Impact of chronic oral mucosal diseases on quality of life in Kurdish patients, Preliminary observations in Sulaimani city

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Original Article

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Abstract

Chronic oral mucosa disorders are often recurrent or painful with a long standing course that affects the quality of patients' life. Scoring such effect with a predominance of oral health–specific quality-of-life measures currently used to a limited extent in oral medicine practice. **Objectives**: to measure the impact of chronic oral mucosal diseases on quality of life in Kurdish patients. Evaluate the efficacy of the discipline-specific quality-of-life measure developed in the field of oral medicine. **Patients and Methods**: Fifty patients with different chronic oral mucosal diseases participated in this study and filled the questionnaire. **Results**: The quality-of-life mean score significantly differed among various chronic oral mucosal diseases. Nevertheless, there were no significant differences in medication nor patient support. Behçet's disease had the highest value (3.36). They had a significantly high score for pain, functional limitation, social and emotional domains. Positive, simple–count score was only significantly differentiating between recurrent aphthous ulceration and recurrent herpes labialis (24 versus 9.62). Chronic oral mucosal diseased patients have moderate difficulty in carrying out daily oral hygiene (mean score 2.34). They felt discomfort with certain food features (mean score 2.02). Also, they were not satisfied with their treatment (mean score 2.5) and were worry from no curing (mean score 2.09). They had bothering from the unpredictability of their oral condition (mean score 2.04). They were moderately satisfied with the level of support and understanding shown to them by family (mean score 2.2). Fortunately, chronic oral mucosal diseases did not disrupt their social activities and did not hold them to the feeling of isolation (mean score 0.98 and 0.74 respectively). **Conclusion**: Dentists should pay particular attention to mucosal-diseased patients because they are likely to experience oral impacts on daily performances. They should also consider the 26 questions included in the chronic OMD-QOL system for better understanding those patients' need.

***Keywords**: quality-of-life, mucosal diseases, questionnaire.*

RAS= recurrent aphthus stomatitis, RHL= recurrent herpes labialies, OLP= oral lichen planus, BD= Behçet's disease, SJ= Sjögren syndrome SLE= systemic lupus erythmatous, DG= desquamative gingivitis

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Introduction:

Chronic oral mucosal diseases (OMD) include inflammatory and autoimmune conditions. They adversely impact the skill of patients for daily-life activities in different fields. They can result in considerable morbidity with physical, social and psychological consequences for patients since it affects oral function, appearance, and interpersonal relationships. The role of oral medicine specialist is to manage and relief symptoms of those patients and deal with all aspects that affect their daily lives(1). These lesions are often long-standing or recurrent, painful disorders. Some of them can lead to life-threatening conditions by themselves or their treatment options and drugs side effects(2). Chronic oral mucosal prevent the patients from eating and drinking, and influencing daily life in many ways. The importance of getting patients' opinion in treatment planning and oral health needs widely advocated. Over the last decade, some different patient-centered oral health status measures have developed. They evaluate the physical, social and psychological consequences of oral health. These measures are considered as complement traditional clinical oral health status, to improve communication between patients and their clinical attendants. They also provide a better consideration of the effect of oral disease upon the daily living and quality of life(3).

The thought of the quality of life (QOL) has various meanings. Despite that, there is still no agreement. It is defined as "an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations and standards, and concerns"(4).

The present study aimed to estimate the impact of chronic OMD on the quality of life (QOL) in Kurdish patients attending the dental clinic in Sulaimani. It also evaluates the discipline-specific quality-of-life measure that specifically developed for the field of oral medicine.

Patients and Methods:

A cross-sectional observational study included 50 Kurdish patients attending the outpatient dental clinic at the University of Sulaimani from Oct.2012 to Dec 2013. They diagnosed with different chronic OMD, and their age was 18 years and above. The patients signed an informed consent form to take part in the study. The work approved by the local Ethical and Scientific Committee. Lesions diagnosed on clinical examination, etiology, history, the presence of the recurrent oral lesion and complementary investigations (when needed).

