

Original Article

Assessment of Oral Health Related Quality of Life In Patients After Maxillectomy

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Abstract: Oral cancer has a profound impact on the quality of life for patients and their families. Functionally, the mouth is an important organ for speech, swallowing, chewing, taste and salivation. These functions become compromised due to surgical ablation of the tumor. This study evaluated the oral health related quality of life of the patients after maxillectomy which will help to prevent complication and achieve better quality of life after maxillectomy. The descriptive type of cross-sectional study which was conducted in the Department of Oral & Maxillofacial surgery, Dhaka Dental College Hospital *for one year*. University of Washington Quality of Life (UWQOL) scale was used for prepared data. 50 maxillary SCC patients were diagnosed at Dhaka Dental College Hospital. Regarding gender majority 32 (64%) respondents were female and 18 (36%) were male. Among the respondents 5 (10%) were aged ≤ 40 years, 23 (46%) were between 41-50 years of age, 8 (16%) were in the age group of 51-60 years and 14 (28%) were aged ≥ 61 years. Surgery alone (n = 32; 64%) was the most common treatment modality availed followed by surgery + chemotherapy (n = 8; 16%), surgery + radiotherapy (n = 5; 10%) and surgery + chemotherapy + radiotherapy (n = 5; 10%). Maximum patients 42 (84%) received type-II maxillectomy, 6 (12%) received type-I maxillectomy and 2 (4%) received type-III maxillectomy. Patients who were treated maxillectomy suffering from psychological problems including anxiety and depression due to loss of function and esthetic damage. Maxillectomy defects should be reconstructed either surgically with local soft tissue pedicle flap or free flaps or by prosthodontic rehabilitation (obturator). To improve the quality of life after maxillectomy we have to ensure proper counseling before and after operation, expert maxillofacial surgeons, proper reconstruction option, healthy diet, proper follow-up, increase the social awareness, family support and sympathy from hospital staff and family members.

Keywords: assessment, oral health, quality of life, maxillectomy

1. INTRODUCTION

Head and neck cancers (HNCs) represent a serious global health issue. It is estimated that in 2020 there were more than 1.4 million new cases of HNC, which include cancers that originate in oral or nasal cavity, nasopharynx, oro-pharynx, hypopharynx, larynx or thyroid gland [1]. The term 'Oral Cancer' is used to describe any malignancy that arises from oral tissues and accounts for the largest percentage of malignant head and neck tumors. Globally, oral cancer is the sixth most common cancer [2,3]. It is a major health problem in the Indian sub-continent (ICMR, 1987). The majority (84-97%) of oral malignancies are SCCs. It accounts for 90% of oral cancer in Bangladesh [4]. It is an age-related disease and 60% of the patients are over the age of 40 years [5]. Surgery and chemotherapy remain the main strategies for radical treatment for oral cancer. However, radical resection results in severe functional impairment, including impaired mastication and deglutition, hyper nasal speech, and nasal leakage as well as psychologic problems associated with disfigurement and the loss of body parts. Survival is often related to clinical status but with reduced quality of life (QoL) [6]. Oral squamous cell carcinoma of the maxilla requiring maxillofacial surgeries can lead to defects caused by maxillectomy that result serious esthetic and functional disabilities involving swallowing and speech [7,8]. Patients experience psychological suffering, including anxiety and depression due to loss of function esthetic damage that accompanies oral squamous cell carcinoma treatment [9]. Post maxillofacial defect can also lead to physical and psychological impairments [10]. Open communication between the oral and nasal cavities may occur accompanied by hyper nasal speech, low speech intelligibility, nasal regurgitation of food and liquids, inability to masticate and facial disfigurement. As a result, the social behavior and quality of life of the patients will be adversely affected [11,12]. Maxillectomy or maxillary resection is defined as surgical removal of a part or all of the maxilla. Maxillectomy defects can be repaired by prosthesis or reconstruction using free or microsurgical transplants, grafts and distant or regional flaps [13]. The regional soft tissue flaps used for reconstruction of these defects are temporalis myo facial flaps, facial artery Myo mucosal flaps, buccal pad of fat and reverse submental flaps. Free soft tissues flaps are radial forearm, rectus abdominis and anterolateral thigh flaps also used for reconstruction of maxillary defects after maxillectomy [14,15]. Quality of life is the degree of well-being felt by an individual. WHO defines quality of life as the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [16]. Oral health related quality of life (OHRQoL) has been assessed using patient-based outcome measures such as The University of Washington Quality of life scale (UW-QOL). It is a simple scale for 12 disease-specific domains that can be used effectively in maxillectomy patients for assessment of oral health related quality of life. Maxillectomy or maxillary defects that have a definite impact on the oral health related quality of life (OHRQoL). As a result, facial appearance, functional, physical, social behavior and oral health related quality of life of the patients are adversely affected. This study evaluated the oral health related quality of life of the patients after maxillectomy which will help to prevent complication and achieve better quality of life after maxillectomy.

