Influencing Factors of Preoperative Quality of Life in Patients with Oral Cancer

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ABSTRACT. *Objective To investigate the influencing factors of preoperative quality of life in patients with oral cancer. Methods 187 patients with oral cancer who were admitted to our hospital from November 2018 to October 2019 were selected as the subjects of this study. Each person sent a copy of the European Cancer Survey and Treatment Organization Quality of Life Survey before admission to surgery Table (EQRTC QLQ-C30), European Cancer Survey and Treatment Organization Head and Neck Cancer Quality of Life Questionnaire (EORTC QLQ-H & N35), Pittsburgh Sleep Quality Index (PSQI), Hospital Anxiety and Depression Scale (HAD) scoring rules and criteria for questionnaires for patients Survey, data statistics and inductive analysis of the questionnaire results withdrawn. Results Age, tumor stage, and gender were the influencing factors of preoperative quality of life in patients with oral cancer. Among them, tumor stage was the most important influencing factor of preoperative quality of life. Tumor stage and diseased location have a great influence on the preoperative quality of life and psychological status of patients with oral cancer. Conclusion There are many factors that affect the quality of life of patients with oral cancer before surgery, including age, tumor stage, tumor location, gender, etc. It is necessary to identify patients with low quality of life and poor mental status earlier through a friendly questionnaire survey, Take effective interventions to enable patients to more actively face treatment, thereby improving patient prognosis.*

KEYWORDS: Oral cancer, Quality of life, Influencing factors, Eqrtc qlq-c30

1. Introduction

Oral cancer is a common malignant tumor of the head and neck, and its incidence rate accounts for the second of malignant tumors of the head and neck, and the 5-year survival rate is below 60%[1]. Statistics show that there are nearly 300,000 new cases of oral cancer and nearly half of deaths worldwide each year[2-3]. The oral cavity has the functions of breathing and chewing. After the onset of oral cancer patients, breathing, chewing, language function, and interpersonal communication are all affected, which brings greater pressure on the patients' psychology. And because of the special position of the anatomical structure of the

oral cavity, it is easy to cause the loss of important tissues and organ functions of the patient after surgery, which affects the appearance of the patient, and many patients will experience anxiety and insomnia before surgery. Therefore, in recent years, domestic scholars have paid more and more attention to the quality of life of oral cancer patients. It has been reported in the literature that the quality of life of patients with head and neck tumors before treatment has a certain reference value for the quality of life after treatment, and is also one of the indicators for prediction of recovery. Based on this, this study used 4 large tables and related scoring criteria to study 187 oral cancer patients admitted to our hospital from November 2018 to October 2019, and analyzed the influencing factors of these patients' preoperative quality of life.

2. Materials and Methods

2.1 General Information

This study has been approved by the Ethics Committee, and 187 oral cancer patients admitted to our hospital from November 2018 to October 2019 were selected as the object of this study. Among the 187 oral cancer patients, there were 102 males and 85 females; the minimum age of the patients was 32 years old, the maximum age was 88 years old, and the average was (55.30 ± 1.62) years old; age structure: 21 cases of 30 years old and below, 31 ~ 33 cases at 40 years old, 48 cases at 41-50 years old, 39 cases at 51-60 years old, 46 cases over 60 years old; Education: 39 cases at junior high school and below; 42 cases at high school (secondary vocational school); 54 cases at high vocational school; 52 undergraduate and above Cases; tumor staging: 38 cases of TNM stage I, 62 cases of TNM stage II, 55 cases of TNM stage III, 32 cases of TNM stage IV; 49 cases of tongue cancer, 42 cases of buccal cancer, 38 cases of palate cancer, 31 cases of gingival cancer, and 27 others.

Inclusion criteria: (1) meets the relevant standards in the 2019 NCCN Oral and Pharyngeal Cancer Guidelines; (2) did not receive other anti-tumor treatment before surgery; (3) did not see malignant tumors in other parts; (4) patients and their families All are informed about the study. Exclusion criteria: (1) Drug and alcohol dependents; (2) Neurotoxic drugs; (3) Cognitive dysfunction; (4) Incomplete clinical data.

2.2 Investigation Methods

Each person sends a copy of the European Cancer Survey and Treatment Organization Quality of Life Center Questionnaire (EQRTC QLQ-C30), European Cancer Survey and Treatment Organization Head and Neck Cancer Quality of Life Questionnaire (EORTC QLQ-H & N35), Pittsburgh Sleep Quality Index Form (PSQI), Hospital Anxiety and Depression Scale (HAD) scoring rules and criteria, questionnaires were conducted on patients, and the results of the questionnaires were

collected for statistical analysis and inductive analysis.

2.3 Evaluation Criteria

The EQRTC QLQ-C30 scale has a total of 30 items. Except for the last two items, the rest of the items are graded on a 4-level scale. They are divided into 5 functional areas, 3 symptom areas, overall health status, and 6 items. The resulting scores are added together and the number of entries is taken to get a rough score in different aspects, and then the coarse score is converted. The lower the score, the better the quality of life[3].