QOL quantitatively assessed by the Chronic Oral Mucosal Diseases Quality of Life Questionnaire (chronic OMD-QOL-26). It is self-explanatory and consists of 26 questions divided into four fields: pain and functional limitation, medication and treatment, social and emotional, and patient support.

Nine questions were referring to pain and functional limitation domain. Three of them related to the extent of discomfort associated with the types, textures, and temperature of food/drink intake. The remaining six questions concerned the scope of the oral condition to cause; 1) limitation in the types, textures and temperature of food or drinks to consume, 2) discomfort or limit in performing daily oral hygiene, and discomfort when wearing a denture. While in medication and treatment scope, there are six questions. They estimate the extent for drugs need, satisfaction and possible side effects, the frustration from single standard therapy, the limitation of medication in everyday life, and the bothering from no cure for the condition. The social and emotional domain encompasses seven questions. They related to the extent of the oral condition to cause a person getting down, anxiety, stress, worry and pessimistic about the future, the disruption in social activities and the unpredictability bother. The last field is the patient support. It refers to 4 questions of satisfaction with available information. These include the level of support and understanding of the family, the degree of support and understanding of friends/work colleagues, feeling of isolation as a result of the oral condition.

Each question assessed by using a 5-point scale: (score, not at all=0, slightly=1, moderately=2, considerably=3, extremely=4)(2).

The interviewer (a specialist in oral medicine) gave each patient, information about the study and the expected length of the interview (20-30 minutes). The questionnaire interview sheets translated into the local language. The patients were asked to fill up their responses to the given questionnaire. When they did not understand the meaning of some items, the interviewer explained it slowly and in a simple way (assisted application). The completed forms collected, and scores calculated in two ways. The first is obtaining the sum of the numeric response codes for all 26 questions (maximum 104 points). Worse QOL indicated by high scores, then calculating the mean score (per all issues and a single one). The second method is a simple count (SC). It estimates the number of questions to which a patient responded 'not at all' or 'slightly – extremely." The response scale is a contrast and indicated the number of the occurrence of the adverse impact.

SPSS software used to analyze the data. The differences between and among means of scores for various disease groups estimated by independent t-test and ANOVA followed by multiple comparisons Post hoc tests (Tukey HSD) test. Differences with $P \leq 0.05$ were considered significant.

Results:

The study includes 23 males (46%) and 27 females (54%). Their mean age is 35.14± 13.6 years. They divided into seven groups according to their clinical diagnosis (Table-1). There is no sex difference, but there is age difference (P=.014) among these groups. Recurrent aphthous stomatitis (RAS) and recurrent herpes labialis (RHL) represent the frequently observed conditions (19 and 16 patients respectively). The most affected sites were the lips (n=36, 65.45%) followed by the buccal mucosa (n=12, 21.82%) the tongue (5.46%), gingiva (3.6^) and floor of the mouth (3.6%) constituted minor affected sites.

The mean score for each disease was significantly differing (Table-2). Multiple comparisons Post hoc test applied, after the exclusion of systemic lupus erythematosus (SLE) and Sjogren syndrome (SJ) groups since they have fewer than two cases. The result indicated that Behçet's disease (BD) had higher mean and sum scores(3.36 and 87.5 respectively) than oral lichen planus (OLP), RAS, and RHL. While simple–count score only showed the BD and RH to be differed (24 mean +ve scores versus 9.62, P=0.028).

Table- 3 showed the comparison of the average of the domain and the overall score for various chronic conditions. There were no significant differences concerning the medication and treatment as well as patient support domains. The domains of pain and functional limitation, social and emotional were statistically significant high in BD group.

Further comparison of the mean score of single items in each domain indicated (Table- 4) the following; the patients were not well satisfied with their treatment and felt in need of multiple medications (mean score 2.5), and have moderate difficulty in carrying out daily oral hygiene (mean score 2.34). They were moderately satisfied with the level of support and understanding shown to them by their families (mean score 2.2). They were also worried from no curing (mean score 2.09) and had to bother from the unpredictability of their oral condition (mean score 2.04). Also, they felt the discomfort of certain food features (mean score 2.02).

