ORIGINAL ARTICLE / ARAŞTIRMA YAZISI

The Impact of the Covid-19 Pandemic on the Care and Treatment of Cancer Patients

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ABSTRACT

Purpose: It was conducted to determine the effects of the COVID-19 pandemic on the care and treatment of cancer patients.

Materials and Methods: The population of this descriptive and cross-sectional study consisted of all inpatients in a university hospital, and the sample included a total of 78 patients. Data were collected using a Patient Information Form, the Presence of Nursing Scale.

Results: The patient's mean age was 57.54±9.83 years, and 69.2% were male. The examination of the characteristics of the patients regarding cancer indicated that 50% had laryngeal cancer, the cancer diagnosis had been made an average of 19.73±26.19 months ago, most of the patients' cancer was in the second 34.6%, third 34.6% stage, and that 88.5% (n=69) of the patients did not have metastasis. Some patients stated there were no disruptions in the diagnosis, 69.2%, treatment 76.9% of their disease during the pandemic. They also stated that the pandemic did not cause the progression of the disease 69.2%, they did not delay coming to the hospital 65.4%, and they did not hesitate to come to the controls 69.2%. All patients, 100.0%, stated that they wore masks during the pandemic. In addition, they said they could contact their physicians 46.2% of the time and their nurses 7.7% of the time during the pandemic. The mean score of the Nurse Presence Scale was 110.62±14.83.

Conclusion: While the COVID-19 pandemic did not have a significant impact on the cancer care and treatment of the patients in the study, their efforts to cope with cancer continued.

Keywords: Cancer, care, COVID-19, nursing presence.

ÖZET

Amaç: Bu araştırma COVID-19 salgınının kanser hastalarının bakım ve tedavisine etkilerini belirlemek amacı ile yapıldı.

Gereç ve Yöntem: Tanımlayıcı, kesitsel türde gerçekleştirilen araştırmanın evrenini, bir üniversite hastanesinin yatarak tedavi gören tüm hastalar, örneklemini ise 78 hasta oluşturdu. Veriler Hasta Bilgi Formu ve Hemşirenin Varlığı Ölçeği kullanılarak toplandı.

Bulgular: Hastaların yaş ortalamasının 57.54±9.83 yıl, %69.2'sinin (n=54) erkek, olduğu saptandı. Hastaların kanser hastalığına ilişkin özellikleri incelendiğinde; %50'sinin (n=39) kanser bölgesinin larinx olduğu, kanser tanısının ortalama 19.73±26.19 ay önce konduğu, önemli çoğunluğunun kanserinin II. %34.6 (n=27) ve III. %34.6 (n=27) evre olduğu ve %88.5'inin (n=69) metastatik olmadığı saptandı. Hastaların %69.2'si (n=54) salgın sırasında kanser teşhisinde, %76.9'u (n=60) tedavisinde aksama olmadığını; %69.2'si (n=54) salgının, hastalığın ilerlemesine neden olmadığını; %65.4'ü (n=51) şikâyetleri olmasına karşın hastaneye gelmeyi ertelemediğini; %69.2'si (n=54) kontrollere gelmeye çekinmediğini; tümü (%100.0, n=78) salgın süresince maske taktığını ifade etti. Salgın döneminde %46.2'sinin (n=36) hekimi ile %7.7'sinin (n=6) hemşiresi ile görüşebildiklerini ifade ettiler. Hemşirenin Varlığı Ölçeği ortalaması 110.62±14.83 idi.

Sonuç: Araştırma kapsamındaki hastaların kanser bakım ve tedavisinde, COVID-19 salgını, büyük bir etki oluşturmazken, kanser ile baş etme çabaları sürmüştür.

Anahtar Kelimeler: Kanser, kulak-burun-boğaz kliniği, COVID-19, hemşirenin varlığı.

The world has been struggling with the SARS-CoV-2 (COVID-19) virus, which causes acute respiratory syndrome and has spread from Wuhan, China, since late 2019 (1). The pandemic has caused the care and treatment of many patients to be postponed. One of these postponed diseases is cancer. New regulations had to be made in health institutions during the pandemic to prevent the spread of COVID-19 in the community, reduce mortality rates, and respond to the increasing patient intensity in health services (2). It is stated that services provided in healthcare settings where services for chronic diseases of the circulatory and respiratory system, diabetes, and cancer have decreased by 69%, and the rate of disruption in cancer treatments has reached 55% (1).

