Wydawnictwo UR 2023
ISSN 2544-1361 (online)
doi: 10.15584/ejcem.2023.3.26

http://www.ejcem.ur.edu.pl
European Journal of Clinical and Experimental Medicine
Eur J Clin Exp Med 2023; 21 (3): 582–589

ORIGINAL PAPER

Nursing care for symptoms seen in patients undergoing palliative surgery – a retrospective study

Özge Uçar , Sevim Çelik , Elif Karahan , Sibel Altıntaş

Department of Nursing, Faculty of Health Sciences, Bartin University, Bartin, Turkey

ABSTRACT

Introduction and aim. Palliative care is an approach to improve the quality of life of patients and their families facing problems associated with life-threatening illnesses or old age, to manage their pain, distress, and other symptoms, improving their quality of life, and providing psychological support. This study was designed to identify the care practices planned by nurses for the health issues of palliative surgical patients.

Material and methods. This is a retrospective, cross-sectional, descriptive study. The data was collected from digital records of the two state hospitals in the Western Black Sea Region of Turkey between January 2019 and January 2020. The research was completed with a total of 391 data of patients undergoing palliative surgery. Frequency and percentage distributions were used in descriptive statistics.

Results. The frequency of symptoms observed in patients were determined as cough and sputum (81.8%), dehydration (73.9%), dyspnea (71.9%), fatigue (49.9%), loss of appetite-weight (49.9%), insomnia (44%), pain (37.6%), nausea (29.2%), and constipation (23.8%). The planned nursing diagnoses for these symptoms were identified as risk for falls, imbalanced nutrition, risk for impaired skin integrity, risk for infection, risk for aspiration, deficient knowledge, risk for impaired respiratory function, constipation, ineffective airway clearance, pain, risk for deficient fluid volume, sleep deprivation, impaired gas exchange respectively.

Conclusion. This study highlights the insufficient planning of nursing care for the symptoms of palliative surgical patients receiving palliative care in our country. Therefore, it is recommended that palliative care nurses be supported with in-service training on appropriate care planning topics.

Keywords. nursing, nursing care, palliative care, palliative surgery, symptom management

Introduction

The advancement of medical care with technology and the development of new treatments for chronic illnesses have increased the fight against diseases and extended survival times. However, these advancements also lead to longer experiences of chronic illness and more pain and suffering caused by these illnesses.[1,2] In this sense, centers where patients and healthy individuals can easily access healthcare services, receive continuous, comprehensive, and integrated care, and particularly receive effective support in palliative care are crucial for family and community health.[3,4]

Palliative care is an approach to improve the quality of life of patients and their families facing problems associated with life-threatening illnesses or old age, to manage their pain, distress, and other symptoms, improving their quality of life, and providing psychological support (WHO, 2020). Palliative care is provided to individuals with life-threatening illnesses such as motor neuron diseases like Alzheimer's and dementia, cancer,

Corresponding author: Özge Uçar, e-mail: ozgeenginucar@gmail.com

Received: 12.04.2023 / Revised: 25.06.2023 / Accepted: 16.07.2023 / Published: 30.09.2023

Uçar Ö, Çelik S, Karahan E, Altıntaş S. *Nursing care for symptoms seen in patients undergoing palliative surgery – a retrospective study*. Eur J Clin Exp Med. 2023;21(3):582–589. doi: 10.15584/ejcem.2023.3.26.

heart disease, cirrhosis, chronic obstructive pulmonary disease, diabetes, HIV/AIDS, kidney failure, multiple sclerosis, rheumatoid arthritis, Parkinson's disease, and tuberculosis.[3,5] The aim is to prevent the symptoms associated with all of these illnesses such as pain, dyspnea, fatigue, and others through the use of pharmacological and non-pharmacological methods, and to provide the patient with a comfortable life until the end of life.[6-8]

Palliative surgery is a surgical intervention aimed at relieving a patient's symptoms and thereby improving their quality of life, typically in those with a poor prognosis or life-threatening illness. The treatment and care techniques used in palliative surgery run parallel to those used in curative surgery.[9] Nowadays, "palliative surgery" is a term used for all surgical procedures aimed at alleviating symptoms caused by advanced disease and improving quality of life. Overlooking the necessity of palliative care in surgical patients can result in greater discomfort for patients in the later stages of the disease or even in the end-of-life period.[6] Clinicians and nurses need to have appropriate experience and knowledge to provide good palliative care.[2,6] Palliative surgery is a series of planned surgical procedures aimed at supporting patients to live as well as possible for as long as possible and determining appropriate treatment. Patient and family participation in care should be ensured to help them cope with the situation in their remaining life.[10]

