Non-Compliance Treatment Plan and Related Factors in Oral Cavity Cancer Patients

Ya-Lan Chang RN, MSN, Case Manager, Adjunct Lecturer
[1]Department of Nursing, Linkou Chang Gung Memorial Hospital, Taoyuan, Taiwan
[2]Department of Nursing, College of Medicine, Chang Gung University, Taoyuan, Taiwan

Keywords: secondary analysis, oral cavity cancer, compliance, treatment plan

Background

In Taiwan, oral cavity cancer ranks sixth in cancer incidence. The major treatment of oral cavity caner was surgery with or without adjuvant therapy which depend on pathological risk factor. As part of its continued effort to improve care for patients with cancer, the Taiwan Health Promotion Administration has taken initiative to promote multidisciplinary team care and case manager as of 2004. Non-compliance of treatment modality may affect patient's outcomes. Case managers can identify the problem and collaborate with the patient to establish goals relating to better adherence and interventions to help the patient achieve the goal.

Objectives

The purposes of this study were to identify the impact of a case management program on the non-compliance to treatment plan (transfer, refusal of treatment, death before treatment, and interruption of treatment) and related factors in Taiwanese oral cavity cancer patients.

Methods

This secondary database analysis of population-based data was conducted from January 1, 2016 to June 30, 2018. Logistic regression was used to reveal the factors related to non-compliance to treatment plan.

Table 1 Demographic and clinical characteristics of patients (n = 1028)

Variable	Number (%)
Age	mean/SD 55.79/11.43
Gender	
Male	941(91.5)
Female	87(8.5)
Cancer stage	
Early stage(stage 0-II)	509(49.5)
Advanced stage (stage III-IV)	519(50.5)
Untreated	
Yes (primary)	564(54.9)
No (recurrence, second, or multiple primary cancer)	464(45.1)
Types of treatment plan	
Surgery alone	517(50.2)
Surgery + RT / CCRT, RT, CT or CCRT	513(49.8)
Compliance with treatment plans	
No	900(87.5)
Yes	128(12.5)

Table 2 Logistic regression analysis of factors related to non-compliance with treatment plans (n=1028)

Variable	Beta	SE	Wald test	p	Odds Ratio	95% CI	
Age (≤64 vs. >65)	0.583	0.223	6.812	<0.05	1.791	1.156	2.773
Gender (female vs. male)	0.329	0.379	0.754	0.385	1.390	0.661	2.924
Recurrence (no vs. yes)	0.295	0.194	2.324	0.127	1.343	0.919	1.964
Cancer stage (early vs. advanced)	0.564	0.244	5.366	<0.05	1.758	1.091	2.835
Types of treatment plan (surgery alone vs. surgery + RT / CCRT, RT, CT or CCRT)	0.583	0.242	5.803	<0.05	1.792	1.115	2.879
Constant	- 3.2000	0.414	59.654	<0.001	0.041	--	--

CI, confidence interval.
1. Chi-square = 35.232, p = 0.000, Nagelkerke R^2 = 0.064.
2. Input independent variable: covariates included age, gender, recurrence, cancer stage, and type of treatment plan.

Results

We examined totally 1028 oral cavity cancer patients. In this cohort, male was predominance (n=941, 91.5%) with the mean age 55.79 years (range, 24–93 years). A total of 12.4% (n=128) of patients were non-compliance with treatment plans. Patients who were older (OR = 1.791% CI: 1.156-2.773, p < 0.01), those with an advanced pathological cancer stage (OR = 1.758, 95% CI: 1.091-2.835, p < 0.05), and those who were treated with palliative chemotherapy (OR = 6.486, 95% CI: 3.329-12.637, p < 0.001) those living in a non-northern region of Taiwan (OR = 0.210, 95% CI: 0.140-0.314, p < 0.001), those who were treated with surgery combined radiation or concurrent chemoradiation or chemoradiation of treatment plan (OR = 1.792, 95% CI: 1.115-2.879, p < 0.05), and those with an advanced pathological cancer stage (OR = 3.863, 95% CI: 2.790-5.347, p < 0.001) were more likely to have non-compliance to treatment plan. Of the 128 patients whom non-compliance treatment plan, the top reasons were as follow: "patients or their family considered patients poor physical condition (chronic disease, or unstable systemic disease), difficulty in enduring any condition likely to cause physical discomfort from disease treatment"(33.6%), "inconvenient transportation"(23.4%), "disease progression" (8.6%), "Distrust of physician's ability and skills" (8.6%), "Patients or their families or friends experienced negative treatment effects and worried about the side-effects of treatment" (8.6%).

Table 3 reasons for non-compliance with treatment plans (N=128)

Rank	Reason	n (%)
1	Patients or their family considered patients poor physical condition (chronic disease, or unstable systemic disease), difficulty in enduring any condition likely to cause physical discomfort from disease treatment	43(33.6)
2	Inconvenient transportation	30(23.4)
3	Disease progression	11(8.6)
4	Distrust of physician's ability and skills	11(8.6)
5	Patients or their families or friends experienced negative treatment effects and worried about the side-effects of treatment	11(8.6)
6	Poor families support	7(5.5)
7	Economic difficulties	4(3.1)
8	Considered patients' old age	3(2.3)
9	Selected complementary and/or alternative medicine	3(2.3)
10	Changed treatment plan by physician	2(1.6)
11	Awaiting longer time of arrangement treatment	2(1.6)
12	Death	1(0.8)

Conclusion

Case managers may strengthen the therapeutic alliance between the patient and the tumor board and/or ensure a greater thoroughness in the patient clinical management and provide positive communication and available resources in relation to cancer treatment. A case management program can help patients cope with the treatment decision making during the diagnosis period.

長庚紀念醫院
CHANG GUNG MEMORIAL HOSPITAL