Fortunately, OMDs did not disrupt their social activities and did not hold them to the feeling of isolation (mean score 0.98 and 0.74 respectively). Multivariate statistical analysis (ANOVA) showed that RAS and BD patient had the highest score in pain related to types of food or drink (score 4 and 3, P=.002). While RHL had the lowest score for pain associated with food textures and its limitation (score 0.75 and 0 .56, P=.01), again minimum score concerning anxiety, down, worry and pessimistic (0.75, 0.75, 0.56, and 0.25 respectively). Lastly, RAS had a low score for concerning the possible side effects of the medications and feeling of isolation (score 0.71, P=.03; 0.32, P=.000).

Concerning age groups (using median split procedure), older OMDs patients had a significantly higher score in the social and emotional domain (1.97 vs. 1, P=0.012), Table 5.

Discussion

There are several precise and generic questionnaires applied to evaluate the oral-health-related QOL in OMD. These instruments considered as a part of clinical decision processes. They include the 36-item short form health survey (SF-36), the oral health impact profile (OHIP-14), the general health questionnaire (GHQ-12) and the oral impacts on daily performance (OIDP) scale(5). Some studies compared the validity of these systems in relevance to oral medicine and considered the impact on oral health-related quality of life for patients with OMDs(6,7). They indicated worse oral QoL in patients with Behçet's disease and RAS(8), high frequency of psychological problems(7) or great physical pain(9) in patients with various oral mucosal conditions. Other researchers indicated moderate impaired QOL among those patients(3, 10 , 11, 12, and 13). Furthermore, Suliman et al.(5) indicated that ulcerative and vesiculobullous lesions associated significantly with OIDP scale.

Therefore the administration of specific questionnaires of QoL that can be used in a clinical setting with good reliability, validity, and precision, will provide a detailed picture of the impact of OMDs on patients and provide valuable information, for identifying treatment needs, selecting therapies, evaluating treatment outcomes and monitoring patient progress (14).

The prevalence of chronic OMLs in 3144 Kurdish dental patients attending an outpatient oral diagnosis clinic in Sulaimani through one year showed that RAS was the most frequent (1.68%) lesion, followed by RHS (0.69%) and LP (0.25%) with no sex variations(15). Chronic OMDs can affect both sexes nearly equally as we find in our results. Lui et al. in their study indicated that scoring did not affect by age and gender while Saimadhavi indicated no difference exist between genders only. Concerning age categories, chronic OMDs can involve different age groups. OLP is a disease of adulthood while RAS can occur in early life. Nevertheless, in Liu et al. study the mean age of RAS male patients was greatly higher than our reported value (48.5 vs. 29 years).

The present work indicated that RAS patients had a minimum value in most of the registered domains; this is because a young person can tolerate life difficulties better than late adults who had more responsibility. Despite that, both age groups received equal support from their families and colleagues (1.56 vs. 1.44). While the social and emotional items were greatly differed and being nearly twice higher scored in the older group (1.97 vs. 1).

The mean total score for each chronic OMD group was significantly differing. Behçet's disease had higher mean and sum scores than OLP, RAS, and RHL. Thus, present work indicates that BD is the disease that had worse QOL. Such patients had a high score in all domains. This finding is in close similarity with previous results(8).Therefore, they need special concern and symptom control by their dentists throughout the course of their disease.

Concerning the domains, in the present study among various chronic diseases investigated, pain-functional limitation followed by social-emotional scores were the on the top of OMDs patients' problems especially in BD group, unlike Saimadhavi et al.(13) results. They reported physical pain, and disability significantly affected in pemphigus, followed by lichen planus. This disparity could have resulted from variations in the populations studied and their sample sizes. Meanwhile, further verification with larger samples is needed.

Conversely, chronic OMD patients have difficulty in carrying daily oral hygiene measures and difficulty in eating and drinking certain food (especially in RAS). Pain is a strong predictor of oral impacts as it affects physical, social and psychological well-being. In the circumstance of oral health, oral pain affects eating, drinking, and other related everyday activities. Thus, the dentist should supply such patients with alternative means and supportive symptomatic local measures to facility the jobs.

