incidence of urticaria was higher in female than males (59%vs 41%). The knowledge of chronic urticaria was poor in (55.0%), fair in (31.9%) and good in (13.1 %). The attitude regarding chronic urticaria was fair in (45. %), poor in (37.5%), and good in (17.5%) and the practice was poor in (80%), fair in (16.25%) and good in (3.75%). The median DLQI was 18 indicating chronic urticaria severely affected the quality of life. **Conclusion**: The knowledge and practice regarding chronic urticaria was found to be poor while attitude was found to be adequate. However chronic urticaria severely affected the quality of life.

KEYWORDS: *DLQI, Knowledge, Attitude, Practice, Urticaria.*

INTRODUCTION

Urticaria is a common disease that is characterized by transient itchy wheals with or without angioedema **(Zuberbier et al, 2001; Grattan CEH, 2004).** Diagnosis is essentially clinical and meticulous history and examination is necessary to establish a etiological cause and clinical form of this condition **(Souza PK, 1999; Grattan CEH et al, 2002).**The condition is considered chronic when wheals are present on a daily or almost daily basis for a period exceeding six weeks **(Zuberbier et al, 2001; Grattan CEH, 2004), (Greaves MW, 2002; Kozel MMA and Sabroe RA, 2004; Kaplan AP, 2004).** The clinical course of disease is often benign and non-life threatening however it significantly interferes with the patient's routine activities, damaging his/her self-esteem and negatively affecting interpersonal relationships and quality of life **(Kozel MMA and Sabroe RA, 2004; Dibben Jr DA and Dreskin SC, 2004)**.

Because of its benign course, healthcare professionals often underestimate the impact of chronic urticaria on patients' quality of life (**O'Donnell BF et al, 1997).** Perception of chronic urticaria and its knowledge, attitude and practice (KAP) varies among patients. Identifications of Knowledge, Attitude and Practise regarding urticaria help in better management of the disorder and improve the quality of life. We were unable to find study assessing KAP in patients with chronic urticarial till the completion of this study. Therefore, we planned to conduct this study to assess knowledge, attitude and practice of individuals with chronic urticaria and to determine the impact of chronic urticaria on patient's quality of life using Dermatology life quality index (DLQI).

METHODOLOGY

A descriptive cross-sectional study was conducted in out-patient department (OPD) of Dermatology and Venereology, B. P. Koirala Institute of Health Sciences (BPKIHS), Dharan from December 2015 to May 2016 after approval by the Institutional ethical committee. Patients of age 15 years or more with the diagnosis of chronic urticaria were included in the study. Considering 80% power, 5% alpha error and prevalence of urticaria by 8.8% a sample size of 80 patients with the diagnosis of chronic urticaria were recruited in the study **(Zuberbier et al, 2001).** Patients were given self-administered questionnaires in English and Nepali (printed back to back), each having six questions on the subtopic's knowledge, attitude and practice after an informed and written consent. These were filled up by the patients while sitting in the waiting area, which were collected on completion the same day. In case of illiterate patients, proformas were interpreted and filled by a co- attendant well versed with either language respectively. Detail history and examination was carried out and was recorded in preset proforma along with the questionnaires on knowledge attitude and practice. Data on knowledge, attitude and practice were assessed using a self-administered questionnaire in either English and Nepali, as preferred, containing 18 questions (six each), on knowledge, attitude and practice, which included both" yes/no", single response, multiple choice questions and multiple answer type question. A score of 1 point was given for every positive response, while for multiple choice questions, scoring was done on a scale 0-3, where the most negative response was given 0, while most positive response was given 3 points. Maximum possible scores were 17 in knowledge, 12 in attitude, and 16 in practice, with a score of total 45 points. Three-point Likert scale was used with categories "Poor (<50% score)", "Fair (50-75% score), and "Good" (>75% score) for knowledge, attitude and practice **(Mohite VR and Shinde MB, 2014)**. The DLQI which is developed by Finlay and Khan in 1994 measures the impact of skin conditions on quality of life. It is composed of ten questions, which can be subdivided into six domains: symptoms and feelings (Questions 1,2), daily activities (3,4), leisure (5,6), work/school (7), personal relationships (8,9) and treatment (10). It is interpreted as a total score or in accordance with the scores of each individual domain. The total DLQI score is calculated from the sum of the scores awarded to each question and ranges from 0 to 30 in which 0 represents the best state of health and 30 the poorest state. This questionnaire evaluates quality of life over the previous seven days, a period that is sufficiently short so as to facilitate recall. **(Finlay and Khan in 1994**). We used the Nepali version of DLQI. **(Agrawal S, 2007).** Grading of DLQI is categorized as Unaffected (0-1), Mild impairment (2-5), Moderate impairment (6-10), Severe impairment (11-20) and Very severe impairment (21-30).