Cancer is a common problem not only in our country but also in the whole world. It is a global problem, and it causes more than 18 million deaths every year and increases the risk of mortality (1,2). The nature of the disease and the treatment process of individuals with cancer adversely affect the immune system, making the individual vulnerable to infection. With COVID-19 infection, the severity of the disease increases, and thus, patients' need for treatment and care services increases (3). Comprehensive changes have been implemented in managing all types of cancer during the pandemic, including the shortening of radiotherapy, switching from intravenous to oral chemotherapy regimens, and changes in the use of immunotherapy. At the same time, individuals diagnosed with cancer state that they are afraid of contracting this disease, their anxiety levels have increased, they have isolated themselves, they are afraid to present to a health institution, and they have delayed their treatment and care processes (4).

Since cancer patients have more bio-psychosocial problems and unmet needs than other patient groups, they need more nursing assistance. Some studies in the literature show that cancer patients see nurses as close friends who are compassionate and caring and make them feel safe (5,6).

Nursing is the only profession that requires providing care for patients 24 hours a day, and it has become apparent during this pandemic that it can never be replaced (3). In the COVID-19 pandemic, nurses are at the forefront of this struggle with all their might. In the clinical setting, nurses have tried to meet the ever-increasing care needs of cancer patients while fighting against COVID-19 (4). Ear Nose Throat (ENT) clinic is one of the clinics where patients with head and neck cancer are accepted. As with other cancer types, patients with laryngeal, pharyngeal, oral cavity,

and lip cancer receive radiotherapy, chemotherapy, surgical operation, or immunosuppressive treatment, and these patients need special care (6). Nurses have been under a heavy workload during the pandemic. To help the patient in the health care environment, it is necessary to know how the nurse who is with the patient the most is perceived by the patient (4,5). It is stated that nurses who provide care for patients with COVID-19 feel weak under a heavy workload in terms of benefiting patients (4,5,6). Many studies show that nurses' working hours are extended due to intense workload, they continue to provide care, and they experience symptoms such as anxiety and depression intensely. Although nurses continue to deliver care in this changing environment, there are no studies on how patients' perceptions of care change (5,6,7). Therefore, it is necessary to know the care and treatment processes of individuals with cancer during the COVID-19 pandemic and their status of feeling the presence of the nurse near them in this process. In this context, the research questions were determined as follows.

Research Questions

1. What are the individual and disease-related characteristics of cancer patients admitted to the ENT clinic during the pandemic?

2. What are the COVID-19 infection status of cancer patients admitted to the ENT clinic during the pandemic and the problems they experience regarding care and treatment?

3. What is the level of feeling the presence of the nurse by cancer patients admitted to the ENT clinic during the pandemic while they struggle with the difficulties of cancer?

Materials And Methods

Study Design

The study was conducted between March 2021 and August 2021 in Istanbul University-Cerrahpaşa, Cerrahpaşa Medical Faculty, the Department of Ear, Nose, and Throat after it had been approved by the Istanbul University-Cerrahpaşa, Non-interventional Clinical Research Ethics Committee (Date/Number: 10.03.2021-49376). The principles of the Helsinki Declaration were followed in the study. Patients who were hospitalized during this study and agreed to participate were included. The study included them by the following inclusion criteria: 1) being aged ≥18 years and 2) having been diagnosed with one

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of the oral cavity, pharynx, larynx, and salivary gland cancers. The exclusion criteria were as follows: provision of the care and treatment of the patient by telephone.

Data collection tools: Data were collected using a Patient Information Form and the Presence of Nursing Scale.

The Patient Information Form: This form, which the researchers designed following a review of the literature (2,3,4,6), includes questions about age, gender, education level, marital status, income status, stage of cancer, region of cancer, the status of wearing a mask, and the history of COVID-19 infection in family members and the patient.

The Presence of Nursing Scale (PONS): This is a 28-item Likert-type scale developed by Kostovich (2012) (7). It measures the nurse's presence with 26 items and the patient's satisfaction with the last two items. Cronbach's alpha coefficient of the scale is 0.95. Kostovich defines the presence of a nurse as "being with the patient" emotionally and "doing for the patient" physically (7). The PONS was adapted into Turkish by Bozdoğan Yeşilot and Öz (2016) (8). The Turkish version of the Presence of Nursing Scale consists of 25 items and is evaluated on a 5-point scale—the minimum and maximum scores on the Turkish version of the scale range from 24 to 120. As the score obtained from the scale increases, it is interpreted that the behaviors that show the nurse's presence increase and that the patients perceive this positively (5). In this study, Cronbach's alpha coefficient was found to be 0.97.

