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Assessment the quality of life patients treated because of multiple myeloma

Summary

Introduction

Patients with multiple myeloma face many challenges related to disease symptoms, treatment, and mental health. In this study, three surveys were conducted using the following questionnaires: EORTC QLQ C30, EORTC QLQ MY20 (a total of 246 patients; three groups of patients treated with chemotherapy, autologous stem cell transplantation, and maintenance therapy were compared), and NSNS (a total of 140 patients; groups of patients treated with chemotherapy and autologous stem cell transplantation were compared). The study was conducted concurrently from August 2020 to December 2021, in both paper and electronic formats, at four Polish centers (two in Warsaw, one in Olsztyn, and one in Kielce). Statistical analysis was performed according to the coding scheme attached to the questionnaires. The study shows that patients' quality of life is related to the type of treatment. Patients treated with chemotherapy have the lowest quality of life compared to other groups and require more medical support. Patients receiving supportive care had the least severe disease symptoms and treatment side effects. Elderly patients require special attention because the severity of disease symptoms experienced by patients increases with age. The experience and satisfaction with nursing care is moderate among patients treated for multiple myeloma in Polish oncology wards.

In medicine, multiple myeloma is considered a rare disease, accounting for approximately 10% of all hematologic malignancies worldwide. The symptoms of the disease, the treatment process, and other coexisting issues cause difficulties in physical, mental, and social functioning, while simultaneously reducing patients' quality of life. The available literature provides information on the use of modern therapies that prolong survival and progression-free survival, but the discomforts resulting from the disease and the treatment process are severe. Disease progression and subsequent lines of treatment are inextricably linked to a decline in quality of life. The toxicity of chemotherapy does not only affect cancer cells but also all cells in the human body. Therefore, the occurrence of treatment side effects is inevitable. Patients' problems vary depending on treatment, age, gender, and other factors. Patients receiving chemotherapy experience unpleasant symptoms during the treatment process. Approximately 98% of patients suffer from a range of symptoms, with pain being the most serious.

As evidence-based nursing evolves, it can be concluded that a nurse caring for a patient with multiple myeloma can improve the patient's quality of life. When providing nursing care, it is important to apply current knowledge and implement interventions that are best for the patient. Sometimes a simple intervention can yield good results and reduce discomfort.

When assessing the quality of life and care for patients with a specific disease such as multiple myeloma, it is necessary to gain a deeper understanding of the patients' situation. Therefore, the study was designed to identify patients' health problems resulting from the

disease and its treatment, using the EORTC QLQ C30 and EORTC QLQ MY20 questionnaires, as well as to assess the current situation regarding nursing care using the Polish version of the NSNS scale. The collected data may be used in the future to develop a care model for patients with multiple myeloma and provide benefits for nursing in the form of practical guidance for staff. By implementing certain procedures into nursing practice, the quality of life for patients may be improved, and the work and knowledge of nurses can be systematized and updated. Furthermore, it will help meet the needs and requirements arising from the disease and increase the safety of both patients and nurses. A broader perspective on certain clinical situations may contribute to the introduction of new standards in patient care.

A search of medical databases revealed numerous studies using the aforementioned questionnaires; however, these were primarily aimed at identifying treatment options. The quality of nursing care in Poland was assessed using the NSNS questionnaire in several hospital wards, including the cardiology (conservative), urology (surgical), and kidney transplantation wards. No similarly designed studies focused on nursing care among patients with multiple myeloma were found.

The purpose of the study is to assess quality of life and satisfaction with nursing care among patients with multiple myeloma.

Material and methods

The study was conducted at four Polish centers (two in Warsaw, one in Kielce, and one in Olsztyn) using three questionnaires: the EORTC QLQ C30 (first article), EORTC QLQ MY 20 (second article) in 246 patients, and NSNS (third article) in 140 individuals diagnosed with multiple myeloma. The questionnaires were distributed in both paper and electronic formats. The study was conducted simultaneously. Statistical analysis of the first and second studies was performed in R using the RStudio environment. Data normality was assessed using graphical methods, including histograms and Q-Q plots. The Kruskal-Wallis test with a post hoc test for multiple comparisons was used for intergroup comparisons. Correlation analysis was performed using Spearman's correlation coefficient. p-values less than 0.05 were considered significant. The analysis of the third study was performed using basic descriptive statistics along with the Shapiro-Wilk test to assess the normality of the data distribution, the Mann-Whitney test, the Kruskal-Wallis test, Student's t-test for independent samples, and Pearson's r correlation analysis. The study was conducted in accordance with the Declaration of Helsinki. This study was approved by the Medical University of Warsaw. The University's Bioethics Committee acknowledged the information on the study (AKBE/271/2019).

Overview and conclusions

The quality of life of patients with multiple myeloma is related to the type of treatment they receive and their age. Patients in the chemotherapy group assessed their quality of life as lower. Quality of life also declined with age. Difficulties with physical and cognitive functioning in daily life and in society indicate that the level of care provided to this group of patients should be increased.

The severity of issues affecting patients with multiple myeloma varies depending on the treatment method. Patients treated with chemotherapy had the highest severity of disease symptoms and treatment side effects, as well as the lowest ratings of their future prospects and body image. Patients treated with supportive care had the lowest severity of disease symptoms

and treatment side effects, and also rated their body image and outlook on the future the highest. Women assessed their outlook on the future significantly lower than men. This group of patients may require additional psychological support. The severity of disease symptoms experienced by patients increases with age, particularly in the chemotherapy and supportive care groups. This may indicate difficulties in daily functioning and an increased need for nursing care.

The experience and satisfaction with nursing care among patients treated for multiple myeloma in oncology wards are moderate. Most patients view their experience and satisfaction with nursing care as positive, regardless of the type of treatment received or their gender. However, as patients age, their assessment of the quality of nursing care declines. This suggests a need for a different approach and intensified care measures for older adults with multiple myeloma. It is necessary to develop a care model specific to this patient group, taking into account the needs arising from the treatment of multiple myeloma and the aging process. Furthermore, as the length of stay in the ward increases, patients' ratings of satisfaction with nursing care, both in terms of experience and overall satisfaction, also improve. Patients rate the quality of nursing care similarly, regardless of their educational background. Efforts should be made to improve the quality of nursing care, especially considering the needs of older