STATISTICAL ANALYSIS

Data were recorded in preset proforma and inserted to excel sheet and was analyzed with SPSS version 11.5. Descriptive analysis (frequency, percentage, mean) was used for the clinical and demographic characteristics of the patients studied, while the chi-square test was used to compare categorical data. Mann-Whitney U test was used to compare two independent means for DLQI and knowledge, attitude and practice. Statistical significance was considered at $p< 0.05$.

RESULTS

The mean age of patients was 27.40±9.03 years (17-62 years). Among the total 80 patients, there were 47(59%) females and 33(41%) were males. Most of the patients were farmers followed by students. The mean Knowledge, attitude and practice score was 6.38 ± 3.124, 8.23± 2.840 and 4.81± 2.79 0 respectively. (Table 1)

Knowledge, Attitude and Practice response of chronic urticaria

Most of the patients had poor knowledge 44(55.0%), attitude 30(37.5%) and practice 64(80%). Only 10 (13.1%), 14(17.5%) and 3(3.75%) had good knowledge, attitude and practice respectively. (Table 2)

KNOWLEDGE

Thirty-three (41.25%) females and 11(13.75%) males had poor knowledge among the total patients with chronic urticaria and was statistically significant (p=0.034) indicating greater number of females had poor knowledge compared to males (Table 3). In the individual Knowledge question 57.5% answered that they aware about the disease entity of which 80% estimated the prevalence of chronic urticaria to be less than 5%. In response to precipitating factors 55% said hot environment and 45% said cold environment precipitated chronic urticaria. 36% of the patients felt the disease was contagious. Eleven percent of the patients had past history of atopic dermatitis and 71% did not have past history of chronic urticaria and 29% had past history. (Table 4)

ATTITIUDE

Twenty (25%) females and 16(20%) males had fair attitude however the difference was not significant statistically (p=0.350) (Table 5). In the individual questions on attitude, 92.5% of the patients were willing to shake hands with patients with chronic urticaria however 81% felt disgusted on seeing these patients. Among them, 87.5% said they would hire these patients with chronic urticaria in their office. Ninety five percent and 62.5% said chronic urticaria would not affect sexual relations and relationship towards the individual with urticaria respectively. These responses indicate the patient's fair attitude regarding chronic urticarial (Table 6).

PRACTICE

Among the 80 participants 64 of them had poor practice regarding chronic urticaria of which 38(47.5%) were females and 26(32.5%) were males however the difference was statistically insignificant (Table 7). Among the individuals, 82.5% and 81% did not use hand cream any time and before doing wet work or farming or whenever contact with metal respectively. Only 9% of the participants had practice of using hand. Only 32.5% of the participants consulted dermatologist whenever they developed symptoms of chronic urticaria (Table 8). These all features indicate poor practice regarding chronic urticarial.

KNOWLEDGE VS ATTITUDE

When we compared the knowledge and attitude of patients with chronic urticaria, it was found that 50% of good attitude is associated with 16% of poor knowledge and was statistically significant (p-value=0.031) (Table 9). This shows patients with poor knowledge have good attitude.

KNOWLEDGE VS PRACTICE

When we compared the knowledge and practice of patients with chronic urticaria (**Table.10**), it was found that practices were not associated with knowledge (p=0.175). Therefore, patient's practices did not depend on their respective knowledge of chronic urticaria.

ATTITUDE VS PRACTICE

When attitude and practice were compared in patients with chronic urticaria (**Table.11**), it was found that attitude score was not associated with practice score and it was found that when attitude score is good (14%), practice score(3.12%) was poor, which was statistically not significant (p=0. 120).

DERMATOLOGY LIFE QUALITY INDEX (DLQI)

DLQI overall score was affected significantly among patients of chronic urticaria (p=0.004), with a median DLQI of 18, and Mean±SD of 19.47±4,26 indicating severely affected quality of life of patients with chronic urticaria. Women suffer the impact of chronic urticaria more than men indicated by higher DLQI value. However, it was not significant statistically (p=0.057). DLQI ten questions are grouped into six domains. Symptoms and feeling,[1,2] daily activities,[3,4] leisure,[5,6] work/school,[7] personal relationship,[8,9] and treatment.[10] In the DLQI domains, a statistically significant effect was found in the symptoms and feeling (p=0.001) and daily activities domain (p=0.003) though other domains of the DLQI were affected but not significant statistically.

