

Quality of Life in Elderly Cancer Patients Undergoing Chemotherapy

Maria Lavdaniti, Sofia Zyga, Eugenia Vlachou,
and Despina Sapountzi-Krepia

Abstract *Introduction:* As life expectancy increases, it is expected that 60% of all cases of cancer will be detected in elderly patients in the next two decades. Cancer treatment for older persons is complicated by a number of factors, thus negatively affecting patients' quality of life.

Purpose: The purpose of this study is to investigate quality of life in elderly cancer patients undergoing chemotherapy.

Material and Method: This study was descriptive and non-experimental. It was conducted in one large hospital in a major city of Northern Greece. The sample was convenience comprising 53 elderly cancer patients undergoing cycle 3 chemotherapy. The data was collected using the Functional Assessment of Cancer Therapy scale and included questions related to demographic and clinical characteristics.

Results: The majority of participants were men ($n = 27$, 50.9%) who were married ($n = 32$, 79.5%). Their mean age was 70.07 ± 3.60 . Almost half of the sample ($n = 30$, 56.6%) had colon cancer. There was a statistical significant difference between men and women pertaining to physical wellbeing ($p = 0.004$) and overall quality of life ($p < 0.001$). When comparing each subscale with the patients' marital status it was found that there was a statistical difference with respect to social/family wellbeing ($p = 0.029$), functional wellbeing ($p = 0.09$) and overall quality of life ($p < 0.001$). Moreover, the type of cancer affected overall quality of life ($p < 0.001$) and social/family wellbeing ($p = 0.029$).

M. Lavdaniti (✉)

Nursing Department, Research Laboratory "Care in Adult Cancer Patients",
Alexander Technological Educational Institute of Thessaloniki, P.O. Box 141,
GR-574 00, Thessaloniki, Greece
e-mail: maria_lavdaniti@yahoo.gr

S. Zyga

Department of Nursing, Faculty of Human Movement and Quality of Life Sciences,
University of Peloponnese, Sparta, Greece

E. Vlachou

Nursing Department, Technological Educational Institute of Athens, Egaleo, Greece

D. Sapountzi-Krepia

Nursing Department, Frederick University of Nicosia, Nicosia, Cyprus

Conclusions: These findings call attention to quality of life and its related factors in elderly cancer patients. It is highly recommended to envisage measures for improving quality of life in this group of cancer patients.

Keywords Elderly • Cancer • Quality of life • Chemotherapy

1 Introduction

Cancer is the second leading cause of death worldwide. One of the high risk factor for cancer is advancing age [1]. As life expectancy increases, is expected that the number of older persons with cancer will increase. Nowadays, 60% of all cancers involve patients over 65 years and this percentage will increase to 70% by to 2030 [2].

Advanced age is associated with a decline in a function of organ system so the administration of antineoplastic drugs (chemotherapy) is accompanied with a number of complications [3]. Generally, cancer treatment for older persons is complicated by a number of factors, thus negatively affecting patients' quality of life.

There is evidence about quality of life in elderly patients undergoing chemotherapy. These patients had advanced cancer [4] prostate cancer [5] and breast cancer [6]. The results of these studies have shown that quality of life is affected by chemotherapy. Although, in Greece the population is getting older, little is known about quality of life in elderly cancer patients undergoing chemotherapy.

2 Purpose

The purpose of this study is to investigate quality of life in elderly cancer patients undergoing chemotherapy.

3 Material-Method

3.1 *Sample and Setting*

This study was descriptive and non-experimental. It was conducted in a large hospital in a major Greek city. The sample was convenience comprising 53 elderly cancer patients undergoing cycle 3 chemotherapy on an outpatient basis.

3.2 Procedure

The hospital's Research Committee gave its approval for the study. All potential participants were approached by a member of a research team and introduced to the aim of the study. A confidential letter was distributed to these potential participants to inform them about the study and participants' rights. Confidential statements were then collected from the patients who agreed to participate, following which they were given the questionnaire.