Implementation of the Study

After the purpose of the study was explained, written and verbal consent of the patients who volunteered to participate was obtained. Data were collected from each patient by using the face-to-face interview method. The average interview time for each patient was 20-25 minutes.

Statistical Methods

Data analysis was performed on the SPSS v. 24.0 software package. In descriptive analyses, categorical variables were presented as percentages and continuous variables as mean ± standard deviation (median, min.-max.) values.

Results

When the disease and individual characteristics of the patients admitted to the Ear, Nose, and Throat Clinic were examined, it was determined that the mean age of the patients was 57.54±9.83 years, 69.2% were male, 61.5% were primary school graduates, and that 92.3% lived with their families (Table 1). Of the patients, 38.4% had a chronic disease, and 50% had a diagnosis of laryngeal cancer. The mean duration of cancer diagnosis was 19.73±26.19 months, 34.6% of patients had 2nd and 3rd stage cancer, and 11.5% had metastatic cancer. These findings regarding the disease status are given in Table 2.

Table 1: Patients' Demographic Characteristics (N=78)		
Demographic Characteristics	**n**	**%**
Age [Mean±SD (Min.-Max.)]	57.54±9.83 (37-78)	
Gender		
Female	24	30.8
Male	54	69.2
Education level		
Primary education	48	61.5
Secondary education	21	26.9
Higher education	9	11.5
Marital status		
Married	72	92.3
Single/Divorced/Widowed	6	7.7
Currently living with		
Single	6	7.7
Family	72	92.3
Working status		
Yes	12	15.4
No	66	84.6
Living place		
City	48	61.5
Town	27	34.6
Village	3	3.8
Income status		
Income more than expenses	6	7.7
Income equal to expenses	42	53.8
Income less than expenses	30	38.5
S.D.:Standart Deviation *Min.=Minimum* *Max.=Maximum*		

Table 2. Patients' disease characteristics (N=78)		
Disease Characteristics	**n**	**%**
Smoking		
Yes	9	11.5
No	69	88.5
Before smoking		
Yes	60	76.9
No	18	23.1
Time of smoking (N=60) *Mean±S.D. (Min.-Max.) (Years)*	31.50±9.84 (15-50)	
Amount of smoking (N=60) *Mean±SD (Min-Max) (number/day)*	39.65±20.93 (8-100)	
Alcohol		
Yes	6	7.7
No	72	92.3
Before alcohol		
Yes	30	38.5
No	48	61.5
Chronic disease		
Yes	30	38.4
No	48	61.6
Site of cancer		
Mouth and cavity	24	30.8
Pharynx	12	15.4
Larynx	39	50.0
Esophagus	3	3.8
Time of cancer diagnosis *Mean±SD (Min-Max) (Month)*	19.73±26.19 (4-132)	
Cancer stage		
I. Stage	12	15.4
II. Stage	27	34.6
III. Stage	27	34.6
IV. Stage	12	15.4
Presence of metastatic cancer		
Yes	9	11.5
No	69	88.5

In Table 3, the effect of the COVID-19 pandemic on patients' cancer care and treatment is given. Of the patients, 69.2% stated that there was no disruption in the diagnosis of cancer, and similarly, 76.9% stated that their cancer treatment was not interrupted. Of those who stated that their treatment had been disrupted, 66.6% stated that they did not have surgery, 16.7% stated that the surgery date had been delayed, and 16.7% reported being referred to another institution. During the pandemic, 30.8% of the patients stated the course of their disease worsened, and 34.6% stated that they hesitated to go to the hospital even though they had complaints. In addition, 46.2% of the patients stated that they could contact their physicians via communication tools, but 92.3% stated that they could not contact nurses. The mean score of patients on the presence of nursing scale was 110.62 (Table 3).