2. MATERIALS & METHOD

This is a Descriptive type of cross-sectional study which is done at Department of Oral and Maxillofacial Surgery, Dhaka Dental College & Hospital, Dhaka, Bangladesh for a period of one year. Sample size of this study was estimated using the following statistical formula

$$n = z^2 pq / d^2$$

Where,

n = the desired sample size.

z = the standard normal distribution, which is 1.96 at 5% level of significance which corresponds to 95% confidence level.

p (prevalence) = 34.1% (p = 0.341) [17]

q = (1 – p) = (1 – 0.341)

d = 0.1 which is the degree of accuracy or precision level which is set at 10% of p.

Using above formula the expected sample size:

$$n = (1.96)^2 \times 0.341 (1 - 0.341) / (0.1)^2$$

$$= 86.45$$

So, the estimated sample size was 86.

According to the article, the study period was long. In different study different authors have taken 3-5 years for the purpose of this study. But in my study, the time is limited (one year) and medical study purpose we took 50 cases of oral squamous cell carcinoma on maxilla where maxillectomy were done for assessment of oral health related quality of life. Patients admitted with oral squamous cell carcinoma on the maxilla and excision of the lesion requiring maxillectomy in the Department of Oral & Maxillofacial Surgery of Dhaka Dental College & Hospital, Dhaka, Bangladesh. A data collection sheet and a consent form was prepared. Sample was selected on the basis of inclusion and exclusion criteria. Written informed consent was taken from the selected subjects. After obtaining informed consent, data were collected by researcher himself by using questionnaire developed & designed for the study. Ethical clearance was obtained from the ethical clearance committee of Dhaka Dental College, Dhaka, Bangladesh. An informed written consent was taken from every patient explaining the nature and objective of the study. Patients had their own right to be included in the study or not and can withdraw him/herself at any stage of the study. Patient's confidentiality was strictly maintained. No names, address or contact details of the patients were disclosed. Applied for ethical clearance certificate to the ethical clearance committee. A preformed consent form is attached here with. Oral squamous cell carcinoma of maxilla patients was admitted to the Dhaka Dental College & Hospital. Informed consent was taken from patients. After operation patient came for follow-up 4 times i.e. after 3-5 POD, after 1 month, after 3 months and after 6 months. Every patient follows up done through a structured summarized data sheet with questionnaires using UW-QOL scale. After collection, data editing and clearing were done manually and prepared for data entry and analysis by using SPSS (statistical package for social science) version 23.

3. RESULTS & DISCUSSION

Patients suffering from oral SCC from 35 year to 80 years but most commonly found in 41-50 years age group (46% patients) and the mean age was 46.52 years. Female are common than male. Maximum patients are treated type II maxillectomy followed by primary obturator. Oral health related quality of life ranges from 47.08 to 73.75 in 3rd POD follow-up. But it is found better in 6 months follow-up after operation.

Table 01: Distribution of the respondents by age

Variables	Frequency	Percentage	Mean age (year)
Age in group (year)			
≤ 40	5	10	37.6
41 – 50	23	46	46.52
51 – 60	8	16	57
≥ 61	14	28	68.64
Total	50	100	

Distributions of the respondents by age distribution are presented in the above table (Table 01). Among the respondents 5 (10%) are ≤ 40 year age group & mean age is 37.6, 22 (46%) were between 41-50 years of age & mean age is 46.52, 8 (16%) were in the age group of 51-60 years & mean age 57 and 14 (28%) were ≥ 61 years age group and the mean age is 68.64.