3.3 Instruments

Subjects were assessed for their quality of life using the Functional Assessment of Cancer Therapy-General (FACT-G) scale. This is a 27-item scale and is comprised of four subscales: physical well-being (seven items), social/family well-being (seven items), emotional well-being (six items) and functional well-being (seven items). The items are rated on a 5-point Likert scale ranging from 0 = "not at all" to 5 = "very much". The FACT-G is scored by summing the individual scale scores. Higher total scores indicate better quality of life. Also, the questionnaire contained demographic and clinical characteristics [7].

3.4 Data Analysis

The data analysis was performed using the statistical software package SPSS 21.0 for Windows. Descriptive statistics were used in order to analyze the demographic data. The variables are not normally distributed, so nonparametric tests were used.

4 Results

The mean age of patients was 70.07 ± 3.60 years. The majority of participants were men ($n = 27, 50.9\%$) and were married ($n = 42, 79.2\%$). A percentage of 64.2% ($n = 34$) were primary school graduates and all of them were retired. Almost half of the sample ($n = 30, 56.6\%$) had colon cancer. The mean scores of the FACT-G subscales were: 8.41 ± 5.46 for physical well-being, 24.75 ± 3.75 for social/family well being, 6.56 ± 2.93 for emotional well-being and 13.11 ± 5.79 for functional well-being.

A statistically significant correlation was observed between the subscale of physical well being and age ($r = 0.272, p = 0.049$), gender ($r = 0.360, p = 0.008$), educational status ($r = -0.529, p < 0.001$). It was found a statistically significant correlation between social/family well being and age ($r = 0.935, p < 0.001$).

Furthermore, emotional well being subscale was correlated with family status ($r = -0.409$, $p = 0.002$), educational status ($r = -0.321$, $p = 0.001$) and type of cancer ($r = -0.440$, $p = 0.001$). Finally, functional well being subscale was correlated well with age ($r = 0.281$, $p = 0.042$), family status ($r = 0.439$, $p = 0.001$) and emotional status ($r = 0.541$, $p < 0.0001$).

5 Discussion

The study assessed quality of life in Greek elderly cancer patients receiving adjuvant chemotherapy. It contributes to the growing body of evidence regarding quality of life and provides an important foundation for Greek oncology nurses, because describing the phenomenon is a fundamental step toward appropriate interventions.

Elderly cancer patients in the study sample generally experienced low levels of quality of life. This is consistent with other studies [4, 6].

The study also found that age, gender, educational status, family status and type of cancer influence quality of life. These findings are not absolutely comparable with the results of a study which examined the pattern of quality of life during adjuvant chemotherapy [6] or another study evaluated and compared the health-related quality of life (HRQOL) of patients aged ≥ 65 with aged < 65 during and after chemotherapy [8]. The findings of the present study could be attributed to a small sample size that did not have enough power to detect any such differences.

In addition, the present research revealed that quality of life is affected by chemotherapy in elderly cancer patients. Also the study found that many domains of quality of life are influenced by treatment so “a good quality of life should be a primary goal in the treatment of elderly patients with cancer” [9].

Furthermore, it should be stressed that the assessment of health-related QOL in elderly patients with cancer is a controversial area of research, because there are some methodological problems such as higher frequency of illiteracy, difficulty to understand the questionnaires, existence of comorbidities, use of instruments not validated in the elderly population. There is a great need for further research dedicated to elderly cancer patients with no methodological problems.

There are some limitations which should be discussed. One of them is the use of a convenience sample, and the fact that the data collection was conducted in one hospital in a major Greek city. Another significant limitation is the fact that the researchers did not study patients' clinical characteristics (e.g. stage of cancer, chemotherapy regimen, etc.) and thus it is difficult to correlate quality of life with them.

6 Conclusions

These findings call attention to quality of life and its related factors in elderly cancer patients. It is highly recommended to envisage measures for improving quality of life in this group of cancer patients.

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