During this period, nurses have significant responsibilities. It is undeniable that timely and effective nursing interventions facilitate symptom management for patients requiring palliative treatment and care, and lead to positive patient outcomes such as improving patient and family quality of life.[11]

Palliative care nursing aims to approach the patient and family holistically, in collaboration with all disciplines, in order to improve the patient's quality of life.[12] In pursuit of this goal, nurses play a prominent role not only as evidence-based care providers, but also as educators and leaders.[13] Given all of this, it is essential that nurses possess the necessary knowledge and skills in palliative care.[6] Particularly in the palliative care phase where patients may be struggling with symptoms, nurses should have a strong understanding of symptom management and develop and implement comprehensive care plans that encompass physical, psychosocial, and spiritual dimensions.[6] Studies have shown that proper symptom management in palliative care reduces treatment time and costs, and shortens hospital stays.[1,13] In the literature, many studies are showing that palliative surgery reduces symptoms. On the other hand, there are findings related to symptom management and nursing care in all palliative patients. However, no data investigating the effect of nursing care on symptoms in palliative surgery patients were found. However, it is thought that the success of palliative surgery may also be affected by the quality of nursing care provided during and after the perioperative period.

Aim

This study was designed to identify nursing diagnoses addressed by nurses for the health problems and symptoms of palliative surgical patients hospitalized in a palliative care unit.

Material and methods

Study design

This study is a retrospective cross-sectional descriptive research.

Study questions

- What are the common symptoms in palliative surgery patients?
- What are the common treatment methods used in palliative surgery patients?
- What are the commonly used nursing diagnoses in palliative surgery patients?

Sample

This retrospective study was conducted on palliative surgical patients who were treated at the Palliative Care Centers of two state hospitals located in the Western Black Sea region between January 2019 and January 2020. Palliative surgical patients who were over 18 years of age, had undergone at least one surgical procedure, had been hospitalized at least once, and had been discharged with complete data were included in the study. Patients who had not undergone palliative surgery as their hospitalization purpose but had undergone it once during their hospitalization were also included in the study. For patients with multiple hospitalizations, only the first hospitalization was taken into account. A total of 391 patient records were included in the study.

Data collection

In this study, data was collected over a period of 1 year by the researcher in the palliative care centers of two state hospitals located in the Western Black Sea region. The palliative care centers were 16-bed and 18-bed units accepting adult palliative patients. There were 12 nurses and 14 nurses working in the unit, all with at least a bachelor's degree. The nurses' years of experience ranged from 2 to 22 years. Data were obtained retrospectively by examining the hospital's digital archives of 527 patients who were followed up and treated in the palliative care center. Only the first admission of patients with multiple admissions was evaluated. 136 patients who did not meet the inclusion criteria, stayed less than 24 hours or had insufficient medical records were excluded from the study. A total of 391 patients were in-

cluded in the study, and their demographic characteristics, admission indications, comorbidities, presence and type of malignancy, length of stay, Glasgow coma scale, pain scale, symptoms, nursing diagnoses, and discharge status were recorded using a data collection form prepared by the literature, based on the evaluation of their first admission.

Table 1. Characteristics of patients (n=391)[a]

Characteristics		n	%
Gender	Female	201	41.5
	Male	190	39.3
Education status	Illiterate	98	25.1
	Literate	220	56.3
	Primary school	18	4.6
	High school	43	11.3
	University	11	2.8
Smoking status	Smoking	120	30.7
	Not smoking	271	69.3
Nutrition	Oral	61	15.6
	NG	25	6.4
	PEG	305	78.0
Dependent Mobilization	Dependent	299	76.5
	Independent	92	23.5
		Mean ±SD	**Min.-Max.**
Age		74.63±11.28	44–96
BMI		25.31±4.03	15.43–34.13
Length of stay		26.12±12.31	3–92
Assessment scales	Glasgow Coma Scale	9.73±1.48	8–13
	Pain Scale*	3.69±2.44	0–6
	Braden Scale	11.49±1.61	0–12

[a] SD – standard deviation; BMI – body mass index; * – the VAS (Visual Analog Scale) pain scale has been used

Statistical analysis

The collected data was analyzed usiwereIBM SPSS Statistics (V25.0, IBM Corporation). Descriptive statistics such as numbers, percentages, means, and standard deviations were used to evaluate the obtained data. Cross table was used for Symptoms, palliative surgery operations and nursing diagnosis. Skewness and kurtosis coefficients of the scores were examined and it was observed that these coefficients were within the range of ±2 (George and Mallery, 2010). No missing data was detected in the dataset.