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Table 3: Features of the effects of the COVID-19 outbreak on cancer care and treatment (N=78)		
Category	**n**	**%**
Delayed cancer diagnosis		
Yes	24	30.8
No	54	69.2
Disruption in cancer treatment		
Yes	18	23.1
No	60	76.9
Types of delayed cancer treatments (N=18)		
I had to have surgery, I couldn't	12	66.6
My surgery date is delayed	3	16.7
Transfer from the hospital I applied to another hospital for the operation	3	16.7
Reason for changing treatment plan* (N=18)		
Worried about the risk of contracting COVID-19	12	66.7
Concerns about the availability of hospital beds and supplies	9	50.0
Hospital/clinic guidelines regarding COVID-19	3	16.7
Professional medical association or organization recommendations	3	16.7
Strict visitor policy	3	16.7
Transportation concerns	6	33.3
Out of province dispatch	6	33.3
Who made the decision about the change/postponement of the treatment plan		
I made the decision myself	3	16.7
The physician made the decision	15	83.3
The state of thinking that COVID-19 is causing the progression of the disease		
Yes	24	30.8
No	54	69.2
Delaying going to the hospital despite having symptoms		
Yes	27	34.6
No	51	65.4
Time of delay (N=27) *Mean±SD (Min-Max) (Day)*	32.78±55.66 (3-180)	
Avoidance and extension to go to the controls		
Yes	12	15.4
No	54	69.2
First admission/New diagnosis	12	15.4
Extension time (N=12) *Mean±SD (Min-Max) (Day)*	100.25±160.07 (2-365)	
Did you use a mask during the pandemic?		
Yes	78	100.0
Have you had a Covid-19 test during the pandemic?		
Yes	66	84.6
No	12	15.4
Number of COVID-19 tests (N=66) *Mean±S.D. (Min.-Max.) (Times)*	4.00±2.75 (1-10)	
Result of positive COVID-19 tests (N=66)		
Yes	3	4.5
No	63	95.5
Results of positive COVID-19 tests for your family members		
Yes	21	26.9
No	57	73.1
Communication with your physician		
Yes	36	46.2
No	42	53.8
Communication with your nurse		
Yes	6	7.7
No	72	92.3
Presence of Nursing Scale Score	110.62	±14.83
Mean±S.D. (Min.-Max.)	(75.00-120.00)	

* More than one option has been ticked. Therefore, the row percentage is taken.
SD =Standart Deviation
Min. =Minimum
Max.=Maximum

Discussion

The COVID-19 pandemic has dramatically affected oncology patients, and healthcare services have resorted to priority classification among patients to prevent hospital-acquired transmission. Therefore, many regulations have been made in the field of oncology. In some cases, the treatment and care of cancer patients have been postponed, or changes have been made in the treatment protocols (4,6).

This study was carried out to determine the use and postponement of care and treatment services by patients receiving cancer treatment in the ear, nose, and throat clinics in our country during the COVID-19 process and to reveal the results of the evaluation of nurses' presence by patients with cancer during this process.

When the individual and disease characteristics of the patients were examined, it was determined that the mean age was 57.54±9.83 years. The average age was similar in similar studies conducted with cancer patients during the COVID-19 pandemic (4,6). One of the cancers evaluated within the scope of head, neck, and throat cancers is laryngeal cancer. In the study, the majority of patients had laryngeal cancer, and oral and oral cavity cancers followed this. Larynx cancer is more common in males aged over 50 years in our country (8). According to the 2017 Turkey Cancer Report, laryngeal cancer ranks tenth among the top ten cancer types seen in males, and its incidence is 5.7% (9). It is seen that the number of other cancer types, such as the esophagus, nasopharynx, and oropharynx, is increasing gradually (10). In the study of Mahl et al., the incidence of laryngeal and mouth cancer was 19.4% and 48.4%, respectively (6). Smoking causes cancer in structures and organs that provide respiration, especially in the lungs. Smoking increases the risk of cancer 2-4 times (11). In the study, it was determined that the rate of previous smoking was 76.9%, the rate of active smokers was 11.5%, the average smoking time was 31.50±9.84 years, and the average number of cigarettes smoked daily was 39.65±20.93. In a study showing the etiological role of smoking on laryngeal cancer in the literature, "the number of cigarettes smoked a day" and "duration" were examined, and it was found that the risk of developing cancer increased as smoking and duration increased (12). Van Roekel et al. (2013) found that smokers had earlier, larger, and more advanced-stage tumors than non-smokers in their study with a relatively large sample (13). Pietzak et al. (2015) showed that cancer was more aggressive in those who smoked more than 30 packs per year than in those who smoked less than 30 packs (14). The findings of the current study support other studies showing the effect of smoking on cancer.

The measures taken at the national and international levels during the COVID-19 pandemic made it necessary to postpone the care and treatment of health problems that were not urgent within the framework of the institutional infrastructure. When the effects of the COVID-19 pandemic on cancer care and treatment were examined, it was found that some patients had disruptions in the diagnosis (30.8%) and treatment of the disease (23.1%), and 66.6% could not have a scheduled surgery on time. On the other hand, of the patients who stated that their treatment plan had changed, 66.7% feared contracting COVID-19, and 50% worried about the lack of materials. Some studies showed delays and disruptions in cancer patients' diagnosis, surgery, and treatment process (15,16,17). A study conducted in Germany showed that the number of new diagnoses decreased by 40% in April 2020 compared to April 2019 (18). In a study conducted in our country, it was stated that while the number of presentations to the ENT outpatient clinic decreased in 2020, there was an increase in the number of surgical operations performed due to malignancy and a decrease in elective surgery, biopsy, advanced diagnostic tests, and emergency surgical interventions (19). Although there was no comparison between the years in terms of the number of surgical operations performed and the postponement of treatment in our study, it is thought that some health services were postponed due to the pandemic in our country. In cancer treatment, the physician decides the treatment in accordance with the protocols specific to the individual. In the event of a pandemic, physicians decide to determine priorities for treatment. The patients in the study also stated that their physicians decided the treatment process. This suggests that the patients cooperated with their physicians during the treatment process.

