

Evaluating the quality of life in patients with ulcerative oral lesions

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Original Article

Abstract

BACKGROUND AND AIM: Oral mucosal lesions can affect patient's quality of life (QOL). In this evaluation, Persian version of Chronic Oral Mucosal Disease Questionnaire (COMDQ) was used to assess participants' QOL.

METHODS: This cross-sectional study was done during 2015-2016 in School of Dentistry, Shiraz University of Medical Sciences, Shiraz, Iran. 95 participants with pemphigus vulgaris (PV), oral recurrent aphthous stomatitis (RAS), and oral lichen planus (OLP) enrolled in this study. The Persian version of COMDQ with 26 questions and 4 domains was used for assessing QOL. The data were analyzed in SPSS software. P-value less than 0.05 was considered significant. Independent t-test, analysis of variance (ANOVA), and Tukey's test were used to assess scores of QOL.

RESULTS: The final QOL scores were 45.95 ± 16.31 , 53.38 ± 17.64 , and 50.02 ± 17.36 for men, women, and all patients, respectively. Patients with OLP and RAS had good QOL, but patients with PV reported lower level of QOL (moderate). None of the COMDQ domains showed significant correlation with gender except pain and functional limitation and overall QOL score.

CONCLUSION: The result of this evaluation revealed a good QOL; considering the type of oral disease, QOL ranged between moderate for patients with PV and good for patients with OLP and RAS.

KEYWORDS: Lichen Planus; Stomatitis; Aphthous; Pemphigus; Quality of Life

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Oral mucosal diseases can result in noticeable discomfort, physical, psychological and social impairment, affecting the quality of life (QOL). Some of these oral mucosal diseases such as recurrent aphthous stomatitis (RAS), oral pemphigus vulgaris (PV), pemphigoid lesions, and oral lichen planus (OLP) are the most common examples of oral mucosal diseases.¹⁻⁵

QOL is a personal conception of situation in life in association with culture and rating system, goals, and concerns.⁶

Oral Health Impact Profile-14 (OHIP-14) and the 36-item Short Form Health Survey (SF-36) are some other questionnaires for

assessing QOL in patients with oral lesions.^{1,7,8}

The Chronic Oral Mucosal Disease Questionnaire (COMDQ) is an oral disease and radiology-specific questionnaire.

Cork University Dental School and Hospital, Ireland, designed the English version of original Oral Health-Related QOL (OHRQOL) questionnaire.⁹

This discipline-specific/condition-specific instrument showed excellent reliability, good validity, and responsiveness.^{9,10}

Few researchers have used this new questionnaire in order to assess QOL of participants with oral lesions. Okumus et al.¹¹ and Rajan et al.¹² evaluated QOL in patients

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with chronic oral mucosal lesions. These studies used COMDQ with their specific version of language. In this study, we aimed to use Persian version of COMDQ in order to assess the QOL in participants with chronic mucosal lesions.

Methods

A cross-sectional study was rendered during 2015-2016 in Department of Oral Maxillofacial Medicine, School of Dentistry, Shiraz University of Medical Sciences, Shiraz, Iran. This study was approved by Ethics Committee of Shiraz University of Medical Science (IR.SUMS.REC.1394.S1188) and was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki. According to Rajan et al.¹² study and the QOL difference of different oral lesions obtained from this study, first degree error (0.05), and the study power (80%), the sample size was deemed 120. Only 95 (79.17%) patients completed the survey and others left the study (20.83%). Some of the participants were in low social level and could not answer the questions and some of them did not complete the questionnaire.

The patients enrolled in this study were referred to this department and their oral diseases including erosive and ulcerative OLP (9 patients), oral PV (without skin involvement) (42 patients), and oral minor RAS (44 patients) were diagnosed by a specialist (the author of this manuscript) with clinical or histopathological confirmation. Enrolling a specific form of oral lesions as mentioned above homogenized the severity of these lesions to have more accurate comparison.

