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A Retrospective Examination of Symptoms Experienced by Patients Diagnosed with Lymphoma, Reasons for Hospital Admission, Hospitalization, and Hospital Treatments

Merve Gözde Sezgin, Hicran Bektaş

Department of Medical Nursing, Akdeniz University Faculty of Nursing, Antalya, Turkey

Abstract

Background: An evaluation of the symptoms experienced by patients with lymphoma, the reasons for admission and hospitalization, and the treatments admitted in the hospital are important in terms of determining the care programs to be applied.

Aim: This study aimed to examine the symptoms experienced by patients diagnosed with lymphoma, reasons for hospital admission, hospitalization, and hospital treatments.

Methods: This retrospective, cross-sectional study was conducted by examining the data of 121 patients over 18 years of age with lymphoma who were admitted to a university hospital between 2018 and 2020. Demographic, disease, and treatment-related data were examined, and the common symptoms, hospital admissions, reasons for hospitalization, and treatments administered in the hospital were examined. Standard deviation, mean, frequency, percentage, and chi-square test were used to evaluate the data.

Results: The mean age of patients was 53.63 ± 16.41 years, 67.8% of patients were male, 66.9% admitted to the hematology outpatient clinic and 33.1% to the emergency service, and 66.9% were hospitalized. The most common symptoms experienced by lymphoma patients related to the disease and treatment were fatigue (35.5%), fever (33.1%), and pain (19.8%). The most common reasons for hospitalization were febrile neutropenia ($P=.424$), anemia ($P=.569$), and low immunoglobulin G ($P=.833$). Antibiotics ($P=.007$), granulocyte-stimulat ing factor ($P=.310$), and erythrocyte transfusion ($P=.336$) were the most common treatments for patients.

Conclusion: The results were obtained that lymphoma patients experienced symptoms associated with the disease and treatment, and therefore, most of them were hospitalized and treated. Within the scope of nursing care for lymphoma patients, it was recommended that current nursing interventions should be planned primarily for managing fatigue, fever, pain symptoms, febrile neutropenia, and anemia and monitoring the side effects of immunoglobulin G depletion.

Keywords: Lymphoma, symptom, treatment, retrospective study, nursing

Introduction

Lymphomas, which are among the hematological malignancies, are an important health problem due to their variable pathological, genetic, and clinical features.[1,2] Lymphomas have become important in the field of health in recent years due to the increase in the incidence, the prolongation of the life span of patients, and the developments in different treatment methods.[3]

According to World Health Organization 2020 data, while non-Hodgkin lymphoma (NHL) is 6.9% and Hodgkin lymphoma (HL) is 1.2% in men, NHL is 4.8% and HL is 0.8% in women.[4] According to the 2020 data of the Turkish Health Statistics Yearbook, the incidence of NHL in Turkey in 2017 was 7.1 per 100 000 for men and 4.8 per 100 000 for women. The incidence rate of these diseases increases with age in both gender.[5]

Although the incidence of lymphoma seems to be low, symptom management of patients is adversely affected due to disease and treatment-related side effects. The main treatment method in lymphoma is chemotherapy treatment from the first diagnosis.[6] Lymphoma patients may experience problems such as anemia, infection, bleeding, nausea, vomiting, mucositis, loss of appetite, weakness, fatigue, pain, constipation, hair

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Corresponding author: Merve Gözde Sezgin
E-mail: gozdesezgin1990@gmail.com

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loss, and peripheral neuropathy due to chemotherapy treatment.[7,8] The risk of bacterial and opportunistic infections due to neutropenia increases in lymphoma patients, and neutropenic fever can progress as a fatal complication. In addition, problems such as hyperglycemia due to the use of corticosteroids and an increase in the need for insulin therapy due to an increase in insulin resistance may occur in treatments.[3,9,10]