Ethics approval

This study was conductedbyh the Helsinki Declaration. The study was approved by the institutional ethics committee of Bartin University (No. 2020-BRT-08). Institutional permission was obtained from the Ministry of Health of the Republic of Turkey, the Provincial Health Directorate to which the hospital is affiliated, and the hospital (2020-05-20T-14). Oral consent was obtained from the responsible physician and nurses of the palliative care unit of the state hospital where the data was collected. Since this was a retrospective study and personal data ofthe patients were not included, informed consent from patients was not necessary and the data were obtained from the hospitals' digital databases.

Results

The mean age of the patients was 74.63±11.28. The average length of stay in the palliative care center was 26.12±12.31 days. Of the patients, 41.5% were female and 39.3% were male. 76.5% of the patients had impaired motor activity, and 30.7% were smokers. The mean body mass index of the patients was found to be 25.31±4.03. 15.6% of the patients were receiving oral nutrition, 6.4% were receiving nasogastric tube feeding, and 78% were receiving percutaneous endoscopic gastrostomy tube feeding. The average Glasgow Coma Scale score of the patients was 9.73, the average Braden Scale score for pressure ulcer risk assessment was 11.49, and the average pain score measured with VAS was 3.69 (Table 1).

Nursing diagnoses planned by nurses for the symptoms were determined as follows: risk for falls (98.2%) was the most common nursing diagnosis, followed by Imbalanced nutrition (87.7%), Risk for impaired skin integrity (72.6%), Risk for infection (63.4%), Risk for aspiration (60.1%), Deficient knowledge (50.9%), Risk for impaired respiratory function (48.6%), Constipation (17.4%), Ineffective airway clearence (15.6%), Pain (10.7%), Risk for deficient fluid volume (10.7%), Impaired gas exchange (10.2%), and Sleep deprivation (8.2%) (Table 2).

Table 2. Nursing diagnoses applied to palliative care patients (n=391)[a]

Nursing Diagnoses	n	%
Risk for aspiration	235	60.1
Risk for impaired respiratory function	190	48.6
Risk for infection	248	63.4
Risk for impaired skin integrity	284	72.6
Risk for falls	384	98.2
Imbalanced nutrition	343	87.7
Pain	42	10.7
Deficient knowledge	199	50.9
Risk for deficient fluid volume	42	10.7
Ineffective airway clearance	61	15.6
Anxiety	33	8.4
Constipation	68	17.4
Sleep deprivation	32	8.2
Impaired gas exchange	40	10.2
Total	391	100

[a] Multiple responses

The frequency of symptoms observed in patients was determined as wounds (93.9%), cough (81.8%), dehydration (73.9.2%), dyspnea (71.9%), fatigue (49.9%),

loss of appetite-weight (49.9%), insomnia (44%), pain (37.6%), nausea and vomiting (29.2%), and constipation (23.8 %) (Table 3).

According to Table 3, it was determined that nurses most frequently provided care to patients with a diagnosis of fall risk for all symptomsWhen evaluating nursing diagnoses related to experienced symptoms, it was found that there were relatively low frequencies of diagnoses for patients experiencing specific symptoms. Among patients with pain symptoms, the diagnosis of pain was given in 3.3% of cases. For those experiencing insomnia, disruptions in sleep patterns were diagnosed in 4.3% of cases. Constipation diagnoses were assigned for patients with constipation issues at a rate of 4.1%. In cases where patients developed wounds, the diagnoses of infection risk (59.3%) and impaired skin integrity risk (67.5%) were more prevalent. For patients with dehydration, the diagnosis of fluid volume imbalance risk was identified in 8.7% of cases. Similarly, among patients complaining of cough and sputum, nursing diagnoses such as ineffective breathing pattern (40.2%), ineffective airway clearance (13.6%), and impaired gas exchange (5.4%) were identified by nurses with less frequency compared to the diagnosis of fall risk. Nursing diagnoses of nutritional imbalance (45.5%) and fluid volume imbalance (5.4%) were also assigned less frequently as nursing diagnoses compared to the diagnosis of fall risk in patients experiencing appetite and weight lossPatients experiencing dyspnea were diagnosed with a risk of impaired breathing pattern at a rate of 32.7%, ineffective airway clearance at a rate of 11.3%, and impaired gas exchange at a rate of 7.9%. In patients suffering from weakness and fatigue, the most common diagnosis was a risk of falls, accounting for 48.6% (Table 3).

