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Evaluating the Quality of Life in Patients with Oral Squamous Cell Carcinoma and the Associated Factors in those Referring to Imam Khomeini Cancer Institute, 2012

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ABSTRCAT

Background and Aim: Various kinds of cancer can negatively affect the quality of life in patients and can indirectly affect the therapeutic results. The current study was enrolled to assess the quality of life in patients with oral squamous cell carcinoma and identify the associated factors to be used for improving the quality of life in patients. This was done on patients referring to Imam Khomeini Cancer Institute in 2012-13.

Materials and Methods: In this descriptive research, 100 patients with OSCC were enrolled 3 months after the end of diagnostic and therapeutic stages while they were in follow-up stage. They were interviewed using EORTC QLQ- H&N35 questionnaire which its validity and reliability was affirmed by Cronbach's α=0.858. The questionnaire consisted of 35 questions concerning 8 indices (pain, swallowing status, sense of taste, speech, feeling of malaise, social communication, eating in public and sexual desire). At the same time, patients were interviewed and the clinico-demographic characteristics form was completed for each of them. Then, the relation between these indices of quality of life and the studied variables was assessed using Mann-Whitney U-test and Kruskal-Wallis test.

Results: As the stage of illness advanced, the quality of life declined in most factors ($P<0.05$). Women were found to have lower quality of life than men regarding swallowing status, pain, and feeling of malaise ($P=0.01$). The patients who had OSCC on tongue, lips and buccal mucosa had lower quality of life in terms of swallowing and speaking ($P=0.004$ and 0.005, respectively). The type of treatment adopted affected the indices of swallowing and feeling of malaise. ($P=0.04$ and 0.007, respectively).

Conclusion: It seems that the site of tumor and the type of treatment play role in reducing the quality of life of patients with OSCC; but advancement in stage of illness was found to be the most important index in decreasing the quality of life.

Key words: Oral Squamous Cell Carcinoma; Quality of Life; Surgery; Radiotherapy

INTRODUCTION

Decreased quality of life (QoL) has been reported following any type of cancer and its associated treatments including surgery, radiotherapy and chemotherapy. [1, 2]

Health-Related Quality of life (HRQoL) refers to satisfaction with physical and mental status, based on which the individual is able to do daily activities. This definition includes physical, mental and social health, as well as having the ability to do the daily tasks satisfactorily.[3] Among the important consequences of oral and dental diseases are the mental-social aspects and reduction of QoL, which have been less discussed over the past decades. Nowadays, the relation between HRQoL and other general disorders have gained considerable importance.[4] QoL of patients with oral cancer is important because such individuals face primary limitations after

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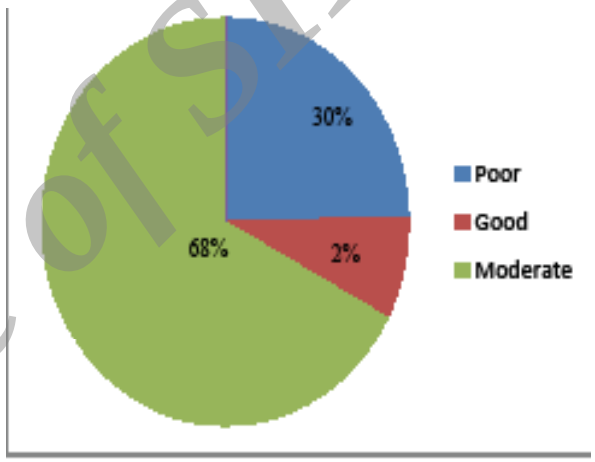
the treatment and preserving the maximum level of functioning is essential for them.[5]
Identifying the factors that influence the QoL of patients can have a significant role in planning the treatment and subsequent care; thus, performing this study seemed necessary.[6]
The QoL of patients with oral cancer has not been evaluated in Iran so far, hence no detailed study is available in this regard. Studies carried out in other countries do not conform to our country because of difference in hygiene system and referral pattern; this is considered lack of information emphasizing the importance of assessing this issue. Thus; the present study was performed to evaluate QoL in patients with OSCC in Imam Khomeini Cancer Institute in 2012-13.