The EORTC QLQ-H & N35 scale has a total of 35 items, including 7 aspects such as pain, dysphagia, and sensory problems, as well as 11 individual items. A 4-level scoring method is used to add the scores from different fields and add the number of items to obtain different aspects Rough score, and then convert the rough score, the higher the score of each aspect and the entry, the more serious the patient's symptoms and problems[4].

The PSQI score has a total of 18 items and is scored using a 4-level scoring method. Is the score the total score on the scale, with a maximum score of 21 points? The lower the score, the better the sleep quality[5].

The HAD score has a total of 14 items, using a 4-level scoring method, with a total score of 21 points. The higher the score, the higher the likelihood that the patient will have anxiety and depression symptoms.

2.4 Statistical Methods

The SPSS 21.0 software package was used to process the survey data of 187 patients. The count data was expressed as the number of cases and percentage. Chi-square test was used. $P < 0.05$ indicates that the results of the two groups are significantly different and statistically significant; otherwise, they are not statistically significant.

3. Results

The pre-operative EQRTC QLQ-C30, EORTC QLQ-H & N35, PSQI scores are shown in Table 1. As can be seen from the table, age, tumor stage, and gender are the influencing factors of oral cancer patients 'preoperative quality of life, among which the tumor stage is the most important influencing factor of patients' preoperative quality of life.

Table 1 187 Oral Cancer Patients with Eqrtc Qlq-C30, Eortc Qlq-h & N35, Psqi Score Factors Survey

		EQRTC	EORTC	PSQI

		QLQ-C30	QLQ-H&N35	
Gender	male	95.61±4.81	96.24±3.09	18.51±2.50
	female	91.34±4.53	88.75±3.11	16.29±2.33
Age	30 years old and below	94.98±4.56	96.15±2.67	15.83±1.91
	31 ~ 40 years old	90.07±4.32	88.15±3.51	19.61±1.08
	41 ~ 50 years old	89.10±3.84	86.69±3.47	20.92±1.27
	51 ~ 60 years old	86.46±4.11	88.07±4.08	18.61±1.05
	60 years old and above	70.61±4.03	83.51±3.84	19.64±1.31
Education level	Junior high school and below	96.08±3.62	93.06±±2.78	18.75±0.51
	High school	94.17±3.44	92.17±2.69	
	Higher Vocational	95.15±3.69	93.55±2.73	19.89±0.17
	Bachelor degree and above 94.61±3.73	94.88±2.42	20.31±0.23	
Tumor stage	TNM Ⅰ	81.62±3.11	75.99±1.17	14.02±0.22
	TNM Ⅱ	82.06±3.56	82.66±1.03	16.19±0.16
	TNM Ⅲ	90.15±3.18	90.40±1.21	19.03±0.11
	TNM Ⅳ	97.41±3.25	95.18±1.86	20.01±0.21
Tumor site	Tongue cancer	86.61±3.17	82.76±2.64	15.15±0.12
	Cheek cancer	93.93±3.03	90.68±2.42 16.92±0.15	
	Palate cancer	81.61±3.64	87.51±2.39	18.32±0.09
	Gum cancer	80.67±3.08	83.04±2.18	19.65±1.02
	Other	75.93±3.26	74.28±2.09	15.72±1.06

Tumor stage and diseased location have a great influence on the preoperative quality of life and psychological status of patients with oral cancer. In the single factor analysis of psychological status, tumor stage and gender have a greater impact on the psychological status of patients. The HAD score of patients with advanced tumors and female patients is significantly higher, and the difference is statistically significant. See Table 2.

Table 2 Single Factor Analysis of Had Score

		HAD score	X^2	P
Gender	male	12.64±1.22	5.109	<0.05
	female	18.38±1.32		
Age	30 years old and below	8.47±0.91	5.012 5.117	<0.05
	31 ~ 40 years old	13.52±0.83	5.106 5.124	

	41 ~ 50 years old	19.61±0.77		
	51 ~ 60 years old	18.13±0.71		
	60 years old and above	19.49±0.62		
Education level	Junior high school and below	17.61±0.24	5.203 5.142 5.162 5.307	<0.05
	High school	12.06±0.17		
	Higher Vocational	15.25±0.22		
	Bachelor degree and above	19.05±0.15		
Tumor stage	TNM Ⅰ	8.23±0.15	5.067 5.158 5.212	<0.05
	TNM Ⅱ	10.62±0.21		
	TNM Ⅲ	14.31±0.18		
	TNM Ⅳ	16.52±0.32		
Tumor site	Tongue cancer	15.15±0.28	0.009 0.105 0.101 0.096	>0.05
	Cheek cancer	14.26±0.19		
	Palate cancer	16.72±0.21		
	Gum cancer	16.02±0.36		
	Other	14.87±0.33		