According to Table 4, the most common palliative surgical treatments were as follows: percutaneous endoscopic gastrostomy (PEG) at a rate of 71.6%, wound surgery at a rate of 71.1%, tracheostomy at a rate of 60.9%, colostomy at a rate of 31.4%, cystostomy procedure at a rate of 30.6%, and biopsy at a rate of 27%.

Table 4 includes a cross-tabulated table comparing nursing diagnoses according to palliative surgical treatments. According to this, the most commonly assigned nursing diagnosis in patients, regardless of the type of palliative surgical procedure, was the risk of falls. In patients with PEG, the nursing diagnosis of risk of falls was followed by diagnoses of nutritional imbalance (60.3%), risk of aspiration (44.4%), and fluid volume imbalance

Table 3. Distribution of nursing diagnoses according to patients' symptoms in palliative care centers (n=391)[a]

Nursing Diagnosis*		Risk for aspiration	Risk for impaired respiratory function	Risk for infection	Risk for impared skin integrity	Risk for falls	Imbalanced Nutrition	Pain	Deficient Knowledge	Risk for deficient fluid volume	Ineffective airway clearance,	Anxiety	Constipation	Sleep deprivation	Gas Exchange, impaired	Total
		Symptoms*														
Pain	n	94	80	94	103	146	131	13	77	12	25	11	26	14	14	147
	%	24.0	20.5	24.0	26.3	37.3	33.5	3.3	19.7	3.1	6.4	2.8	6.6	3.6	3.6	37.6
Nausea and vomiting	n	67	54	77	85	110	104	9	55	12	20	8	25	12	11	114
	%	17.1	13.8	19.7	21.7	28.1	26.6	2.3	14.1	3.1	5.1	2.0	6.4	3.1	2.8	29.2
Insomnia	n	96	85	99	126	169	147	15	96	15	22	10	27	17	12	172
	%	24.6	21.7	25.3	32.2	43.2	37.6	3.8	24.6	3.8	5.6	2.6	6.9	4.3	3.1	44.0
Constipation	n	55	43	56	69	92	84	13	48	9	16	11	16	6	12	93
	%	14.1	11.0	14.3	17.6	23.5	21.5	3.3	12.3	2.3	4.1	2.8	4.1	1.5	3.1	23.8
Wounds**	n	223	178	232	264	362	321	42	186	42	55	33	63	29	39	367
	%	57.0	45.5	59.3	67.5	92.6	82.1	10.7	47.6	10.7	14.1	8.4	16.1	7.4	10.0	93.9
Dehidratation	n	176	138	190	202	284	252	37	139	34	44	28	48	25	33	289
	%	45.0	35.3	48.6	51.7	72.6	64.5	9.5	35.5	8.7	11.3	7.2	12.3	6.4	8.4	73.9
Fatique- weakness	n	123	73	119	145	190	166	23	109	27	18	18	21	12	24	195
	%	31.5	18.7	30.4	37.1	48.6	42.5	5.9	27.9	6.9	4.6	4.6	5.4	3.1	6.1	49.9
Coughing-sputum	n	184	157	203	235	313	280	33	161	32	53	27	61	24	34	320
	%	47.1	40.2	51.9	60.1	80.1	71.6	8.4	41.2	8.2	13.6	6.9	15.6	6.1	8.7	81.8
Loss of appetite-weight	n	121	105	130	131	191	178	28	86	18	34	21	33	22	21	195
	%	30.9	26.9	33.2	33.5	48.8	45.5	7.2	22.0	4.6	8.7	5.4	8.4	5.6	5.4	49.9
Dyspnea	n	164	128	183	206	276	247	31	142	31	44	25	53	22	31	281
	%	41.9	32.7	46.8	52.7	70.6	63.2	7.9	36.3	7.9	11.3	6.4	13.6	5.6	7.9	71.9
Total	n	235	190	248	284	384	343	42	199	42	61	33	68	32	40	391
	%	60.1	48.6	63.4	72.6	98.2	87.7	10.7	50.9	10.7	15.6	8.4	17.4	8.2	10.2	100

[a] * – multiple responses; ** – diabetic ulcers, pressure ulcers, arterial ulcers, venous leg ulcers