Materials and Methods:

This descriptive study was performed on 100 patients with OSCC who had been diagnosed and treated from 2008 to 2012 and had not shown tumor relapse or metastasis for at least one year after treatment and had referred to Imam Khomeini Cancer Institute for follow-up between March 2012 and October 2013.
Patients' information was gathered from their files and interview; this information was recorded in a form. EORTC QLQ-H&N35 questionnaire [7] was translated to Farsi. The validity and reliability were calculated in an experimental study using test-re-test method; the Cronbach's α was equal to 0.858. As for scoring in questionnaire, the answer that showed the lowest QoL had 4 points and the one showing the highest QoL had 1 point. According to the total points obtained, the three status of QoL were defined as good (<35), moderate (35-70), and poor (>70) and frequency of samples in each group was recorded in percent. The total score of QoL was recorded with standard deviation. The relation between the frequency of QoL status and variables of age, sex, location of lesion, stage of disease and the type of treatment was evaluated using Chi-square test.
Kruskal-Wallis and Mann-Whitney U-tests were used to analyze the relation between the studied variables and the factors of QoL including pain, swallowing, sense of taste, feeling of malaise, speech disorders, social communication, eating in public and sexual desire.

Results:

This study was done to assess the QoL in 100 patients (58 men and 42 women) with OSCC with the mean±SD age of 58.2±6.1. The total mean±SD score of QoL in these patients was 58.83±22.33. Table 1 represents the frequency of patients divided based on QoL status.



Digram 1- Frequency of OSCC patients based on Qol-Imam Khomeini Cancer institute 2012-13

The role of factors associated with QoL is demonstrated in table 1, indicating the unacceptable QoL not to be in relation with gender (men or women), age (high or low) and the location of lesion or at least they had no significant difference.(P<0.4) However, the patients with Poor QoL were 32 (49.2%) and those with Good QoL were ten patients (28.6%) that were exposed to stage 3 and 4 of cancer (P<0.04); in other words, patients with Poor QoL were 2.4 times more exposed to stage 3 and higher stages of

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the disease (OR=2.4); this proportion was estimated to be at least 2.1 to 2.7 times higher in society (C.I OR=2.1-2.7) with confidence level of 95%. patients who had unacceptable QoL were also more exposed to different types of treatment (surgery, radiotherapy, chemotherapy) (P<0.03), (O.R=2.9) with confidence level of 95%. This higher exposure to treatment was at least 2.2 to 6.9 times higher (C.I O.R=2.2-6.9).

With respect to the results obtained from the non-parametric Mann-Whitney U-test about the age variable, the QoL of patients >58 was significantly higher than those <58. Patients<58 had a significantly better QoL in terms of sexual desire (P=0.007). No significant difference was found between the patients of these two age groups regarding other indexes (P>0.05).

There was a significant difference between men and women in factors of swallowing, pain and feeling of malaise (P=0.01, 0.04 and 0.01, respectively); women having lower QoL than men. No significant difference was observed between men and women regarding other QoL indices (P>0.05).

Different stages of illness caused significant difference in all indices except sense of taste and sexuality (P<0.05), i.e. in stages 3 and 4, pain, swallowing, speech, social communication and feeling of malaise were worsened respectively and consequently influenced the QoL (P<0.05).

Table 1- QoL based on the related factors

Associated factors / QoL		Good & Acceptable (40>points)	Unacceptable (≥58points)	Tests results	O.R	CI 95% OR
sex	Men	21 (60)	38 (58.5)			
	Women	14 (40)	27 (41.5)	P<0.9	-	-
Age	58≥	17 (48.6)	31 (47.7)			
	<58	18 (51.4)	34 (52.3)	P<0.9	-	-
Lesion's location	Tongue, mouth floor, etc.	17 (48.6)	28 (43.1)	P<0.4	-	-
		18 (51.4)	37 (56.9)			
Stage of disease	I, II	25 (71.4)	33 (50.8)	P<0.4	2.4	1.3-2.7
	III & IV	10 (28.6)	32 (49.2)			
Type of Treatment						
	Surgery	17 (48.6)	16 (24.6)	P<0.03	2.9	2.2-6.9
	Surgery+radiotherapy+chemotherapy	18 (50.4)	49 (75.4)			