The presence of the disease prevents patients from fulfilling their daily responsibilities, and failure to fulfill these responsibilities causes emotional problems.[11-13] The functional status of patients is affected due to conditions such as perception of health, biological and psychological disorders, and disease symptoms.[14-16] Symptoms that occur due to the disease and chemotherapy treatment in lymphoma patients limit the patient's life, prevent them from getting satisfaction from life, create difficulties in their functional life, and cause a worsening of their functional status.[17,18] It is predicted that by determining the symptoms experienced by lymphoma patients, the reasons for admission and hospitalization, care, and education interventions specific to these patients can be planned, and symptom management can be done more effectively. In this process, it is thought that it is important for nurses to know the symptoms frequently experienced by lymphoma patients and to evaluate the reasons for admission and hospitalization and the infection rates in terms of contributing to the following subjects; determining the content of care and education and counseling services to be given to patients, choosing treatment and care programs that can improve patient's functional ability, well-being, and general health understanding, increasing patients' compliance with the treatment and care program, reducing the negative effects of the disease and treatments, and increasing the quality of life.

Aim

This study aims to examine the symptoms experienced by patients with lymphoma, the reasons for admission and hospitalization, and the treatments admitted in the hospital.

Materials and Methods

Type of Research

A retrospective, cross-sectional design was used in the study.

Research questions:

- What are the symptoms experienced by patients with lymphoma?
- What is the distribution of the reasons for admission of patients with lymphoma to the hospital according to the type of admission?
- What is the distribution of reasons for hospitalization of patients diagnosed with lymphoma according to the type of admission?
- What is the distribution of treatments administered at the hospital to patients diagnosed with lymphoma according to the type of admission?

Research Setting

This study was conducted in a university hospital, where 350 lymphoma patients were admitted annually. All patient data in the hospital are followed by the Hospital Information Management System (HIMS).

Universe and Sample of the Research

The research sample consisted of 121 patients who admitted between March 15, 2018, and March 15, 2020, and met the inclusion criteria. Patients who were treated with chemotherapy, aged 18 years and over, who were treated with at least 2 cycles of chemotherapy to evaluate the symptoms, and who were admitted to the hematology clinic only were included in the study. In order not to be confused with different symptoms in the study, he was admitted to clinics other than a hematology clinic (n=98) or external institution (n=53) with metastasis (n=77) or chronic disease (n=94), in remission (n=38), other than hematological malignancy. Files of patients with missing data (n=121) were determined as exclusion criteria. In total, 481 patient data were excluded. The sampling rate was found to be 20.1%.

Data Collection Tools

In the study, the patient information form, which included the personal (age, gender, marital status) and disease (number of hospitalization days, number of chemotherapy cures, type of admission to hospital, hospitalization status, reason for hospitalization, type of treatment admitted in hospital (chemotherapy, radiotherapy, surgery), chemotherapy treatment administration protocols, symptoms experienced by patients) characteristics, prepared by the researchers in line with the literature information, was used. A Microsoft Excel file was created for the information obtained from the HIMS.

Data Collection

The patient's data were retrieved by the researcher and the Hospital Information Processing Personnel, using the structured query language (SQL) script method over the HIMS. Structured query language is the structured query language used to manage and design data. In addition, SQL is used for adding information to systems, changing information, extracting information, and querying information.

Data Analysis

Statistical Package for Social Sciences 23.0 (IBM SPSS Corp.; Armonk, NY, USA) package program was used to evaluate the data obtained from the study. Standard deviation, mean, frequency, and percentage values were calculated for the category and continuously variable data. The difference between categorical variables was evaluated with the chi-square test. *P* values less than .05 were considered significant in the study.

Ethical Aspect of Research

Written approval was obtained from the Clinical Research Ethics Committee of Akdeniz University Hospital (date: May 13, 2020/ decision no: KAEK-329) and from the hospital where the study was conducted for all procedures involving the study and patients' information. Written informed consent was obtained from the hospital management for data use.