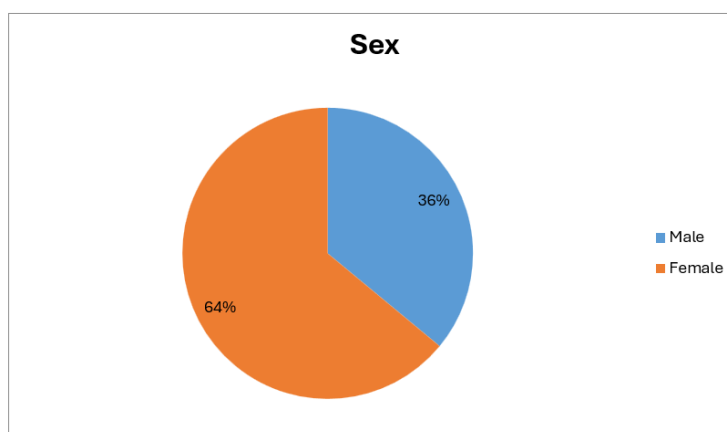


Figure 01: Distribution of the patient according to sex

Maximum respondents are female and it is 32 (64%) where 18 (36%) were male.

Table 02: Distribution of patients according to treatment modalities (n=50)

Treatment	Number of cases	Percentage
Surgery	32	64
Surgery + Chemotherapy	8	16
Surgery + Radiotherapy	5	10
Surgery + Chemotherapy + Radiotherapy	5	10
Total	50	100

Among 50 patient's majority 32 (64%) were received only surgery where 8 (16%) received surgery & chemotherapy, 5 (10%) received surgery & radiotherapy and 5 (10%) received surgery, chemotherapy & radiotherapy.

Table 03: Distribution of patients according to type of maxillectomy

Type of maxillectomy	Number of cases	Percentage
Type-I	6	12
Type-II	42	84
Type-III	2	4
Total	50	100

Table 03 shows the distribution of patients according to type of maxillectomy where maximum patients 42 (84%) received type-II maxillectomy, 6 (12%) received type-I maxillectomy and 2 (4%) received type-III maxillectomy.

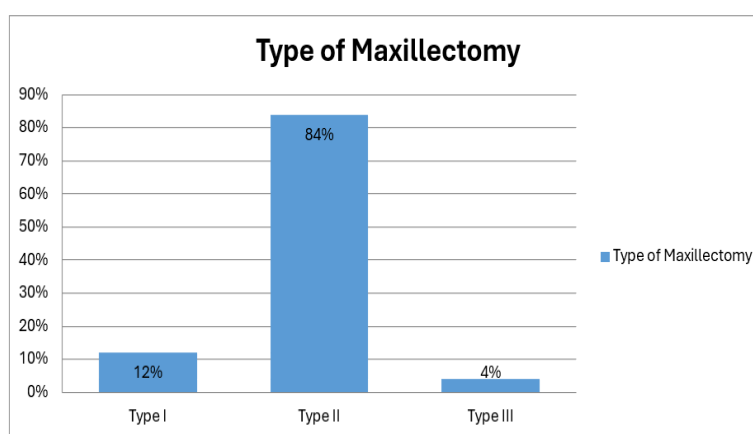


Figure 02: Distribution of patients according to type of maxillectomy

Table 04: Distribution of patients according to reconstruction

Reconstruction	Number of cases	Percentage	Mean overall UWQOL score			
			3-5 POD	After 1 month	After 3 months	After 6 months
Primary Obturator	34	68	61.00	72.25	77.86	77.60
Local flap	16	32	60.86	69.82	77.73	78.30
Total	50	100				
Local flap						
Temporalis muscle flap	5	31.25	59.50	69.25	79.67	79.67
PMMF	3	18.75	58.75	65.97	74.44	77.08
Forehead flap	2	12.50	60.83	74.59	75.84	75.84
Masseter muscle flap	6	37.50	63.06	70.63	78.4	78.4
Total	16	100				