4. Conclusion

Oral cancer is a common clinical malignant tumor of the head and neck. With the advancement of medical technology and the application of new drugs and new treatments, the short-term survival rate of oral cancer patients has improved. 1. Postoperative complications are transferred to the patient's quality of life. Because of the special oral physiological anatomy and the characteristics of surgical treatment, it is generally necessary to remove part of the patient's tissue during the operation, which is easy to leave scars after surgery. Has a certain impact. Therefore, many patients with oral cancer are prone to anxiety, depression and other emotions due to pain at the lesion site and concerns about the effect of surgical treatment and prognosis before surgical treatment, and are prone to insomnia, and the quality of life before surgery is not high. To investigate the preoperative quality of life of oral cancer patients, we can understand the factors that affect the preoperative quality of life of patients, so as to implement targeted nursing interventions for patients before surgery, and understand which types of care and treatment are more effective for improving the quality of life of oral cancer patients. Advantageous[6]. At this stage, there is no recognized specific scale for the quality of life investigation of head and

neck cancer patients in China. Most of the investigations are based on the scales already available in foreign countries. Among them, the EORTCQLQ-C30 scale is more common. UW-OQ scale, EORTC QLQ-H & N35 scale, etc[7].

This study investigated the preoperative quality of life of 187 oral cancer patients in our hospital using 4 scales. It was found that education level is not the main factor affecting the preoperative quality of life of patients. It may be because patients with different educational levels pass different The way of understanding the incidence, treatment and prognosis of oral cancer, so the impact of patient education on their quality of life has not been reflected. Age, tumor stage, and gender are the influencing factors of preoperative quality of life in patients with oral cancer. Among them, tumor stage is the most important influencing factor of preoperative quality of life in patients with oral cancer, which has a greater impact on the quality of life and psychological status of patients with oral cancer. . The EQRTC QLQ-C30, EORTC QLQ-H & N35, PSQI score and HAD score were significantly higher in patients with stage TNM III and IV. This is because the higher the tumor stage, the more general the surgical treatment effect of oral cancer patients and the worse the later. Many middle-advanced oral cancer patients learn their own condition and the survival status of middle-advanced oral cancer patients before surgery. The low survival rate can easily make patients lose their treatment confidence and hope. Therefore, patients have lower scores in the emotional and functional fields. The lower the sleep quality score. The difference in the quality of life between men and women is because female oral cancer patients are more sensitive, and the disease is more powerful for female patients. In the survey, female oral cancer patients scored lower in the emotional field than male patients overall. In addition, the tumor site also has a certain impact on the quality of life of oral cancer patients before surgery. In the investigation, it was found that EQRTC QLQ-C30, EORTC QLQ-H & N35, PSQI score, and HAD score were higher in patients with tongue and palate cancer, mainly because of the important role of the tongue and palate in patients' chewing, communication, and language activities. Lesions in these two parts of the patient will seriously affect the patient's language function, swallowing function and chewing function, which will have a significant impact on the patient's quality of life.

According to the survey results of this study, there are many factors affecting the quality of life of oral cancer patients before surgery, including age, tumor stage, tumor location, gender, etc. It is necessary to identify life earlier through a friendly questionnaire survey before surgery Patients with low quality and poor mental state.

References

[1] Chen Y H , Liang W A , Hsu C Y, et al (2018). Functional outcomes and quality of life after a 6-month early intervention program for oral cancer survivors: a single-arm clinical trial [J]. peerj, vol.6, no.2, pp.4419.

[2] Shuai-Hua Qin, Xin-Ming Li, Wen-Lu Li (2018). Influencing factors on the quality of life and medical coping style of patients with oral cancer [J]. Hua xi kou qiang yi xue za zhi = Huaxi kouqiang yixue zazhi = West China journal of

stomatology, vol.36, no.3, pp.271-276.

[3] Shu-Ching Chen, Bing-Shen Huang, Chia-Yin Chung, et al (2018). Effects of a swallowing exercise education program on dysphagia-specific health-related quality of life in oral cavity cancer patients post-treatment: a randomized controlled trial [J]. Supportive Care Cancer, vol.26, no.8, pp.2919-2928.

[4] Shalini G. Nayak, Mamatha Shivananda Pai, (2018). Self-Image and Quality of Life among Head and Neck Cancer Patients [J]. Journal of Clinical & Diagnostic Research, vol.12, no.8m, pp.82-85.

[5] Nidarsh D Hedge, Mithra N Hedge (2018). Screening for oral cancers: Future perspectives [J]. Journal of Oral Research, vol.7, no.15, pp.84-87.

[6] Arzmi Mohd Hafiz, Cirillo Nicola, Lenzo Jason C,et al (2018). Monospecies and polymicrobial biofilms differentially regulate the phenotype of genotype-specific oral cancer cells [J]. Carcinogenesis, vol.4, no.1, pp.1-2.

[7] Jesús Núñez-Aguilar, LG Oliveros-Lopez, Ana Fernández-Olavarría, et al (2018). Influence of dental treatment in place on quality of life in oral cancer patients undergoing chemoradiotherapy [J]. Medicina Oral Patologia Oral Y Cirugia Bucal, vol.23, no.4, pp.152-154.