Results

Descriptive Characteristics Regarding the Patients Diagnosed with Lymphoma Participating in the Study

In the study, the mean age of patients was 53.63 ± 16.41 years. Of the patients, 82 (67.8%) were male, 88 (72.7%) were married, 81 (66.9%) of them admittedto the hematology outpatient clinic, and 81 (66.9%) of them were hospitalized. It was found that 93 (76.9%) of patients were treated with chemotherapy and 88 (72.7%) with rituximab,

Table 1. Descriptive Characteristics of the Patients (n=121)

Descriptive Findings of the Patients	n	%
Age	Mean: 53.63 ± 16.41 (min:21, max:83)	
Number of hospitalization days	Mean: 9.35 ± 9.46 (min:0, max:38)	
Number of chemotherapy cures	Mean: 5.30 ± 2.82 (min:0, max:19)	
Gender		
Male	82	67.8
Female	39	32.2
Marital status		
Married	88	72.7
Single	33	27.3
Type of admission to hospital		
Hematology outpatient clinic	81	66.9
Emergency service	40	33.1
Hospitalization status		
Yes	81	66.9
No	40	33.1
Type of treatment		
Chemotherapy	93	76.9
Radiotherapy	2	1.7
Chemotherapy + surgery	11	9.1
Chemotherapy + radiotherapy	13	10.7
Chemotherapy + radiotherapy + surgery	2	1.6
Chemotherapy treatment admission protocols		
ABVD	25	20.7
CHOP	8	6.6
R-CHOP	88	72.7

ABVD, adriamycin, bleomycin, vinblastine, and dacarbazine; R-CHOP, rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine, and prednisone.

cyclophosphamide, doxorubicin hydrochloride, vincristine, and prednisone [R-CHOP] chemotherapy treatment protocol. In addition, the mean number of hospitalization days for the patients was 9.35 ± 9.46 and the mean number of chemotherapy cycles was 5.30 ± 2.82 (Table 1).

The Symptoms of Lymphoma-Diagnosed Patients and the Distribution of the Reasons for Admitted to the Hospital by Type of Admission

When the symptoms experienced by the patients with lymphoma were examined, it was found that 43 (35.5%) of them experienced weakness, 40 (33.1%) of them had a fever, and 24 (19.8%) of them had pain symptoms (Table 2). When the distribution of the reasons

Table 2. The Symptoms of Patients with Lymphoma

Symptoms	n	%
Weakness	43	35.5
Fever	40	33.1
Pain	24	19.8
Fatigue	20	16.5
Dyspnea	9	7.4
Cough	9	7.4
Anorexia	7	5.8
Bleeding	5	4.1
Nausea	4	3.3
Vomiting	4	3.3
Sweating	3	2.5
Diarrhea	3	2.5
Constipation	2	1.7

for admission to the hospital according to the type of admission of patients with lymphoma was examined, 26 (32.1%) of patients had a weakness, 23 (28.4%) were feverish, and 16 (19.8%) had fatigue. It was also determined that 17 (42.5%) of them experienced weakness, 17(42.5%) of them had a fever, and 12 (30.0%) of them had pain symptoms at the time of admission to the emergency department. The symptoms of dyspnea ($P=.003$), anorexia ($P=.026$), and const ipation/diarrhea ($P=.049$) experienced by the patients were statistically significant compared to their presentation to the hematology outpatient clinic or emergency service. It was found that 17.5% of patients with dyspnea admitted to the emergency department, while 2.5% of them admitted to the hematology outpatient clinic, and the difference between them was statistically significant ($P=.003$). In the study, it was determined that 12.5% of patients who had a statistically significant loss of appetite admitted to the emergency service and 2.5% to the hematology outpatient clinic ($P=.026$). It was seen that 10% of the lymphoma-diagnosed patients with constipation/diarrhe a admitted to the emergency department and 1.2% to the hematology outpatient clinic, and the difference between them was statistically significant ($P=.049$; Table 3).