Case No	Age (yr)	Sex	Dx	Type of Maxillectomy	Treatment Reconstruction (YES/NO)	Overall UWQOL score			
						3-5 POD	After 1 Month	After 3 months	After 6 months
27	35	F	SCC	Type-I	S (NO)	65.83	73.33	73.33	73.33
28	62	F	SCC	Type-II	S (YES)	59.58	77.5	80.0	80.0
29	38	F	SCC	Type-II	S (YES)	60.83	73.75	75.83	75.83
30	65	F	SCC	Type-II	S (NO)	59.17	77.92	77.92	77.92
31	45	F	SCC	Type-III	S (NO)	64.17	71.67	75.83	75.83
32	50	F	SCC	Type-I	S+CT+RT (NO)	64.17	71.67	71.67	71.67
33	45	M	SCC	Type-II	S (YES)	64.17	69.58	73.75	73.75
34	40	M	SCC	Type-II	S (NO)	61.67	69.67	69.67	69.67
35	72	M	SCC	Type-II	S (NO)	64.17	80.0	80.0	80.0
36	43	F	SCC	Type-II	S+CT(NO)	63.75	71.25	75.42	75.42
37	56	F	SCC	Type-I	S (NO)	80.0	77.92	84.17	84.17
38	55	F	SCC	Type-II	S+CT (YES)	68.33	73.75	87.08	87.08
39	45	F	SCC	Type-II	S+RT (NO)	68.33	72.92	85.42	85.42
40	60	F	SCC	Type-III	S (YES)	70.42	76.67	82.08	82.08
41	45	F	SCC	Type-II	S(NO)	70.0	72.08	84.58	84.58
42	35	F	SCC	Type-II	S(YES)	55.0	70.42	75.83	75.83
43	65	M	SCC	Type-I	S (NO)	65.0	89.17	91.25	91.25
44	50	F	SCC	Type-II	S (YES)	50.42	71.25	89.58	89.58
45	49	F	SCC	Type-II	S+RT (YES)	58.75	62.92	84.58	84.58
46	80	M	SCC	Type-II	S (NO)	50.77	57.08	77.5	77.5
47	55	M	SCC	Type-II	S (YES)	60.42	62.5	73.33	73.33
48	72	F	SCC	Type-II	S (NO)	61.67	65.89	71.67	71.67
49	41	M	SCC	Type-II	S (YES)	61.67	68.33	75.83	75.83
50	50	F	SCC	Type-II	S (NO)	62.92	60.0	77.5	77.5

Among 50 patients majority 34 (68%) received primary obturator after operation and only 16 (32%) patients received local flap. Out of 16 patients, 5 (31.25%) received temporalis muscle flap, 6 (37.5%) masseter muscle flap, 3 (18.75%) received Pectoralis major Myo cutaneous flap (PMMF) and 2 (12.5%) received forehead flap.

Table 05: Distribution of the patients according to demographics, tumor diagnosis, treatment characteristics and questionnaire.

UWQOL: University of Washington Quality of life, Dx: Diagnosis, F: Female, M: Male, S: Surgery, CT: Chemotherapy, RT: Radiotherapy, SCC: Squamous Cell Carcinoma, POD: Post-operative day. Table 05 shows every patient's demographic, diagnosis, treatment modalities and follow-up according to UWQOL score. The age of the patient ranges from 35 years to 80 years. 6 patients (12%) death and rest

44 patients (88%) are still alive without any recurrence. Overall UWQOL score for 4 different time period are also reported in the table.

Table 06: Quality of life after 3-5 days of operation

UWQOL	QOL Scores							Mean	% Best Score
	0	25	30	50	70	75	100		
Pain		1		47		2		50.50	4%
Appearance		5		39		6		50.50	12%
Activity				46		4		52.0	8%
Recreation				37		13		56.50	26%
Swallowing			17		33			56.40	00%
Chewing				50				50.0	00%
Speech			11		39			61.20	00%
Anxiety			43		6			34.20	00%
Taste			4		29		17	77.00	34%
Saliva			1		12		37	91.40	74%
Mood		1		33		16		57.50	32%
Shoulder						11	39	94.50	78%

UWQOL: University of Washington Quality of Life. Here QOL score 0 represent the much worse and 100 represent best response. After operation Quality of Life (QOL) was assessed based on standard scoring system prescribed by UW-QOL questionnaire. Composite score was generated for Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain. Mean UWQOL score in 3-5 POD follow-up for shoulder, saliva and taste are better and the scores are 94.5, 91.4 and 77 respectively. The mean score for anxiety is worse and it is 34.2. and other domains are ranges from 50 to 61.20. (Table 6).