Table 4. Distribution of nursing diagnoses according to palliative surgical treatments in palliative care centers (n=391)[a]

Nursing Diagnosis*		Risk for aspiration	Risk for impaired respiratory function	Risk for infection	Risk for impared skin integrity	Risk for falls	Imbalanced Nutrition	Pain	Deficient Knowledge	Risk for deficient fluid volume	Ineffective airway clearance,	Anxiety	Constipation	Sleep deprivation	Gas Exchange, impaired	Total
		Surgical treatments for palliative purposes*														
Drains	n	76	55	76	92	117	106	15	59	13	19	13	18	11	17	121
	%	20.9	15.2	20.9	25.3	32.2	29.2	4.1	16.3	3.6	5.2	3.6	5.0	3.0	4.7	33.3
PEG	n	161	124	161	187	254	219	29	136	31	34	21	40	21	28	260
	%	44.4	34.2	44.4	51.5	70.0	60.3	8.0	37.5	8.5	9.4	5.8	11.0	5.8	7.7	71.6
Tracheostomy	n	125	111	145	160	215	193	23	104	25	35	18	43	20	22	221
	%	34.4	30.6	39.9	44.1	59.2	53.2	6.3	28.7	6.9	9.6	5.0	11.8	5.5	6.1	60.9
Colostomy	n	69	52	73	87	109	101	13	55	12	19	11	19	9	14	114
	%	19.0	14.3	20.1	24.0	30.0	27.8	3.6	15.2	3.3	5.2	3.0	5.2	2.5	3.9	31.4
Cystostomy	n	69	53	73	84	107	97	14	52	13	16	13	19	10	15	111
	%	19.0	14.6	20.1	23.1	29.5	26.7	3.9	14.3	3.6	4.4	3.6	5.2	2.8	4.1	30.6
Wound surgery**	n	159	129	162	184	252	217	28	135	28	35	20	42	23	26	258
	%	43.8	35.5	44.6	50.7	69.4	59.8	7.7	37.2	7.7	9.6	5.5	11.6	6.3	7.2	71.1
Biopsy	n	58	45	60	76	94	87	11	50	9	16	10	15	7	13	98
	%	16.0	12.4	16.5	20.9	25.9	24.0	3.0	13.8	2.5	4.4	2.8	4.1	1.9	3.6	27
Total	n	217	180	230	264	356	315	39	183	42	56	30	64	29	37	363
	%	59.8	49.6	63.4	72.7	98.1	86.8	10.7	50.4	11.6	15.4	8.3	17.6	8.0	10.2	100

[a] * – multiple responses; ** – greft, flept, debritman, VAC

(8.5%). In patients who underwent tracheostomy, nursing diagnoses included a risk of aspiration at a rate of 34.4%, risk of impaired breathing pattern at a rate of 30.6%, ineffective airway clearance at a rate of 9.6%, and impaired gas exchange at a rate of 6.1%. In patients who underwent wound surgery procedures such as grafting, flaps, debridement, and vacuum-assisted closure (VAC), the most common nursing diagnosis after the risk of falls was impaired skin integrity risk, which was identified at a rate of 50.7%. Among patients who underwent biopsy procedures, the highest percentage of diagnoses was the risk of falls at 25.9%, followed by impaired skin integrity risk at 20.9%, knowledge deficit at 13.8%, and pain at 3% (Table 4).

Discussion

Palliative care has become an important field that the whole world has been giving importance to in recent years due to the increasing aging population and related chronic diseases. In the terminal phase of patients, it is evident that palliative care is necessary for maximizing their quality of life as much as possible in their final moments, and for the participation of both the patient and their family. This retrospective cross-sectional study was conducted with 391 patients to determine the palliative care profile in Turkey and the interventions of nurses.

In our current study, the most common symptoms were coughing, dehydration, wounds, dyspnea, fatigue, insomnia, pain, nausea, and constipation. In a study on care in the terminal phase, 72% of the patients had cancer.[14] Thrane et al. found that 60.5% of patients were admitted to palliative care due to pain, 53.9% due to neurological diseases, and 51.2% due to congenital disorders.[15] In a systematic review of palliative care in Australia, the main reasons for admission were cancer (42%), non-cancer diseases (8%), and terminal conditions (12%), such as heart failure and renal failure.[16] The same study reported that pain was more common in male patients, and the most common symptoms for all patients were difficulty breathing, nausea/vomiting, and dementia.[16] In a study conducted in Turkey, the most common reasons for admission were inadequate nutrition, care education, pain, and pressure ulcers. The frequency of reasons for admission to palliative care can vary from region to region, and the low number of patients admitted for cancer in our study may be due to the lack of oncology specialists in our region. Another study conducted in Turkey showed similar reasons for admission to palliative care.[17] Therefore, while our study is parallel to Miniksar and Aydın's study, it differs from other studies in terms of reasons for admission. However, differences in reasons for admission were observed in all other studies.