Tables: 1

Characteristics		**Values**
Total Patients		80
Age(years)		27.40±9.03(17-62 years)
Sex:	Male	33(41%)
	Female	47(59%)
Marital status:	Married	44
	Un-married	36
Occupation:	Farmers	31
	Teachers	8
	Students	18
	Service	9
	House-wives	14
Address:	Sunsari	75
	Dhankuta	5
Religion: Hindu		80
Total Knowledge score(Mean±SD)		6.38 ± 3.124
Total Attitude score(Mean±SD)		8.23± 2.840
Total Practice score(Mean±SD)		4.81± 2.79 0
Total Score (Mean± S.D)		18.13± 6.540
Total Median DLQI		18
Total DLQI score(Mean±SD)		19.47± 4.260

Table. 2: Knowledge, Attitude and Practice response of chronic urticarial.

Characteristics	Response			Total
	Poor	Fair	Good	
Knowledge	44(55%)	26(31.9%)	10(13.1%)	80(100%)
Attitude	30(37.5%)	36(45%)	14(17.5%)	80(100%)
Practice	64(80.%)	13(16.25%)	3(3.75%)	80(100%)

Table. 3: Knowledge score and gender.

Characteristics	**Categories**	**Knowledge score groups**			**χ^2 test**	**p Value**	**Remarks**
		Poor	**Fair**	**Good**			
Gender	Female (N=47)	33	10	4	6.752	0.034	Sig.
	Male (N=33)	11	16	6			
Total		44	26	10			

Table. 4: Knowledge questionnaires.

Knowledge question	**Response**	**No of Respondent**	**Percentage**
Do you know what chronic urticaria is?	Yes	46	57.5
	No	34	42.5
What is your estimation about the prevalence of this disease?	<5%	64	80
	>5%	16	20
Which of these are causal/precipitating factors of chronic urticaria	Cold	36	45
	Hot	44	55
Chronic urticaria disease is contagious	Yes	29	36
	No	51	64
Prior history atopic disorders	Yes	09	11
	No	71	89
Prior history of chronic urticaria	Yes	23	29
	No	57	71

Table.5: Attitude score and gender.

Characteristics	Categories	Attitude score groups			χ^2 test	p value	Remarks
		Poor	Fair	Good			
Gender	Female(47)	20	20	7	2.048	0.350	NS
	Male(33)	10	16	7			
Total		30	36	14			

Table.6: Attitude questionnaires.

Attitude Questions	Response	No of Respondent	Percentage
Willingness to shake hands with patient	Yes	74	92.5
	No	6	7.5
Felt disturbed/ disgusted by looking at these hands	Yes	65	81
	No	15	19
Would hire this person in your workplace	Yes	70	87.5
	No	10	12.5
Family member/close friend/ life partner, develops this disease, how would it affect your relationship towards that individual?	Affects	30	37.5
	Does not affect	50	62.5
Husband/ wife develops this disease, then will it affect sexual relations	Yes	04	5
	No	76	95
In the case you develop this disease, which of the following action would you take:	Hide	08	10
	Consult	72	90

Table.7: Practice score and gender.

Characteristics	Categories	Practice score groups			χ^2 test	p value	Remarks
		Poor	Fair	Good			
Gender	Female(N=47)	38	7	2	2.821	0.886	NS
	Male(N=33)	26	6	1			
Total		64	13	3			

Table.8: Practice questionnaires.

Practice questions	Response	No of Respondent	Percentage
Do you use hand creams	Yes	14	17.5
	No	66	82.5
Use hand creams before doing wet work/farming/contact with metal	Yes	15	19
	No	65	81
Do you use Hand gloves,	Yes	07	9
	No	73	91
Have you consulted a physician/dermatologist in the case you developed itching/dryness/fluid filled lesions/red raised lesions over your hands	Yes	26	32.5
	No	54	67.5
No. of times hand creams used in above symptoms	Occasionally	62	77.5
	Multiple times	18	22.5

Table.9: Knowledge vs Attitude.

