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# Relationship Between Surgery Information and Oral Health–Related Quality of Life for Patients with Oral Cancer

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## Objective

- ❑ Oral cancer ranks fourth among the causes of death in Taiwanese men.
- ❑ The main treatment of oral cancer is tumor wide excision (Wex), which could be combined with flap repair or radical neck dissection (RND) when necessary.
- ❑ Surgical operations affect patients' functions and their psychosocial conditions, subsequently reducing their quality of life.
- ❑ Aim to explore the relationship between different surgery types, the time since previous surgery and number of operations for patients with oral cancer and their oral health–related quality of life (OHRQoL).

## Method

- ❑ Between September 2020 and August 2022, we collected total 79 participants in a medical center in Kaohsiung, Taiwan.
- ❑ The participants were divided into three groups by the types of surgery they received, namely the Wex+flap, Wex+RND, and Wex+flap+RND groups.
- ❑ A questionnaire survey and a retrospective medical history review were conducted to collect data related to their OHRQoL and medical history.

## Result

Table 2. ANOVA in OHRQoL scores among three groups

Variables	Total (n=79)	Wex+flap (n=6)	Wex+RND (n=21)	Wex+flap+RND (n=52)	<i>p</i>	Post-hoc test <sup>a</sup>
	Mean±SD	Mean±SD	Mean±SD	Mean±SD		
OHRQoL Disability						
Total score	23.3±9.2	13.0±6.2	21.2±11.3	25.1±7.6	<b>0.007</b>	1<3
Physical	11.2±4.7	8.0±3.7	10.0±5.5	11.9±4.3	0.091	
Functional	7.1±3.3	4.4±2.4	6.4±3.8	7.6±3.1	0.069	
Psychosocial	7.1±3.8	1.6±2.5	5.9±4.1	8.1±3.1	<b>&lt;0.001</b>	1<2<3

<sup>a</sup> Used Bonferroni test to compare; 1: Wex+flap; 2: Wex+RND; 3: Wex+flap+RND

The higher the score, the worse the OHRQoL

Table 1. ANOVA and chi-squared test in demography among three groups

Variables	Total (n=79)		Wex+flap (n=6)		Wex+RND (n=21)		Wex+flap+RND (n=52)		<i>p</i>
	n	%	n	%	n	%	n	%	
Age									0.842
Mean±SD	56.13±9.46		58.00±11.31		55.43±9.55		56.19±9.39		
Gender									0.371
Male	74	93.7	5	83.3	19	90.5	50	96.2	
Female	5	6.3	1	16.7	2	9.5	2	3.8	
Tumor location									0.432
Lip	6	7.6	1	16.7	3	14.3	2	3.8	
Tongue	26	32.9	1	16.7	6	28.6	19	36.5	
Gingival	8	10.1	2	33.3	1	4.8	5	9.6	
Floor of mouth	3	3.8	0	0.0	1	4.8	2	3.8	
Buccal	22	27.8	1	16.7	8	38.1	13	25.0	
≥2 locations	14	17.9	1	16.7	2	9.5	11	21.2	
Tumor Stage									0.073
I	11	13.9	2	33.3	3	14.3	6	11.5	
II	14	17.7	3	50	3	14.3	8	15.4	
III	20	25.3	1	16.7	8	38.1	11	21.2	
IV	34	43.0	0	0.0	7	33.3	27	51.9	

Table3.Liner regression in OHRQoL and surgery information

Variables	B	SE	<i>p</i>	95% CI of B	
				Lower	Upper
<b>Total OHRQoL score</b>					
Number of surgery	-1.708	1.177	0.151	-4.055	0.639
Surgery distant (year)	-1.199	0.575	<b>0.041</b>	-2.346	-0.052
Surgery types <sup>★</sup>					
Wex+RND	4.337	4.566	0.345	-4.768	13.441
Wex+flap+RND	8.855	4.395	<b>0.048</b>	0.092	17.619
<b>Physical score</b>					
Number of surgery	-0.77	0.624	0.221	-2.014	0.474
Surgery distant (year)	-0.584	0.305	0.060	-1.192	0.025
Surgery types <sup>★</sup>					
Wex+RND	0.053	2.421	0.983	-4.774	4.879
Wex+flap+RND	2.254	2.330	0.337	-2.392	6.899
<b>Functional score</b>					
Number of surgery	-0.842	0.446	0.063	-1.731	0.048
Surgery distant (year)	-0.233	0.218	0.290	-0.668	0.202
Surgery types <sup>★</sup>					
Wex+RND	1.24	1.731	0.476	-2.211	4.691
Wex+flap+RND	2.759	1.666	0.102	-0.563	6.081
<b>Psychosocial score</b>					
Number of surgery	-0.484	0.451	0.287	-1.384	0.416
Surgery distant (year)	-0.597	0.221	<b>0.008</b>	-1.037	-0.157
Surgery types <sup>★</sup>					
Wex+RND	2.432	1.751	0.169	-1.059	5.924
Wex+flap+RND	4.770	1.686	<b>0.006</b>	1.409	8.131

B=unstandardized regression coefficient; SE=standard error; CI=confidence interval;

<sup>★</sup> Reference group: Wex+flap; Adjusted gender and age

## Conclusion

- ❑ Patients with oral cancer who received surgery types diversely and whose previous surgery was closer distant will reduce their total OHRQoL and psychosocial score.