In our study, the most common symptoms observed were cough, dehydration, dyspnea, weight loss, fatigue, insomnia, pain, nausea, and constipation in order of frequency. According to an analysis conducted by Pang et al., fatigue was identified as the most frequently encountered symptom, with a rate of 96%. This was followed by sleep problems at 94.8% and pain at 92.5%.[18] In a study conducted by Cantero et al. on symptom management in palliative care patients, the most common symptoms

were ranked as pain, fatigue, nausea, depression, anxiety, drowsiness, shortness of breath, anorexia, sleep disorders, and malaise.[19] In a study conducted in 2022, the most common problems in palliative patients were reported as nausea, pain, fatigue, and sleep problems.[20] In a study conducted on 145 patients in Denmark, the most common symptoms were recorded as pain and deterioration in physical condition.[21] In another study, the most common symptoms in palliative patients were reported as nausea, pain, drowsiness, shortness of breath, and loss of appetite, respectively.[22] Considering all these results, similar symptoms were observed in palliative care patients at different frequencies. This may be due to cross-cultural differences in the populations of patients admitted to palliative care clinics and shortcomings in healthcare. When examining the nursing diagnoses used according to patients' symptoms, it can be observed that nurses most frequently assigned the diagnosis of fall risk for all symptoms. It has been determined that nursing diagnoses consistent with the symptoms were assigned; however, the rates were found to be quite low. This situation suggests that nurses may not be actively and accurately utilizing nursing diagnoses according to patients' symptoms. Furthermore, the diagnosis of anxiety was assigned to a total of 8.4% of all patients. No nursing diagnoses related to the spiritual and religious care of palliative patients were found. In previous studies, it has been noted that the most common nursing diagnoses in palliative patients are anxiety and spiritual care diagnoses.[23,24]

According to our research, the most commonly performed palliative surgical procedures for patients in palliative care clinics include PEG placement, wound surgery, tracheostomy, colostomy, cystostomy, and biopsy procedures. It has been observed that the most commonly used nursing diagnosis in patients, regardless of the type of surgical procedure, is the risk for fall. The utilization rate of diagnosis specific to surgical procedures is indeed quite low. This situation indicates that nurses are not utilizing specific diagnoses for palliative surgical patients. On the other hand, it is also considered that this situation may stem from the nurses' inadequacy in documentation, despite providing comprehensive care in all areas.

Patients receiving palliative care require planned and comprehensive nursing care during their end-of-life period. When evaluating the data obtained, it was found that the most common diagnosis given to patients was malnutrition. However, it is noteworthy that diagnoses such as risk for fall, risk for infection, risk for impaired skin integrity, and risk for impaired respiratory function followed closely. According to a study published by Carpenter et al., nursing interventions focused on three main strategies: (1) advanced care planning, (2) personnel education (e.g.. teaching general concepts in a classroom or seminar) or patient/family education (e.g. guiding practical palliative care skills), and (3) integration of the palliative care team.[25] In their study on palliative patients with lung cancer, Naito et al. conducted a feasibility study that included early multimodal interventions for nutrition, exercise and mobility, and risk for fall, and found that early interventions were beneficial for patients.[26] A study conducted by Zongo et al. in oncology patients who underwent palliative surgery in Africa, it was reported that patients experienced an 80% reduction in symptoms after palliative surgery.[27] However, no extensive nursing diagnoses or interventions specifically targeting symptoms seen in palliative care patients have been found in the literature. Nevertheless, our study identified similar nursing diagnoses such as the risk for fall and imbalanced nutrition based on limited data. However, our research revealed that the nursing diagnoses were not specific to patient symptoms, and there was a statistical increase in the same diagnoses. On the other hand, it is notable that risk diagnoses were used more frequently than actual diagnoses. Therefore, according to the research results, patients should be primarily diagnosed with actual diagnoses such as impaired respiratory function, imbalanced fluid volume, fatigue, sleep deprivation, pain, nausea, and constipation. Considering the characteristics of the nurses working in the palliative care centers where the data was collected, it is worth considering that palliative care nurses may be inadequate in determining the current situation of patients and planning appropriate nursing care and diagnoses.