Discussion:

In this study, QoL was inappropriate in 30% of patients, moderate in 68% and good in 2%. The Mean±SD age of patients was 58.2±6.1 that was a bit lower than the age range reported by other studies.[8] Men constituted 58% and women 42% of the patients, which is similar to other studies. [9, 10] The most commonly involved area was tongue in the current study which is also similar to other studies. [1, 2, 10]

Similar to studies by Kessler and Thomas et al., majority of patients were in stage 2 and 4 of disease; however this was not in line with the study by Osthus et al. in which, patients were mostly in stage 2 [11-13] Similar to other studies, 46% of patients assessed in the current study were smokers [11, 14, 15]

The mean±SD score for QoL found by this study was 58.83±22.33, which seems more promising compared to the score reported by the studies that had evaluated QoL in patients with breast cancer. [16] This number is similar to

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what was found by Momeni et al. in their study about colorectal cancer. [17] This similarity can be due to the similarity between the oral mucosa and colorectal mucosa cancer or because of similarity in functioning of these organs.

Similar to Osthus's study, the average time between diagnosis of the lesion and being enrolled in the present study was 16-17 months.[18] in the present study, the most common therapeutic method was surgery which was in contrast with the studies carried out by Osthus and Chiou et al. [17, 18]

EORTC QoL-C30 was the questionnaire used in the current study which was translated to Farsi and Cronbach's alpha proved its validity and reliability to be 0.858. Most of the studies that evaluated QoL used the same questionnaire[7, 12]

This study reported the patients with 58 years of age and older to have significantly lower QoL regarding sexual appeal. This is similar to the results of Chiou et al. and can be attributed to the normal process of decreasing sexual appeal following aging.[19]

Women were detected to have considerably lower QoL in terms of the three indices: pain, swallowing and feeling of malaise. Maciejewi et al. also affirmed this issue in their study and this phenomenon can be due to the women's physique and hormonal issues.[9]

The results of this study revealed that with advancement in stage of disease, QoL decreases in 6 indices out of 8 ($P<0.04$), similar to the results obtained by Montazeri et al. and Chiou et al [19, 20] No significant relation was found between the disease stage and the reduction observed in sexual appeal and sense of taste.

The type of treatment applied on patients was an important index that affected the QoL considerably ($P<0.03$). Those who were treated solely with surgery had a significantly higher QoL. Patients who were treated with combination therapy (surgery and radiotherapy or surgery, radiotherapy and chemotherapy) were detected to have 2.9 times reduction in QoL, particularly in swallowing; which can be due to the secondary complications of radiotherapy and chemotherapy .[3, 4]

Also the studies by Kessler et al. emphasize that although combination therapies are considered as more complete treatment, they reduce the survival indirectly by causing decrease in QoL.[11]

In this study, it was found that advancement in stage of disease significantly affects many indices which can reduce the QoL. Eating in public, swallowing, sense of smell and taste were considerably affected in patients that were in higher stages of the disease. Patients also felt sicker in these groups; this was also proven in other studies and shows the necessity of investigating all possible ways to diagnose the disease in its early stages. [18, 19]

Patients with SCC of the lips had significantly higher olfactory-gustatory problems and those with palatal SCC had difficulties in speech. Due to structure of speech, palatal lesions cause serious problems in speaking.[20] The results of this study revealed that advancement in the stage of the disease significantly decreases the QoL; exactly the same as what was observed in most studies. [18-22] In this regard, the patients with SCC of lips had better QoL in comparison to SCC in other oral and maxillofacial areas.

Conclusion:

Advancement in the stage of disease and the type of combination therapy considerably decrease the QoL in patients with OSCC.

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