The Reasons for Hospitalization of Patients with Lymphoma Diagnosis by Admission Type

When the reasons for hospitalization of patients with lymphoma were examined according to the way they were admitted; among the reasons for hospitalization from the hematology outpatient clinic were febrile neutropenia in 17 patients (21.0%), anemia in 11 patients (13.6%), and low immunoglobulin G (IgG) in 11 patients (13.6%); among the reasons for hospitalization from the emergency room, 11 of patients had febrile neutropenia (27.5%), 7 had anemia (17.5%), and 6 had low IgG (15.0%). In the study, it was determined that patients with oral intake disorders admitted to the emergency department at a statistically significant rate (10.0%) and the rate of admission to the hematology outpatient clinic (1.2%) was found to be higher ($P=.023$; Table 4).

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Table 3. The Distribution of the Reasons for Admitted to the Hospital by Type of Admission

	Hospital Admission Type				
	Hematology Outpatient Clinic		Emergency Service		
	n	%	n	%	Statistical Value (*P*)
Weakness	26	32.1	17	42.5	.261
Fever	23	28.4	17	42.5	.121
Pain	12	14.8	12	30.0	.490
Fatigue	16	19.8	4	10.0	.174
Cough	5	6.2	4	10.0	.450
Bleeding	4	4.9	1	2.5	.526
Sweating	2	2.5	1	2.5	.992
Dyspnea	2	2.5	7	17.5	**.003***
Nausea/vomiting	2	2.4	6	15.0	.240
Anorexia	2	2.5	5	12.5	**.026***
Constipation/diarrhea	1	1.2	4	10.0	**.049***

Significant difference at $P < .05$; *Value in bold: significant.

The Distribution of Treatments Admitted in the Hospital to Patients with Lymphoma Diagnosis by Admission Type

When the distribution of treatments admitted in the hospital according to the admission type is examined, it was found that 26 (32.1%) patients with lymphoma who admitted to the hematology outpatient clinic were treated with antibiotics, 23 (28.4%) were given granulocyte-stimulating factor [G-CSF] treatment, and 16 (19.8%) were erythrocyte transfusion. It was determined that 23 (57.5%) of patients received antibiotic treatment, 15 (37.5%) of them G-CSF treatment, and 11 (27.5%) of them received erythrocyte transfusion at the time of admission to the emergency department. When the treatments admitted in the hospital were evaluated according to the way of admission to the hospital, it was determined that 32.1% of patients were hospitalized in the hematology outpatient clinic and 57.5% of patients who were hospitalized in the emergency department were given antibiotic treatment. It was found that the difference between them according to the antibiotic treatment applied was statistically significant ($P = .007$). In addition, nutritional therapy was admitted to 1.2% of patients hospitalized in the hematology outpatient clinic and 20% of patients admitted to the emergency department, and the difference between them was statistically significant according to the nutritional therapy applied ($P = .001$; Table 5).

Table 4. The Distribution of the Reasons for Hospitalization of Patients with Lymphoma Diagnosis by Admission Type

	Hospital Admission Type				
	Hematology Outpatient Clinic (n=81)		Emergency Service (n=40)		Statistical Value (*P*)
	n	%	n	%	
Febrile neutropenia	17	21.0	11	27.5	.424
Anemia	11	13.6	7	17.5	.569
Low IgG	11	13.6	6	15.0	.833
Thrombocytopenia/bleeding	10	12.4	4	10.0	.930
Neutropenia	6	7.4	4	10.0	.626
Pneumonia	6	7.4	5	12.5	.359
Pain	4	4.9	2	5.0	.988
Dyspnea	3	3.7	2	5.0	.337
Malignant fever	3	3.7	2	5.0	.736
Oral intake disorders	1	1.2	4	10.0	**.023***

Significant difference at $P < .05$; *Value in bold: significant.

