

Quality of life during early radiotherapy in patients with head and neck cancer

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Abstract

Patients with head and neck cancer (HNC) have a potentially severe diagnosis and often suffer from tumor-related pain as well as from adverse side effects of treatment such as radiotherapy (RT). Knowledge about quality of life (QoL) during early radiotherapy in this group is limited and should be assessed in relation to diagnosis and treatment. We hypothesized that pain intensity, pain interference, catastrophizing, and mood disturbance correlates with QoL during early RT. Fifty-four HNC patients were included from the Pain and Rehabilitation Center at Linköping University, completed self-reported questionnaires on demographics, pain intensity, pain interference, mood disturbance, catastrophizing, and QoL. The patients scored high for QoL, low for pain intensity, and low for pain interference, and the patients reported minor depressive symptoms and anxiety symptoms. However, regression analyses showed that pain intensity and depressive symptoms negatively influenced QoL.

Introduction

A cancer diagnosis in combination with pain negatively affects perceived health, including anxiety and depression. Individuals with newly diagnosed cancer quite often suffer from multiple symptoms associated with the disease itself as well as with the treatment. Patients with HNC have a potentially serious disease that might influence QoL even during the early stage of RT and experience extensive social and psychological impacts. Further, as early as the treatment phase, HNC patients have reported that they experience existential fear of death, a sense of meaninglessness, and feelings of guilt. Patients with HNC have the highest prevalence of pain in patients with cancer, and a pain prevalence of approximately 60% at diagnosis and 55% during treatment. Pain in HNC patients may be due to tumor-related pain as well as to side effects of RT, which is a common therapy for HNC. It is important to manage symptoms and impairments in individuals recently diagnosed with cancer. Tailored interventions to the needs of the patient from the time between diagnosis and the start of cancer treatment can offer significant physical as well as psychological relief for patients.

Method

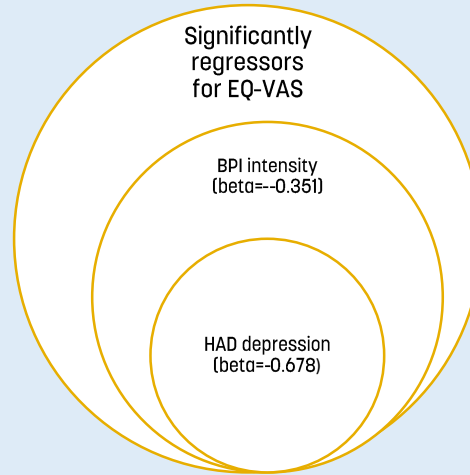
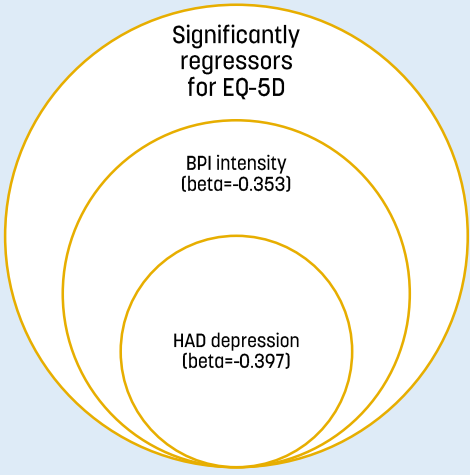
This cross-sectional study on HNC patients was performed at the Pain and Rehabilitation Centre, Linköping University Hospital (Linköping, Sweden). Patients with HNC with anticipated impending pain related to RT were invited to participate in the study.

The recruitment procedure consecutively followed the ordinary flow of patients from January 2015 to August 2016. Inclusion criteria were 18 years of age or older, planned for curative cancer treatment (RT), and able to read, write, and understand Swedish. The patients completed self-reported questionnaires on demographics, pain and psychological symptoms, and QoL.

Euro Quality of Life 5 Dimensions, Euro Quality of Life Vertical Visual Analogue Scale, Brief pain inventory, Hospital Anxiety and Depression Scale and Pain Catastrophizing Scale were used in this study.

Results

In a regression model with EQ-5D as a dependent variable, pain intensity (BPI intensity) and depression (HAD-D) were significant regressors. These associations remained significant after adjustments for age, gender, living status, education, smoking habits, and weeks from diagnosis to inclusion in the study. In the regression model with EQ VAS as dependent variable, pain intensity (BPI intensity) and depression (HAD-D) also were significant regressors. Likewise, adjustments from the above variables did not alter the results. Hence, the regression models showed that pain intensity and depression negatively influenced both dimensions of QoL.



Socio-demographic characteristics of the 54 HNC patients

Variables	Number (%)
Age (years)	
≤ 65	23 (42.6)
> 65	31 (57.4)
Sex	
Men	36 (66.7)
Women	18 (33.3)
Living situation	
Not living alone	35 (63.6)
Living alone	20 (36.4)
Education	
Elementary school	10 (18.2)
Secondary upper school/vocational training	23 (41.8)
University	22 (40.0)
Smoking habits	
Non-smokers	23 (41.8)
Smokers	9 (16.3)
Ex-smokers	23 (41.8)

Type of tumors among the 54 patients

	Number (%)
Oral cavity	
Tongue	8 (14.6)
Gingiva	5 (9.0)
Hard palate	1 (1.8)
Other oral cavity cancer	1 (1.8)
Pharynx	
Tonsillar	13 (23.9)
Base of tongue	6 (10.9)
Larynx	
Larynx	5 (9.0)
Glottis	1 (1.8)
Other types	
Nasopharynx	1 (1.8)
Salivary glands	8 (14.6)
Thyroid	1 (1.8)
Lip	1 (1.8)
Cancer of unknown primary location	4 (7.2)

Conclusions

During early RT, patients with HNC constitute a relatively low affected group with minor physical and psychological impairment. This positive outcome might be related to adequate health care system in the patient's context and improved efficiency of therapies last decades with subsequent expectations of favorable prognosis. Early screening for pain and depression in a targeted preventive strategy might maintain QoL during the course of the disease; however, this assumption needs to be investigated further.

References

- Schaller A, Larsson B, Lindblad M, Liedberg GM. Experiences of pain: a longitudinal, qualitative study of patients with head and neck cancer recently treated with radiotherapy. *Pain Manag Nurs.* 2015;16(3):336-345.