Table 07: Quality of life after 1 month of operation

UWQOL	QOL Scores							Mean	% Best Score
	0	25	30	50	70	75	100		
Pain				1		29	20	84.5	40%
Appearance				30		19	1	60.5	2%
Activity				46		4		60.5	8%
Recreation				21		29		64.5	58%
Swallowing			8		40		2	64.8	4%
Chewing				48			2	52	4%

Speech			2		46		2	69.6	4%
Anxiety			13		37			59.6	00%
Taste			2		26		22	81.6	44%
Saliva					6		44	96.4	88%
Mood				18		30	2	67.0	4%
Shoulder						4	46	98.00	92%

UWQOL: University of Washington Quality of Life. Here QOL score 0 represent the much worse response and 100 represent best response. After operation Quality of Life (QOL) was assessed based on standard scoring system prescribed by UW-QOL questionnaire. Composite score was generated for Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain. Mean UWQOL score after 1 month follow-up for shoulder, saliva, pain and taste are better and the scores are 98, 96.4, 84.5 and 81.6 respectively. The mean score for other domains is ranges from 52 to 69.4. (Table 07).

Table 08: Quality of life after 3 months of operation

UWQOL	QOL Scores							Mean	% Best Score
	0	25	30	50	70	75	100		
Pain						3	47	98.5	94%
Appearance				20		29	1	65.5	2%
Activity				19		29	2	66.5	4%
Recreation				12		36	2	66.0	4%
Swallowing			3		40		7	71.8	14%
Chewing				43			7	57.0	14%
Speech					46		4	72.4	8%
Anxiety					47		3	71.8	6%
Taste					21		29	87.4	58%
Saliva					3		47	98.2	94%
Mood				14		27	9	72.5	18%
Shoulder						3	47	98.5	94%

UWQOL: University of Washington Quality of Life. Here QOL score 0 represent the much worse response and 100 represent best response. After operation Quality of Life (QOL) was assessed based on standard scoring system prescribed by UW-QOL questionnaire. Composite score was generated for Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain. Mean UWQOL score after 3 months follow-up for shoulder, pain, saliva and taste are better and the scores are 98.5, 98.5, 98.2 and 87.4 respectively. The mean score for other domains is ranges from 57 to 72.5. (Table 08)

Table 09: Quality of life after 6 months of operation

UWQOL	QOL Scores							Mean	% Best Score
	0	25	30	50	70	75	100		
Pain						1	43	99.43	97.73%
Appearance				22		21	1	63.07	2.27%
Activity				16		26	2	67.05	4.55%
Recreation				8		34	2	71.59	4.55%
Swallowing			2		35		7	72.95	15.91%
Chewing				37			7	57.95	15.91%
Speech					40		4	72.73	9.09%-
Anxiety					41		3	72.05	6.82%
Taste					15		29	89.77	65.91%
Saliva					1		43	99.32	97.73%
Mood				12		23	9	73.30	20.45%
Shoulder						2	42	98.86	95.45%

UWQOL: University of Washington Quality of Life. Here QOL score 0 represent the much worse response and 100 represent best response. After operation Quality of Life (QOL) was assessed based on standard scoring system prescribed by UW-QOL questionnaire. Composite score was generated for Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain. Mean UWQOL score after 6 months follow-up for shoulder, pain, saliva and taste are better and the scores are 98.86, 99.43, 99.32 and 89.77 respectively. The mean score for other domains is ranges from 57.95 to 73.30. (Table 09).