Table 5. The Distribution of Treatments Admitted in the Hospital by Admission Type

	Hospital Admission Type				
	Hematology Outpatient Clinic (n=81)		Emergency Service (n=40)		
	n	%	n	%	Statistical Value(*P*)
Antibiotics	26	32.1	23	57.5	**.007***
G-CSF	23	28.4	15	37.5	.310
Erythrocyte transfusion	16	19.8	11	27.5	.336
Intravenous immunoglobulin	11	13.6	8	20.0	.361
Analgesic	9	11.1	9	22.5	.098
Platelet transfusion	7	8.6	5	12.5	.504
Nutrition	1	1.2	8	20.0	**.001***
Nebulization	2	2.5	2	5.0	.464
Oxygen	1	1.2	2	5.0	.210
Antiemetic	1	1.2	1	2.5	.608

G-CSF, granulocyte-stimulating factor. Significant difference at $P < .05$; *Value in bold: significant.

Discussion

In this study, the symptoms experienced by patients with lymphoma, the reasons for admission to the hospital and hospitalization, and the treatments admitted in the hospital were evaluated retrospectively. According to the results of the research, it was determined that two-thirds of patients admitted to the hematology outpatient clinic, one-third of them admitted to the emergency service, and more than two-thirds of them were hospitalized, depending on the symptoms they experienced. In the study by Chuang et al.[19] it was stated that 17% of patients with lymphoma were hospitalized. Similarly, in the retrospective study by Boo et al.[20] it was reported that 85.1% of patients were treated with adriamycin, bleomycin, vinblastine, and dacarbazine chemotherapy, 13.8% received radiotherapy, and 78.6% of them were hospitalized. It is seen that the fact that almost all of patients included in the study received chemotherapy treatment and the average number of chemotherapy cycles administered to the patients is 5, which has a negative effect on the symptoms experienced and hospitalization. The fact that the patients were hospitalized for an average of 9 days or more indicates that patients with lymphoma need nursing interventions for symptom management.

It was found that more than one-third of patients with lymphoma diagnosed in the study experienced weakness, more than one-third of them had a fever, and one-fifth of them had pain. In the study by Chuang et al.[19] it was stated that the most common problems in patients were thrombocytopenia, anemia, weakness, fatigue, and sleep problems. In a randomized controlled study conducted by Ruland et al.[21] on patient care, symptoms, and the need for symptom management support of a special computer-assisted assessment tool, patients reported symptoms of pain, infection, sleep problems, bleeding, and sexuality problems. As a result of the same study, it was stated that computer-assisted technology applied reduced the severity and frequency of problems.[21] In a randomized controlled study by Maguire et al.[22] in which they evaluated the symptoms of cancer patients using remote symptom management technology, it was reported that the most expressed symptoms by patients were fatigue, nausea/vomiting, mucositis, and febrile neutropenia. When the results of the study were examined, it was stated that remote symptom monitoring devices reduced morbidity, unplanned hospitalizations, supportive care needs, and increased the quality of life of patients.[22] Similarly, Breen et al[23] reported that symptoms such as nausea, mucositis, constipation, and fatigue adversely affect the quality of life in a randomized controlled study in which they monitored chemotherapy-related side effects in real-time via telehealth in patients with hematological malignancies. According to the results of the same study, it has been reported that the application has positive contributions such as a decrease in symptoms such as vomiting and diarrhea-related burden, psychological distress, an increase in symptom self-management ability, cancer-related knowledge, support needs, and utilization of health services.[23] In the descriptive study by Sezgin and Bektaş,[24] in which they examined symptom clustering and its effect on functional status in lymphoma patients, it was determined that the most common psychological symptoms experienced by lymphoma patients were difficulty in sleeping, feeling sad, and worried, and physical symptoms were pain, dry mouth, and nausea. In addition, when the results of the study were examined, it was reported that the functional life of patients was adversely affected due to pain, low energy, feeling sad, worrying about worsening of the condition, getting tired quickly, and pain problems in certain parts of the body. According to the results of the research, it was stated that it is important to evaluate the symptoms experienced by the patients and to plan the appropriate nursing interventions in line with these symptoms.[24] It is seen that patients diagnosed with lymphoma experience disease and treatment-related anemia, weakness, fatigue, fever, pain, infection, febrile neutropenia, thrombocytopenia, bleeding, nausea/vomiting, mucositis, constipation, diarrhea, sleep problems, and sexual problems. It is thought that telenursing interventions for remote symptom control support are needed to provide training on symptom management to patients with lymphoma, strengthen symptom self-management, and reduce

hospital admissions, especially due to the COVID-19 pandemic in the world and our country.