Study limitations

This research was obtained from the records of a palliative care clinics in the two state hospitals located in the Western Black Sea region of Turkey. Due to the lack of an oncologist and the responsible physician being a general surgeon in the hospital where the study was conducted. patients admitted to the clinic are mostly followed up for palliative surgical purposes. Therefore, this study cannot be generalized to all palliative patients and palliative care services.

Conclusion

This study highlights the wide range of symptoms are frequently seen in patients receiving palliative care surgery in Turkey. It is seen that the duration and variety of medical treatments given with these symptoms may increase. In addition, it was found that the nursing diagnoses planned for symptoms were not parallel and related to the symptoms and that similar diagnoses were often made for all patients. Considering the effects of nursing care on symptom management in palliative surgery patients, it emphasizes that the nursing care planning applied for symptoms in patients is inadequate. Therefore, it is recommended that palliative care nurs-

es be supported with in-service training on appropriate care planning. On the other hand, it is recommended that future studies be conducted on repeated hospitalizations in palliative patients in order to determine the frequency of recurrence of certain symptoms and needs analysis for this purpose.

Declarations

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author contributions

Conceptualization, Ö.U. and S.Ç.; Methodology, Ö.U.; Software, Ö.U.; Validation, Ö.U., S.Ç. and E.K.; Formal Analysis, Ö.U. and S.A.; Investigation, Ö.U.; Resources, E.K. and S.A.; Data Curation, Ö.U. and S.Ç.; Writing – Original Draft Preparation, Ö.U., S.Ç., E.K. and S.A.; Writing – Review & Editing, Ö.U. and S.Ç.; Visualization, Ö.U.; Supervision, S.Ç.

Conflict of interest

No conflict of interest has been declared by the authors.

Data availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethics approval

This study was approved by the local ethics committee (Ethics Committee of Bartin University-Bartin date: 15.08.2020 decision number: 2020-08).

References

1. Graney BA, Au DH, Barón AE, et al. Advancing symptom alleviation with palliative treatment (ADAPT) trial to improve quality of life: A study protocol for a randomized clinical trial. *Trials*. 2019;20(1):355. doi: 10.1186/s13063-019-3417-1
2. Harden K, Price D, Duffy E, Galunas L, Rodgers C. Palliative care: improving nursing knowledge, attitudes, and behaviors. *Clin J Oncol Nurs.* 2017;21(5):232-238. doi: 10.1188/17.CJON.E232-E238
3. Schlick CJR, Bentrem DJ. Timing of palliative care: When to call for a palliative care consult. *J Surg Oncol.* 2019;20(1):30-34. doi: 10.1002/JSO.25499
4. Sekse RJT, Hunskår I, Ellingsen S. The nurse's role in palliative care: A qualitative meta-synthesis. *J Clin Nurs.* 2018;27(1-2):e21-e38. doi: 10.1111/JOCN.13912
5. Sawatzky R, Porterfield P, Roberts D, et al. Embedding a palliative approach in nursing care delivery: an integrated knowledge synthesis. *ANS Adv Nurs Sci.* 2017;40(3):263-279. doi: 10.1097/ANS.0000000000000163
6. Fahy BN. Introduction: Role of palliative care for the surgical patient. *J Surg Oncol*. 2019;120(1):5-9. doi: 10.1002/JSO.25449
7. Temel JS, Greer JA, El-Jawahri A, et al. Effects of early integrated palliative care in patients with lung and gı cancer: A randomized clinical trial. *J Clin Oncol.* 2017;35(8):834-841. doi: 10.1200/JCO.2016.70.5046
8. Uzelli Yilmaz D, Akın Korhan E, Khorshid L. Evaluation of nursing care quality in a palliative care clinic. *Journal of Human Sciences*. 2017;14(3):2968. doi: 10.14687/jhs.v14i3.4828
9. Bergdahl E, Ternestedt BM, Berterö C, Andershed B. The theory of a co-creative process in advanced palliative home care nursing encounters: A qualitative deductive approach over time. *Nursing Open*. 2018;6(1):175-188. doi: 10.1002/NOP2.203
10. Mounsey L, Ferres M, Eastman P. Palliative care for the patient without cancer. *Australian Journal of General Practice*. 2018;47(11):765-769. doi: 10.31128/AJGP-07-18-4625
11. Hagmann C, Cramer A, Kestenbaum A, et al. Evidence-based palliative care approaches to non-pain physical symptom management in cancer patients. *Semin Oncol Nurs.* 2018;34(3): 227-240. doi: 10.1016/j.soncn.2018.06.004
12. Bostwick D, Wolf S, Samsa G, et al. Comparing the palliative care needs of those with cancer to those with common non-cancer serious illness. *J Pain Symptom Manage.* 2017;53(6):1079-1084. doi: 10.1016/j.jpainsymman.2017.02.014
13. Chow K, Dahlin C. Integration of palliative care and oncology nursing. *Semin Oncol Nurs.* 2018;34(3):192-201. doi: 10.1016/J.SONCN.2018.06.001
14. Lokker ME, van der Heide A, Oldenmenger WH, van der Rijt CCD, van Zuylen L. Hydration and symptoms in the last days of life. *BMJ Support Palliat Care.* 2021;11(3):335-343. doi: 10.1136/bmjspcare-2018-001729
15. Thrane SE, Maurer SH, Cohen SM, May C, Sereika SM. Pediatric palliative care: A five-year retrospective chart review study. *J Palliat Med.* 2017;20(10):1104-1111. doi: 10.1089/jpm.2017.0038
16. Khalil H, Downie A, Ristevski E. Mapping palliative and end of care research in Australia (2000–2018). *Palliat Support Care.* 2020;18(6):713-721. doi: 10.1017/S1478951519001111
17. Miniksar ÖH, Aydın A. Retrospective analysis of hospitalized patients in our palliative care unit. *Journal of Contemporary Medicine*. 2020;10(3):429-433. doi: 10.16899/jcm.624878
18. Pang L, de la Cruz M, Wu J, et al. Symptom frequency and change of oldest old cancer patients. *Support Care Cancer.* 2019;27(11):4165-4170. doi: 10.1007/s00520-019-04702-7
19. Valero-Cantero I, Martínez-Valero FJ, Espinar-Toledo M, et al. Complementary music therapy for cancer patients in at-home palliative care and their caregivers: protocol for a multicentre randomised controlled trial. *BMC Palliat Care.* 2020;19(1):61. doi: 10.1186/S12904-020-00570-9

