



Symptom Distress Affects Cancer Patients' Purpose in Life after Radiotherapy

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Introduction

Given the health impact of symptom distress and PIL, it is of particular importance to explore the association between them. We decided to use a well-validated measurement of PIL with control for a wide range of covariates, including several sociodemographic and biological factors that had been linked to symptom distress. We aimed to assess changes in PIL and symptom distress and to reveal associated factors in cancer patients after radiotherapy.

Methods

This was a longitudinal study. One hundred and sixty-four cancer patients from the radiotherapy clinic of Kaohsiung Veterans General Hospital (VGHKS), Taiwan were recruited to the study in 2014 based on the following criteria. Surveys were conducted one week before and one week after the patients had radiotherapy by the questionnaire. Paired-samples t test, independent samples t tests, and multivariate regression analysis was performed with the patients' demographic data and SDS as independent variables to explore factors related to PIL.

Results

The predictive factors for changes in PIL were post-RT SDS, stage IV, surgery, and the treatment site of the abdominal cavity and pelvis. These four variables accounted for 34% of the total variance in PIL changes. The patients had lower PIL if they were at stage IV, had not received surgery, had tumors in sites other than the abdominal cavity and pelvis, and had higher post-RT SDS scores.

Table Multivariate Regression Analysis of post-RT Purpose in Life (N=160).

Variable	Model 1			Model 2			Model 3			Model 4		
	β	95%CI	p	β	95%CI	p	β	95%CI	p	β	95%CI	p
Gender (M/ F)	9.19	0.34 18.03	0.042	6.75	-1.93 15.43	0.126	2.60	-8.69 13.90	0.648	3.45	-7.90 14.80	0.547
Age (Year)	5.64	-9.11 20.40	0.450	-0.49	-0.83 -0.16	0.005	8.73	-13.95 31.42	0.446	-0.26	-0.68 0.17	0.229
Living alone (No/ Yes)	0.83	-13.02 14.68	0.906	-0.77	-14.17 12.62	0.909	-1.12	-15.16 12.92	0.874	-2.01	-16.08 12.07	0.777
SDS (post-RT)				-0.55	-0.87 -0.23	0.001				-0.42	-0.74 -0.10	0.010
Cancer stage 4*							-38.46	-58.15 -18.77	< 0.001	-35.94	-55.10 -16.77	< 0.001
Operation (No/ Yes)							12.56	4.35 20.78	0.003	10.78	2.71 18.85	0.009
Abdominal and Pelives Disease site (Disease site; 1: Abdominal and Pelives; 0:other stage)							11.41	1.94 20.88	0.019	10.31	1.10 19.52	0.029

R-square= 34%

*Stage 1 was used as the baseline, and neither stage 2 nor stage 3 was significant.

Conclusions

That both SDS and PIL scores were significantly higher after RT than those before RT, suggesting a strong influence therapy had on the patients. We also found that patients had lower PIL if they were at stage IV, unable to receive surgery, and had tumors at sites other than the abdominal cavity and pelvis. Meanwhile, SDS was shown to be an independently significant factor to predict PIL in that one faced with higher distress after therapy had lower PIL.

Key word: Purpose in Life, Radiotherapy, Symptom

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