In the study, it was determined that more than one-third of patients with lymphoma were admitted to the hematology outpatient clinic with symptoms of weakness, one-third with fever, and one-fifth with fatigue symptoms. In addition, it was found that nearly half of patients presented to the emergency department with symptoms of weakness, half of them with fever, and one-third of them with pain symptoms. It was found that patients who experienced dyspnea, anorexia, and constipation/diarrhea admitted to the emergency department more often than the hematology outpatient clinic, and the difference between them was significant according to the way they applied. In the study by Ardeshna et al.[25] it was reported that the most common problems experienced by patients who admitted to the emergency department were infection, allergic reaction, and neutropenia. In the study conducted by Basch et al.[26] symptoms such as fatigue, pain, anorexia, dyspnea, neuropathy, and nausea were reported by the patients in emergency service admissions. In the results of the study, it was reported that monitoring the symptoms reported via tablet computers, supported by home visits, increases the survival of patients and decreases the use of the emergency room, hospitalization, and secondary infections. It is seen that it is very important to plan nursing interventions such as online remote symptom control and home visits to increase the quality of patient care at home and to prioritize symptoms such as weakness, fatigue, fever, pain, dyspnea, anorexia, and constipation/diarrhea experienced by lymphoma patients by healthcare professionals.

In the study, febrile neutropenia (outpatient clinic: 21%, emergency service: 27.5%), anemia (outpatient clinic: 13.6%, emergency service: 17.5%), and low IgG (outpatient clinic: 13.6%, emergency service: 15%) were found to be the reasons for hospitalization in the hematology outpatient clinic and emergency room of patients with lymphoma. In the study, it was determined that patients with oral intake disorders presented to the emergency department approximately 10 times more often than in the hematology outpatient clinic, and the difference between them was statistically significant. In the study by Kane et al.[27] it was stated that the most common symptoms experienced by 85% of 1660 lymphoma patients who admitted to the emergency department due to R-CHOP treatment were fatigue, weakness, and fever. In the study conducted by Elsayem et al.[28] it was reported that the most common symptoms of patients who admitted to the emergency department, such as pain, fever, and dyspnea, affected their quality of life negatively and the treatment applied had a significant positive effect on their survival. It is seen that nursing interventions and patient education should be increased regarding symptoms such as febrile neutropenia, anemia, oral intake disorder, pain, and dyspnea that cause emergency service admissions and hospitalization of patients with lymphoma.

In the study, it was found that the treatments admitted in the hospital according to the hematology outpatient clinic and the emergency service admission to the patients with lymphoma were antibiotic therapy (outpatient clinic: 32.1%, emergency service: 57.5%), G-CSF therapy (outpatient clinic: 28.4%, emergency service: 37.5%), and erythrocyte transfusion (outpatient clinic: 19.8%, emergency service: 27.5%). It was determined that there was a significant difference between the treatments admitted in the hospital according to the admission type and, depending on the antibiotic and nutritional treatment. In the study by Fietz et al.[29] it was reported that problems such as bone pain, anemia, leukocytosis, and thrombocytopenia were the most common in lymphoma patients. When the results were examined, it was stated that the administration of filgrastim to NHL patients who received chemotherapy in routine clinical practice affected the neutrophil and leukocyte values positively. In a randomized controlled study conducted by Torfoss et al.[30] on neutropenic lymphoma patients, it was reported that broad-spectrum antibiotics and G-CSF treatment options were mostly applied to lymphoma patients. According to the results of the study, it was determined that broad-spectrum antibiotics used in febrile neutropenic patients had a positive effect within 72 hours. Similarly, in the study by Drach et al[31] in which they evaluated the efficacy and safety of R-CHOP treatment in patients with mantle cell lymphoma, the most common side effects experienced by their patients were reported as neutropenia, thrombocytopenia, and leukopenia. According to the results of the study, it was stated that transfusions of G-CSF, antibiotics, blood, and blood products are among the most used treatment methods in lymphoma patients. It is observed that patients with lymphoma often have problems of infection and anemia since the treatments admitted in the hospital are often antibiotic therapy, G-CSF therapy, and erythrocyte transfusion. Due to the risks of bleeding and sepsis in lymphoma patients, it is thought that it is important to organize nursing care interventions and education regarding these problems, in terms of reducing hospital admissions and hospitalizations.