Regarding the medications, 68% of patients participated in this survey need medication (16 patients had no previous medications). This may be assigned to the fact that those patients learn to cope with commonly occurring symptoms and conditions (recurrent aphthous stomatitis and recurrent herpes labialis) that become less disabling with recurrence. They do not seek every disease episode a medication unless the case is infected or become complicated.

All patients were moderately satisfied with their medication, but they were worried about their oral condition. They easily accept the concept of multi-therapeutic modality and the recurrence of the lesions. They respond to these questions with a moderate score.

Fortunately, disrupting the social activities and feeling of isolation was not a significant concern to OMDs patients. They were moderately satisfied with the support and understanding of their families

The simple–score can only discriminate between RAS and RHL. The use of simple scoring system loses part of the significant results that registered by the mean and summation scoring method Thus; it has been proposed to be used for simplicity in a certain situation when the tested patient cannot perfectly select the appropriate level of response written in the questionnaire.

Concerning the limitations encountered during the work, we meet few patients who reject to participate in this study. They were worried from the time-consuming interview, and the biopsy when needed.

The second point is the neglection to answer the question regarding the pain and discomfort when wearing a denture since only 8 of our patients had dentures. Lastly, the method of filling a self-administered questionnaire that adapts health status measures required clear defined terms and points that would necessitate translation and cultural adaptation(16).

This is the first study considering OMD-QOL-26 in patients with chronic OMDs, using a Kurdish version. Therefore, we required a careful translation of the original questionnaire from English to the Kurdish language performed by a professional translator using simple common Kurdish words.

Conclusion

The findings confirm the effect of chronic OMDs on QOL. Therefore, an early diagnosis and appropriate treatment can improve their QOL. There is a need to increase both dentist and the general population awareness about oral health-related QOL and its relation to education level and habits. Periodic estimation of QOL levels while following up chronic OMDs patients is a viable clinical work. It provides useful information for the clinical management and patient's needs for treatment of the oral mucosa pathology. The chronic OMD-QOL-26 is a well-designed questionnaire that provides a greater perception of the outcome of oral disease upon subject’s living on a daily basis and QOL. It is a complement to the traditional clinical oral health status help improving communication between patients and dentists.

Table 1. Demographic distribution of patients with chronic oral mucosal diseases according to clinical diagnosis.

Chronic OMD	No.	Age		P value	Sex				P value
		Mean	Sd		Female		Male		
					No.	%	No.	%	
RAS	19	29	14.2	.014	8	42.1	11	57.9	NS
RHL	16	32.94	9.63		8	50	8	50	
OLP	9	48.56	12.5		5	55.6	4	44.4	
BD	2	43.5	7.77		2	100	0		
DG	2	35.5	7.77		2	100	0		
SLE	1	36			1	100	0		
SJ	1	48			1	100	0		
Total	50	35.14	13.6		27	54	23	46	

Table-2. Comparison of mean scores, sum scores, simple-count scores and the ratio of positive and negative items in chronic OMD/ QOL-26 questionnaire among various chronic oral mucosa lesions

Method of scoring		**RAS**	**RH**	**OLP**	**BD**	**DG**	**SLE***	**SJ***	**ANOVA Sig.**	**Post hoc test**	
		Mean±sd	Mean±sd	Mean±sd	Mean±sd	Mean±sd	Mean	Mean		Group	Sig
Mean score		1.52±0.6	0.98±0.7	1.47±0.1	3.36±0.24	2.44±1.33	3.23	3.26	0.0001	BD vsLP BD vs RA BD vs RH	0.021 0.018 0.001
Sum score		39.7±15.7	25.6±19.7	38.2±25.5	87.5±6.36	63.5±34.6	84	85			
Simple score	-ve	10.84±4.9	16.38±7.3	12.11±6.3	2	7.5±9.19	2	1	0.043	BD vsRH	0.028
	+ve	15.16±4.9	9.62±7.3	13.89±6.3	24	18.5±9.19	24	25	0.007		
∑+ve /∑--ve		1.4	0.59	1.15	12	2.47	12	25			