20. Chung V, Sun V, Ruel N, Smith TJ, Ferrell BR. Improving palliative care and quality of life in pancreatic cancer patients. *J Palliat Med.* 2022;25(5):720. doi: 10.1089/JPM.2021.0187
21. Skjoedt N, Johnsen AT, Sjøgren P, et al. Early specialised palliative care: interventions, symptoms, problems. *BMJ Support Palliat Care.* 2021;11(4):444-453. doi: 10.1136/BMJSPCARE-2019-002043
22. de Nooijer K, Van Den Noortgate N, Pype P, Van den Block L, Pivodic L. Palliative care symptoms, concerns and well-being of older people with frailty and complex care needs upon hospital discharge: a cross-sectional study. *BMC Palliat Care.* 2022;21(1):173. doi: 10.1186/S12904-022-01065-5
23. Abreu-Figueiredo RM, Sá LO, Lourenço TM, Almeida SS. Death anxiety in palliative care: validation of the nursing diagnosis. *Acta Paul Enferm*. 2019;32(2):178-185.
24. Caldeira S, Timmins F, de Carvalho EC, Vieira M. Clinical validation of the nursing diagnosis spiritual distress in cancer patients undergoing chemotherapy. *Int J Nurs Knowl*. 2017;28(1):44-52. doi:10.1111/2047-3095.12105
25. Carpenter JG, Lam K, Ritter AZ, Ersek M. A systematic review of nursing home palliative care interventions: Characteristics and outcomes. *J Am Med Dir Assoc.* 2020;21(5):583. doi: 10.1016/J.JAMDA.2019.11.015
26. Naito T, Mitsunaga S, Miura S, et al. Feasibility of early multimodal interventions for elderly patients with advanced pancreatic and non-small-cell lung cancer. *J Cachexia Sarcopenia Muscle.* 2019;10(1):73. doi: 10.1002/JCSM.12351
27. Zongo N, Yameogo PB, Savadogo JT, et al. The outcomes of palliative surgical treatment in a context of rising incidence of gastrointestinal cancers in Burkina Faso, Africa. *Eur J Surg Oncol.* 2022;48(10):2174-2180. doi: 10.1016/j.ejso.2022.07.002