Characteristics	Categories	Knowledge Score Groups			χ^2 test	r value	p value	Remarks
		Poor (N=44)	Fair (N=26)	Good (N=10)				
Attitude Score Groups	Poor (N=30)	24(80%)	4(13%)	2(7%)	12.87	0.028	0.031	Sig.
	Fair(N=36)	13(36%)	18(50%)	5(14%)				
	Good(N=14)	7(50%)	4(28.5%)	3(21.5%)				

Table.10: Knowledge vs Practice.

Characteristics	Categories	Practice Score Groups			χ^2 test	r Value	p Value	Remarks
		Poor (N=64)	Fair (N=13)	Good (N=3)				
Knowledge Score Groups	Poor(N=44)	40(91%)	3(7%)	1(2%)	8.126	-.058	0.175	NS
	Fair(N=26)	24(92%)	1(4%)	1(4%)				
	Good(N=10)	0(0%)	9(90%)	1(10%)				

Table.11: Attitude vs Practice.

Characteristics	Categories	Practice Score Groups			χ^2 test	r value	p value	Remarks
		Poor (N=64)	Fair (N=13)	Good (N=3)				
Attitude Score Groups	Poor(N=30)	29(97%)	1(3%)	0(0%)	13.071	0.088	0.120	Not sig.
	Fair(N=36)	33(92%)	3(8%)	0(0%)				
	Good(N=14)	2(14%)	9(64%)	3(22%)				

Table.12: Dermatology Life Quality Index (DLQI).

S.N	Characteristics	Score	P-value
1.	DLQI overall score (Mean±SD)	19.47± 4.26	(0.004)
	Sex-i) Female(Mean±SD)	21.68±2.32	(0.057)
	ii) Male(Mean±SD)	17.88±1.23	
2.	DLQI (Median)	18	
3.	*DLQI – **Score in each domain (Questions No.)***		
i.	Symptoms and feelings(1,2) (Mean±SD)	3.1 ± 1.7	(0.001)
ii.	Daily activities(3,4) (Mean±SD)	2.8 ± 1.6	(0.003)
iii.	Leisure(5,6) (Mean±SD)	1.8 ± 1.7	(0.054)
iv.	Work/school (7) (Mean±SD)	1.0 ± 1.0	(0.082)
v.	Personal relationships(8,9) (Mean±SD)	1.8 ± 2.0	(0.065)
vi.	Treatment (10) (Mean±SD)	0.7 ± 1.2	(0.075)

DISCUSSION

We were unable to find studies on Assessment of Knowledge, attitude and practice (KAP) in patients with chronic urticaria till the completion of our study.

In our study there were 47 (59%) female and 33 (41%) male which is similar to a study by **Letule et al, 2014** where there were 53% and 47% female and male respectively. In the same study the age range was 18-88 years with a mean of 52 years where in our study it was 17-62 years with a mean age of 25.47±8.08 years. This narrow range of age in our study could be due to small sample in our study.

In our study, 44 (55%) cases were married and 36 (45%) were unmarried which is similar to the findings reported by Altunay IK et al, 2011. This may be due to the fact that urticaria affects people of any age group and irrespective of marital status.

Knowledge

Forty four (55.0%) patients included in the study reported they had poor Knowledge about chronic

urticaria, fair in 26 (31.9%) and good only in 10 (13.1 %). This finding is similar to that reported by **Hacard F et al**, 2018. This may be due to the fact that chronic urticaria has a chronic relapsing course but each episodes are acute and often associated with catastrophic symptoms as well as precipitating or relieving are often not noticeable by the patients. It was found that 33(41.25%) females and 11(13.75%) males had poor knowledge among the total patients with chronic urticaria and was statistically significant (p=0.034) indicating greater number of females had poor knowledge compared to males.

In our study, 46 (57.5%) patients knew about the disease entity chronic urticaria in particular while the rest 34 (42.5%) did not. This is almost similar to a study by **Ling and Coulson, 2002** where 60% knew about the disease entity and in **Letule et al 2014** where 62% knew about the disease.

In response to precipitating factors 55% said hot environment and 45% said cold environment precipitated chronic urticaria. 36% of the patients felt the disease was contagious and 64% felt it was not contagious. 11% of the patients had past history of atopic dermatitis and 89% did not have. Similarly 71% did not have past history of chronic urticaria and 29% had past history.