The inclusion criteria were being older than 18 years of age and being under treatment for oral disease. The exclusion criteria were patients who did not receive any treatment, individuals without the ability to understand the questions in the questionnaire, and patients with any history of chemotherapy or radiotherapy, diabetes, disease in relation with salivary glands and xerostomia, and cerebrovascular attack that

could cause taste disorders and swallowing disabilities. A written informed consent was taken from each participant. The participants were given a Persian version of COMDQ to complete. The original COMDQ is an English version of OHRQOL questionnaire, developed by the Cork University Dental School and Hospital in Ireland.⁸

The reliability and validity of this Persian version were evaluated in a former evaluation by Shirzad et al.¹³ The Cronbach's α coefficient and intraclass correlation coefficient for COMDQ were 0.969 and 0.997, respectively. Persian version of COMDQ has acceptable reliability and validity according to Shirzad et al.'s study.¹³

This questionnaire has 26 items, categorized into 4 domains: pain and functional limitation, medication and treatment, social and emotional status, and patient support. A five-point Likert scale was considered for this questionnaire.

The total score of participants was calculated from 104. Response scale rating code was between 0-4 [not at all (0), slightly (1), moderately (2), considerably (3), and extremely (4)]. Excellent QOL was considered for scores of 0 to 25 of the total score, good QOL for scores of 26-50, moderate QOL for scores of 51-79, and poor QOL for scores of 76 to 100.¹²

The data were analyzed by SPSS software (version 18, SPSS Inc., Chicago, IL, USA). P-value less than 0.05 was considered significant.

Independent t-test was used to compare the total score of QOL and each domain according to sex. Analysis of variance (ANOVA) assessed the relationship between type of diseases and the overall score of QOL and each domain; since the result of this test was significant ($P < 0.001$), post-hoc Tukey's test was used for pairwise comparison of QOL between different types of diseases. Pearson correlation test assessed the correlation between different domains of COMDQ.

Results

In this study, 95 questionnaires were

collected finally (20.83% was missed). The number of men was 43 patients (mean age: 34.0 ± 4.3 years) and the rest were women (mean age: 33.3 ± 4.6 years).

A total of 21.1% of participants had no academic education and 78.9% had high academic education.

The final QOL score of participants from 104 was 45.95 ± 16.31 in men, 53.38 ± 17.64 in women, and 50.02 ± 17.36 in all the participants. Overall scores on COMDQ and their total level in each domain are separately represented in table 1. According to table 1, patients with OLP and RAS had good QOL, but patients with PV reported lower level of QOL (moderate).

Significant differences between the total score and mean value of score for each disease in all domains were defined (Table 1).

Post-hoc analysis (Tukey's test) evaluated the difference of QOL score for each disease in comparison with one another. The results are presented in table 2.

The RAS and OLP scores were not different in all domains except for social and emotional status domain. Otherwise, there were significant differences between PV and OLP scores in all domains except for "social and emotional status" and "patient support" domains.

Table 3 evaluated the correlation between age and scores in different domains of COMDQ. There was a significant correlation between age, pain, functional limitation, and medication and treatment.

The correlation between different domains of COMDQ is shown in table 4, which indicates that all COMDQ domains have correlation with each other. Also, these variables affected patients' QOL. Improvement in each domain showed positive effect on QOL.

Gender correlation with QOL score in each domain is shown in table 5. All COMDQ domains showed no significant correlation with gender except "pain and functional limitation" part and the overall QOL score.

Table 1. Overall scores on Chronic Oral Mucosal Disease Questionnaire (COMDQ) and their comparison based on the domains

Domain	Disease group	Total score (mean \pm SD)	Mean percentage of total score	P*	Level
Pain and functional limitation (total: 32)	OLP	14.80 ± 9.27	41.10	< 0.001	Good
	PV	25.06 ± 8.81	69.60		Moderate
	RAS	11.66 ± 8.91	32.30		Good
	Total	19.26 ± 10.49	53.50		Moderate
Medication and treatment (total: 24)	OLP	10.90 ± 4.28	45.40	< 0.001	Good
	PV	14.47 ± 4.39	60.29		Moderate
	RAS	8.00 ± 4.15	33.30		Good
	Total	12.28 ± 4.80	51.16		Moderate
Social and emotional (total: 28)	OLP	10.11 ± 5.38	36.10	< 0.001	Good
	PV	12.00 ± 4.46	42.85		Good
	RAS	5.50 ± 4.30	19.60		Excellent
	Total	10.60 ± 5.59	37.85		Good
Patient support (total: 16)	OLP	7.78 ± 2.31	48.60	< 0.001	Good
	PV	8.50 ± 2.52	53.12		Moderate
	RAS	6.33 ± 2.23	39.50		Good
	Total	7.97 ± 2.46	49.81		Good
Overall QOL (total: 104)	OLP	43.61 ± 14.54	41.90	< 0.001	Good
	PV	60.04 ± 14.09	57.73		Moderate
	RAS	30.88 ± 14.56	29.60		Good
	Total	50.02 ± 17.36	48.09		Good