DISCUSSION

Treatment of oral SCC within the maxilla can be challenging. Surgery for such patients should only be undertaken after an in-depth informed consent discussion with the patient regarding the risks, benefits and alternatives to surgery and the postoperative expectations. Treatment planning for patients with cancer has been evolving to one in which postoperative quality of life factors is becoming increasingly important [18]. Many investigators have used the European organization for research and treatment of cancer (EORTC) quality of life questionnaire core 30 (QLQ-C30) for assessing the health-related quality of life of cancer patient [19,20]. In the present study University of Washington Quality of Life (UWQOL) scale was utilized. The direct comparison of the result with the previous studies are not possible as in different studies, different tests and scales were used to evaluate the quality of life. In the present study 50 maxillary SCC patients were diagnosed at Dhaka Dental College Hospital. Regarding gender majority 32 (64%) respondents were female and 18 (36%) were male. An author [21] reported female patients were more common in their study where female: male ratio was 1.27:1. Park et al. showed male female ratio was 2:1 which was different from the present study. In this study age distribution was very widely, from 35 year to 80 years but most commonly found in 41-50 years age group (46% patients) and the mean age was 46.52 followed by 14 (28%) were ≥ 61 years age group and the mean age was 68.64, 8 (16%) were in the age group of 51-60 years & mean age was 57 and. There were 5 (10%) patients in ≤ 40 -year age group & mean age was 37.6 (Table 01). Different study reported the incidence of oral squamous cell carcinoma which was 6th decade, 5th-6th decade and 7th decade of life by [22], [23]

and [24] respectively. In the present study, surgery alone (n = 32; 64%) was the most common treatment modality availed followed by surgery + chemotherapy (n = 8; 16%), surgery + radiotherapy (n = 5; 10%) and surgery + chemotherapy + radiotherapy (n = 5; 10%). According to the study conducted by [25] & [26], the most common treatment modality was surgery only. According to Brown's classification of maxillectomy (vertical), in this study maximum patients 42 (84%) received type-II maxillectomy, 6 (12%) received type-I maxillectomy and 2 (4%) received type-III maxillectomy. An author [27] also reported that the vast majority of patients in their study had Class II defects according to the maxillectomy defect classification by Brown and Shaw. In this classification, it must be noted that the superior portion of the zygoma remains intact in Class II defects. An author [28] reported that, in their experience, obturator reconstruction was offered for patients with Class I to IIa and IIb defects, but a composite free flap option was preferred for larger alveolar (Class IIc) and Class III to VI defects, when appropriate to the patient's medical fitness and informed choice. In the present study among 50 patient's majority 34 (68%) received primary obturator. After 3rd POD the obturator was removed and the defect kept open. 16 (32%) patients received local flap. Out of 16 patients, 5 (31.25%) received temporalis muscle flap, 6 (37.5%) masseter muscle flap, 3 (18.75%) received Pectoralis major Myo cutaneous flap (PMMF) and 2 (12.5%) received forehead flap. Reconstruction of the ablative defect has implications for the patients' quality of life after total or extended maxillectomy. Free tissue transfer has revolutionized the treatment of patients with advanced head and neck malignancy. This not only applies to the reconstruction, but also to tumor ablation, because a more aggressive approach can be adopted. We believe surgery with concomitant reconstruction should be given as an option for patients with non-resect able maxillary malignancy, provided they have been predicted to have good short to intermediate-term survival. The reconstructive options for the surgical defect include an obturator, a locoregional pedicled flap, or a free vascularized flap. Opinion is divided regarding the best reconstructive option. An author [29] stated that filling the defect with a soft tissue free flap to meet the minimum reconstruction requirements was best. This option will inevitably affect the patient's quality of life, especially with regard to the cosmetic result and mastication. The reconstructive options for the surgical defect include an obturator, a locoregional pedicled flap, or a free vascularized flap. Size of the maxillectomy defect, particularly the extent of the hard and soft palate resection, has been shown to affect obturator function and QOL [30,31]. Patients often experience regurgitation of fluids or solids while drinking or eating and hypernasality of speech, particularly when the defect is not well sealed. An author [32] reported that patients who had no more than a third of the soft palate and a fourth of the hard palate resected had better speech scores and overall obturator function. It is noted that patients with larger defects had lower scores for activity, recreation, physical function, and overall QOL. Similarly, [33] reported that stability of the prosthesis was compromised as defect size increased, resulting in poor obturator function and QOL. They concluded that defects that involved more than half the hard palate or included the premaxilla and both canines were poor candidates for prosthetic reconstruction. An author [34] stated that filling the defect with a soft tissue free flap to meet the minimum reconstruction requirements was best. This option will inevitably affect the patient's quality of life, especially with regard to the cosmetic result and mastication. The UW-QOL has domains and general questions based upon discrete ordinal responses. Scoring is scaled from 0 to 100 to reflect the number of possible responses where 0 represented much worse, 25: somewhat worse, 50: about the same, 75: somewhat better and 100: much better. After operation Quality of Life (QOL) was assessed based on standard scoring system prescribed by UW-QOL questionnaire. Composite score was generated for Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain. In the present study, mean UWQOL score in 3-5 POD follow-up for shoulder, saliva and taste were better and the scores are 94.5, 91.4 and 77 respectively. The mean score for anxiety was worse and it was 34.2. and other domains were ranged from 50 to 61.20. After 1 month follow-up the UWQOL score for shoulder, saliva, pain and taste are