Most of the patients had fair attitude towards the disease, 92.5% of the patients were willing to shake hands with patients with chronic urticarial, 87.5% said they would hire these patients with chronic urticaria in their office, 62.5% of the patients said it would not affect their relationship if their friend, 95% said sexual relationship would not be affected if their partner developed chronic urticarial, 90% said they would immediately consult doctors if they develop chronic urticarial however 81% felt disgusted on seeing these patients. The feeling of disgust may arise from personal experience of chronically relapsing nature of the disease. These response indicate the patient's fair attitude regarding chronic urticaria.

Sixty four (75%) of patients had poor practice regarding chronic urticarial of which 38(47.5%) were females and 26(32.5%) were males. However statistical difference was not observed between male and female. This finding is similar to the finding of poor patient self-care in 69% reported by **Thapa D**, 2018.

Our study showed that use hand cream was very limited as 82.5% would not use of hand cream, 81% did not use hand cream before doing wet work or farming or contact with metal. This finding is higher than that of emollient use reported by **Lee HJ et al**, 2014. The difference may be because the study by Lee HJ was done in atopic dermatitis where visible skin dryness and visible benefit is seen immediately with emollient use.

In our study, only 9% used gloves. Twenty six (32.5%) of the participants consulted dermatologist whenever they developed symptoms of chronic urticaria. These findings are similar to poor patient practice reported by Verma A et al 2019. These all features indicate poor practice regarding chronic urticaria.

This study showed that good attitude is associated with of poor knowledge (p-value=0.031). This shows patients with poor knowledge have good attitude. In the comparison of knowledge score and practice score, no significant association was found between knowledge score and practice score, indicating patients' knowledge of chronic urticaria did not depend and improve their practices. However, a study by **Letule et al 2014** showed significant association between good attitude and good practice, this could be due to higher educational status of their participant.

This study showed that practices were not associated with knowledge (p=0.175). Therefore, patient's practices did not depend on their respective knowledge of chronic urticarial. The attitude score was not associated with practice score and it was found that when attitude score is good (14%), practice score (3.12%) was poor, which was statistically not significant (p=0. 120). These findings is similar to that reported by **Verma A et al**, 2019 who also reported that despite of average knowledge, patients had poor practice.

Quality of life in the patients involved in the study was significantly affected with statistically significant DLQI overall score (p=0.004) with a median DLQI of 18, and Mean±SD of 19.47±4.26 which is similar to a study by **Ue APF et al 2011** where overall DLQI score was also (p=0.004). The mean DLQI is higher than that of RELEASE study (DLQI <12). This discordant may be because of the duration of chronic urticarial reported in RELEASE survey was 10.7 years and included a wider spectrum of the recruited patients compared with our study in a tertiary centre. Women suffered the impact of chronic urticaria more than men indicated by higher DLQI value although was not significant statistically on assessing individual domains of DLQI, symptoms and feeling (p=0.001) and daily activities (p=0.003) were the most significantly affected. These findings are in agreement with the study by **Mlynek et al 2009**, where DLQI was assessed in patients with chronic idiopathic urticaria with a score in the symptoms and feelings (p=0.001), work/school (p=0.042) and personal relationships (p=0.025) domains. This significant effect on patients DLQI indicates chronic urticaria more than physical symptoms affect quality of life. In the present study, the most affected domains of quality of life were symptoms and feelings and daily activities. Both represent the areas in which the signs and symptoms of the disease would have the greatest repercussion. The symptoms and feelings domain reflects how pruritus and the presence of wheals may upset or embarrass the patient in front of other people. The daily activities

domain shows how chronic urticaria may hamper the patient's daily life or restrict their manner of daily activities. This may justify the greater negative impact on overall quality of life (DLQI, median 18) found in the present study. However, our hospital is a tertiary healthcare, consequently, it is probable that the degree of morbidity found may be greater and may not be representative of patients with chronic urticaria in the general population.

CONCLUSION

1. The knowledge and practice of patients with chronic urticaria was poor, however attitude was fair.
2. Quality of life was severely impaired with high DLQI in patients with chronic urticaria and symptoms and feeling and daily activities domains were the most severely impaired
3. Chronic urticaria though a benign disease with low mortality but has a high morbidity and severely impairs the patients quality of life.

RECOMMENDATION

1. Education programs focussing on knowledge, attitude and practice regarding chronic urticaria must be started early, preferably at school level.
2. Individuals need not only a good knowledge, they have been found to develop good attitude and optimal practices with increasing experience.
3. Hence education programs focusing on knowledge, attitude and practice in chronic urticaria must be encouraged thereby improves the quality of life of an affected individual

LIMITATION

1. Single center study
2. Small sample size

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