*ANOVA test was used

OLP: Oral lichen planus; RAS: Recurrent aphthous stomatitis; PV: Pemphigus vulgaris; QOL: Quality of life; SD: Standard deviation

Table 2. Comparison of the Chronic Oral Mucosal Disease Questionnaire (COMDQ) score of different diseases in evaluated domains

Multiple comparisons		Dependent variable, P*				
		Pain and functional limitation	Medication and treatment	Social and emotional status	Patient support	Overall
OLP	PV	< 0.001	< 0.001	0.1070	0.1730	< 0.001
	RAS	0.346	0.071	0.0280	0.1040	0.018
PV	OLP	< 0.001	< 0.001	0.1070	0.1730	< 0.001
	RAS	< 0.001	< 0.001	0.0020	0.0160	< 0.001
RAS	OLP	0.346	0.071	0.0280	0.1040	0.018
	PV	< 0.001	< 0.001	0.0200	0.0160	< 0.001

*Post-hoc Tukey's test was used

OLP: Oral lichen planus; RAS: Recurrent aphthous stomatitis; PV: Pemphigus vulgaris

Table 3. Correlation between age and scores in different domains of Chronic Oral Mucosal Disease Questionnaire (COMDQ)

Correlation coefficient: Age with	Age group (year)	r	P
Pain and functional limitation	> 40	0.255	0.035
	< 40	0.290	0.020
	Overall	0.239	0.030
Medication and treatment	> 40	-0.256	0.010
	< 40	-0.301	0.005
	Overall	-0.216	0.045
Social and emotional status	> 40	-0.101	0.065
	< 40	-0.098	0.132
	Overall	-0.194	0.083
Patient support	> 40	-0.045	0.709
	< 40	-0.010	0.803
	Overall	-0.002	0.989
Overall QOL	> 40	0.087	0.401
	< 40	0.043	0.609
	Overall	0.001	0.991

QOL: Quality of life

Discussion

According to the results of our study, QOL of patients with COMD was good. The QOL was moderate for patients with PV and good for patients with RAS and OLP.

The overall COMDQ score in each domain is an indication of moderate QOL for participants in pain and medication domains and good QOL in social and emotional status and patient support domains.

An overall moderate QOL has been reported by Rajan et al. for patients with chronic oral lesions.¹² Their findings for QOL for different oral lesions were compatible with our study, except for the QOL in patients with OLP. The COMDQ scores in Rajan et al.'s study¹² were the same as our findings in each domain except for participants' QOL in social and emotional domain, which was reported moderate. In another study, Turkish subpopulation QOL was evaluated by the Turkish version of COMDQ. However, Okumus et al. reported their results in a different way, but moderate QOL of Turkish patients with many types of oral lesions was somehow different from our findings. Also, to some extent their reports were different in all domains.¹¹

Table 4. Pearson correlation between different domains of Chronic Oral Mucosal Disease Questionnaire (COMDQ)

Correlation coefficient		Pain and functional limitation	Medication and treatment	Social and emotional status	Patient support	Overall
Pain and functional limitation	r	1	0.446	0.219	0.248	0.841
	P	-	< 0.001	0.034	0.016	< 0.001
Medication and treatment	r	0.446	1	0.555	0.316	0.773
	P	< 0.001	-	< 0.001	0.002	< 0.001
Social and emotional status	r	0.219	0.555	1	0.233	0.646
	P	0.034	< 0.001	-	0.024	< 0.001
Patient support	r	0.248	0.316	0.233	1	0.448
	P	0.016	0.002	0.024	-	< 0.001
Overall	r	0.841	0.773	0.646	0.448	1
	P	< 0.001	< 0.001	< 0.001	< 0.001	-