better and the scores were 98, 96.4, 84.5 and 81.6 respectively. The mean score for other domains was ranged from 52 to 69.4. Mean UWQOL score after 3 months follow-up for shoulder, pain, saliva and taste are better and the scores are 98.5, 98.5, 98.2 and 87.4 respectively. The mean score for other domains is ranges from 57 to 72.5. Mean UWQOL score after 6 months follow-up for shoulder, pain, saliva and taste are better and the scores are 98.86, 99.43, 99.32 and 89.77 respectively. The mean score for other domains is ranges from 57.95 to 73.30. The present study revealed that all Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain mean score were found to be gradually increased after treatment. According to the study conducted by [35] & [36], found the same result. In one prospective study on quality of life conducted by [37] found that chewing domain was statistically significant in preoperative vs. 12-month postoperative comparison. This significant worsening of chewing function was detected in relation to mandibular resection when comparing patients with preserved mandible. In another study on Brazilian population conducted by [38] also found that chewing was the poorer & presented the highest proportion of complaints both at the baseline and at the follow up assessments. In a study conducted by [39] showed that percentage of best score of chewing, taste and saliva function fell sharply just after operation. Because they assessed quality of life following partial glossectomy and most of the patients had undergone neck dissection, taste and saliva function were significantly decreased. All the domains were identified by the patients as important issue over last 7 days after operation but appearance, activity and anxiety were most commonly cited in their study. He also reported the overall quality of life after 3 months of operation was found to be much higher value (71.8%) in their study.

4. CONCLUSIONS

Oral cancer has a profound impact on the quality of life for patients and their families. Functionally, the mouth is an important organ for speech, swallowing, chewing, taste and salivation. These functions become compromised due to surgical ablation of the tumor. 50 maxillary SCC patients were diagnosed at Dhaka Dental College Hospital. Regarding gender majority 32 (64%) respondents were female and 18 (36%) were male. Among the respondents 5 (10%) were aged ≤ 40 years, 23 (46%) were between 41-50 years of age, 8 (16%) were in the age group of 51-60 years and 14 (28%) were aged ≥ 61 years. Surgery alone ($n = 32$; 64%) was the most common treatment modality availed followed by surgery + chemotherapy ($n = 8$; 16%), surgery + radiotherapy ($n = 5$; 10%) and surgery + chemotherapy + radiotherapy ($n = 5$; 10%). Maximum patients 42 (84%) received type-II maxillectomy, 6 (12%) received type-I maxillectomy and 2 (4%) received type-III maxillectomy. Maximum number of patients 34 (68%) received primary obturator after operation and only 16 (32%) patients received local flap. Out of 16 patients, 5 (31.25%) received temporalis muscle flap, 6 (37.5%) masseter muscle flap, 3 (18.75%) received Pectoralis major Myo cutaneous flap (PMMF) and 2 (12.5%) received forehead flap. all Physical (chewing, swallowing, speech, taste, saliva and appearance) and social (Pain, Activity, Recreation, Shoulder, Mood and Anxiety) domain mean score were found to be significantly increased after treatment. Patients who were treated maxillectomy suffering from psychological problems including anxiety and depression due to loss of function and esthetic damage. Maxillectomy defects should be reconstructed either surgically with local soft tissue pedicle flap or free flaps or by prosthodontic rehabilitation (obturator). To improve the quality of life after maxillectomy we have to ensure proper counseling before and after operation, expert maxillofacial surgeons, proper reconstruction option, healthy diet, proper follow-up, increase the social awareness, family support and sympathy from hospital staff and family members.

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