It is thought that it can be tiring and difficult for patients with lymphoma to cope with conditions such as disease, complications, treatments, and changes in daily life activities. In these patients, there may be delays or disruptions in the treatments to be applied to multiple symptoms. In this case, to minimize the symptoms experienced by the patients, it seems important to plan and maintain nursing interventions for appropriate management of symptoms, appropriate pharmacological treatment methods, positive coping methods, and the development of family relationships.[14,15,32]

As a result of the multiple symptoms experienced in lymphoma patients, the treatment of patients can be difficult and complex. Evaluation of disease and treatment-related features as a whole, monitoring of other symptoms in addition to the basic symptom experienced by the patient, determination of effective treatment, and care interventions are important in improving the quality of life of patients. In addition, examining the symptoms experienced by the patients, the treatment options, and the reasons for hospitalization will contribute to the implementation of more effective symptom management and nursing interventions. It is believed that the results of this research can contribute positively to nursing care in the symptom management process of lymphoma patients, planning their care priorities, and reducing their hospitalization.

Limitations of the Research

Since the research data were collected retrospectively through the HIMS, patient files with missing medical records could not be included in the scope of the study and the entire population could not be reached.

Conclusion and Recommendations

Patients diagnosed with lymphoma experience disease and treatment-related symptoms, apply to the hospital in cases where they cannot effectively manage the symptoms, and may need inpatient

treatment. It is seen that patients diagnosed with lymphoma often experience symptoms of weakness, fatigue, fever, and pain; admit to the hospital due to these symptoms; and apply to the emergency service more often than in outpatient clinics, especially in cases of dyspnea, anorexia, oral intake disorder, constipation/diarrhea. In addition, it is understood that patients are hospitalized due to febrile neutropenia, anemia, low IgG, and antibiotics, G-CSF treatment, and erythrocyte transfusion are frequently applied. Findings related to the symptoms experienced by patients with lymphoma are very important in terms of improving the life quality of patients, planning symptom management interventions to be given by nurses, and providing symptom management support at home to patients with lymphoma, whose hospital admission or hospitalization is at high risk for infection, especially due to the current pandemic. Considering situations such as the vital risks of patients with lymphoma due to sepsis and bleeding, the delay of active chemotherapy treatment, the frequent hospital admissions or hospitalizations leading to important complications, especially infection, it is recommended to develop symptom management programs that can be applied in face-to-face or online environments specific to these patients, to implement telenursing interventions for remote symptom control support, to increase patient education, and to empower patients. In addition, it is recommended to increase the awareness of student and graduate nurses about symptom management of patients with lymphoma, determine the difficulties and symptom burdens of patients with lymphoma in symptom management, and conduct studies on the effect of different nursing interventions on symptom management. Due to the difficulties experienced in the process of obtaining the data, it is thought that awareness should be raised about the meticulous entry of patient data in health institutions.

Ethics Committee Approval: Ethics Committee Approval was obtained from Akdeniz University Clinical Research Ethics Committee (date: May 13, 2020, decision no: KAEK-329).

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