*** sd cannot be calculated in groups contain only one case.**

Table-3. The overall score and the scores of the pain, medication, social relations and patient support domains of the chronic OMD/QOL-26 questionnaire among various chronic oral mucosa lesions

Domain	RAS (n=19)	RHL (n=16)	OLP (n=9)	BD (n=2)	DG (n=2)	SLE (n=1)	SJ (n=1)	ANOVA Sig.	Post hoc	
	Mean± sd	Mean± sd	Mean± sd	Mean± sd	Mean± sd	Mean	Mean		Group	Sig
Pain & functional limitation	2±0.7	1.24±0.97	1.59±1.33	4±0	2.87±1.06	3.12	3..37	0.003	BD vs RH	0.004
									BD vs LP	0.02
Medication and treatment	1.66±0.85	1.07±1.42	1.42±1.23	3.41±0.12	2.41±1.76	3.66	3.83	0.027	NS	
Social and emotional	1±1.05	0.89±0.89	1.9±1.22	3. 21±1.11	2.85±1.01	4	3.57	0.001	BDvs RH	0.044
Patient support	1.77±0.88	1.06±0.8	1.3±.72	2.62±0.88	1.5±2.12	2.25	2.5	0.1	NS	
Total score	6.45±2.4	4.27±3.38	6.23±3.73	13.25±0.1	9.64±5.95	13.04	13.27	.001	BD vsLP	0.048
									BD vs RA	0.042
									BD vs RH	0.004

One-way ANOVA test followed by Post hoc test was only applicable to the exclusion of SLE and SJ groups since they have fewer than two cases.

Table 4. Ranking the mean of scores for 26 questions in a descending manner in all chronic OMD patients in descending and in each diseased group

How much does/do….?	**Mean**	**sd**
you satisfied with the medication used	2.5	1.38
your oral condition leads to discomfort when carrying daily oral hygiene	2.34	1.59
the level of support and understanding of your family regarding your condition	2.2	1.65
certain types of food/drink cause you discomfort	2.16	1.46
it frustrates you that there is no single standard medication	2.15	1.76
it bothers you that there is no cure	2.14	1.74
you feel you need medication to help you with activities of daily life	2.09	1.5
certain food textures cause you discomfort	2.06	1.61
the unpredictability of your oral condition bother you	2.04	1.64
the temperature of certain foods/drinks causes you discomfort	2.02	1.57
you consider the information available to you regarding your oral condition	1.74	1.43
your condition limit the temperature of the foods/ drinks you consume	1.64	1.63
your condition limits your daily oral hygiene routine	1.64	1.65
your condition causes you to limit the types of food/ drinks you consume	1.62	1.61
your condition gets you down	1.6	1.7
your condition causes you stress	1.52	1.57
your condition causes you anxiety	1.5	1.59
you concerned about the possible side effects of the used medications	1.47	1.64
your condition limits the textures of the food you consume	1.46	1.61
your condition leads to discomfort when wearing a denture	1.44	1.59
the level of support and understanding of your friends regarding your condition	1.36	1.61
your oral condition causes you to worry about the future	1.16	1.52
the medication limit your everyday life	1.15	1.62
your condition makes you pessimistic about the future	1.04	1.43
your condition disrupts social activities in your life	0.98	1.42
you feel isolated as a result of this oral condition	0.74	1.26

Table 5. Comparison of mean scores of items, total score and sum score (±sd) for QOL questionnaire between age groups

Items	Age				P value *
	<35 no=29		≥35 n=21		
	mean	sd	mean	sd	
Pain and functional limitation	1.69	1.22	2.07	1.29	
Medication and treatment	1.39	1.22	1.92	1.32	
Social and emotional	1	1	1.97	1.42	0.012
Patient support	1.56	0.87	1.44	1.01	
Total score	5.65	3.2	7.4	4.35	
Mean score	1.32	0.75	1.79	1.12	
Sum score	34.45	19.65	46.67	29.21	

* Student's t-test for independent samples

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