Table 5. Gender correlation with Chronic Oral Mucosal Disease Questionnaire (COMDQ) scores

Questionnaire domain	Gender	Mean \pm SD	t	P
Pain and functional limitation	Women	21.34 \pm 10.55	2.170	0.033
	Men	16.74 \pm 9.95		
Medication and treatment	Women	13.01 \pm 5.00	1.651	0.102
	Men	11.39 \pm 4.46		
Social and emotional status	Women	11.03 \pm 5.63	0.816	0.417
	Men	10.09 \pm 5.56		
Patient support	Women	8.19 \pm 2.40	0.926	0.357
	Men	7.72 \pm 2.54		
Overall	Women	53.38 \pm 17.64	2.114	0.037
	Men	45.95 \pm 16.31		

SD: Standard deviation

In the present study, there was no significant correlation between overall score on COMDQ, as well as the score of the mentioned domains and the age of participants. This correlation was just positive in the “pain and functional limitation” and “medication and treatment” domains. However, this exception was for the overall aspect and social and emotional domains in the study of Rajan et al.¹² They reported better QOL for the younger participants, while Okumus et al. reported the opposite.¹¹

This study showed a significant correlation between COMDQ scores in different domains and overall score, in addition to the significant correlation between different domains with each other. These reports are compatible with the results of Rajan et al.¹² There are some inconsistencies in correlation of “patient support” with “pain and functional limitation” and “medication and treatment” domains which did not show any correlation.

There was significant lower QOL for women in “pain and functional limitation” domain in our study and Rajan et al.’s study,¹² while Okumus et al. showed lower QOL for female participants in “social and emotional status” domain.¹¹ Overall, the present study showed that male participants had better QOL.

The present study showed significant differences between COMDQ scores of different diseases, while this was significant just for RAS in comparison with PV in Rajan

et al.’s study in the overall aspect and all other domains, except for “patient support”.¹²

In the present study, the severity of evaluated lesions in each type of them had been homogenized, while this was not pointed in other studies.^{11,12} QOL can be affected by population and cultural differences, ethnicity, and medical health services and these can justify some differences.

Patients with RAS and OLP in our study showed no significant difference in “pain and functional limitation”, “medication and treatment”, and “patient support” domains; however, they had a significant difference in “social and emotional status” domain.

On the other hand, patients with OLP and PV were not different in “social and emotional status” and “patient support” domains.

The sign and symptoms of PV are usually more severe than OLP and RAS, while these two diseases can be irritating too. Also, the medication dose and treatment duration for PV disease are more and longer; hence, lower level of QOL in patients with PV is possible.

On the other hand, OLP and PV lesions in comparison with RAS lesions are more serious autoimmune diseases, which can create a severe psychological pressure on patients and their families that can cause irritating thoughts about the prognosis of their diseases. This assumption is in line with showing no difference between patients with OLP and PV in domains of “social and emotional status” and “patient support”.

Overall comparison between the QOL of different populations depends on many socio-

economic, healthcare delivery system, and cross-cultural influences. Heterogeneity of the evaluated oral lesions was another confounding factor, and these diversities can cause differences in some aspects of COMDQ results.

Patients with chronic oral lesions have long-term problems. Patient-reported information about long-standing diseases can provide new concepts for improving their treatment modalities, social interrelation, and finally QOL.

According to the results of a former study, COMDQ Persian version can offer specific, valid, and reliable alternative instead of general instruments.¹³

During data collection, some patients did not cooperate with the researchers. Since, some of the participants were illiterate, the researcher filled out the questionnaire by asking them. These problems caused some limitations. In order to have more accurate QOL assessment, enrolling a heterogeneous group of patients with similar oral lesions, gender, and age should be considered.

Conclusion

The result of this evaluation in Iranian population revealed good QOL in these patients; considering the type of oral diseases, QOL ranged between moderate for patients with PV and good for patients with OLP and RAS.

Conflict of Interests

Authors have no conflict of interest.

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