When the cases of delaying treatment despite complaints were examined, it was seen that 65.4% of patients did not postpone their treatment and that it was postponed for an average of 32.78±55.66 days by others. Some studies in the literature indicated that patients' knowledge about cancer and its symptoms was low and, therefore, that they did not take these complaints into account (20,21). In a study examining the average time to present to a health institution after the complaints of colorectal cancer started, it was found that 60.6% of the patients presented to the health institution an average of 7.27±11.02 months after their complaints started. It was found that there was

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a more than one-month delay in 60.6% and a severe delay in 31.6% (22). According to the study results, the mean diagnosis time was 19.73±26.19 months. Therefore, this finding showed that the COVID-19 pandemic prolonged the diagnosis time. One of the most critical factors causing the delay of surgical operations was the positive result of the patient's COVID test (23,24). According to the research findings, it was seen that 4.5% (n=3) of the patients were COVID-19 positive in this process. This finding aligns with studies showing that surgery was delayed due to a positive COVID test (2,23,25).

The pandemic process has increased the use of technology in the health field. With the pandemic, telemedicine, telehealth, and telenursing have become widespread (26). Although methods for reaching health workers remotely during the pandemic increased, according to the research result, the rate of contacting the physician using communication tools was 46.2%, and the rate of contacting the nurse was 7.7%. Lou et al. (2020) determined that 70.8% of patients without metastatic cancer contacted their physicians and that 64.7% frequently talked to their physicians on the phone (4). This finding was thought to stem from the fact that the diagnosis and treatment were under the direct responsibility of the physician, nurses spent more time in bedside nursing care, and the patient did not need to reach the nurse from a distance.

Individuals receiving cancer treatment need nursing care. During nursing care to these patients, the nurse-patient relationship should be at the forefront, and the nurse should be accessible and always with the patient. As in all clinics, nurses continued to provide 24-hour patient care in ENT clinics during the COVID-19 process. The mean score of the patients included in the study on the Presence of Nursing Scale was 110.62. Patients' score on the same scale was found as 105.83±16.05 in the study by Bozdoğan Yeşilot and Öz (2016) (5), 107.03±16.16 in Turpin (2016) (27), and 88.46±22.64 in Bozdoğan Yeşilot and Öz (2017) (28), 101.91±16.19 in Mahdavi et al. (2020) (29). When these scores were compared, it was seen that patients' perception of the nurse's presence was high in our study. Huz (2019) found the mean presence of the nurse score as 116.6 ± 7.51 (30). We thought that the data collection during the patients' hospitalization may have led to high scores on the Presence of Nursing Scale. Also, it was shown that while it was easier to reach nurses in the hospital, they had difficulty getting them outside the hospital. This is because there is no case management approach in our healthcare system. Although there is no

case management, a multidisciplinary approach is essential, especially in managing chronic diseases.

Limitations

This research has several limitations. First, research findings were based on self-report. Secondly, since no sampling method was used in the study and it was conducted in a single center, the results cannot represent the whole of Turkiye.

Conclusion

As a result of the research, it was concluded that the COVID-19 pandemic negatively affected the demand for and access to health services in Turkey and the world. However, it was shown that the postponement was due to the change in the functioning of healthcare services, especially during the pandemic, and individuals' fear of contracting COVID-19. In this period, when health services have been maintained uninterruptedly and at the maximum level, the healthcare team has performed their duties at the highest level. We are proud in the name of patient care and our profession that patients have always felt nurses' presence during the pandemic, which is one of the primary purposes of the study. However, nurses are not always in the hospital. Therefore, a system should be established where the patient can call the nurse and receive counseling outside the hospital. To reveal the existence of nurses, it is necessary to create telehealth services that include nurses, not just physicians. The number of nurses needs to be increased to use these systems efficiently. At the same time, regular home visits by nurses working in the family health center and complete home health services will have positive results in terms of patient follow-up. It also requires the reorganizing of health policies, especially in the management of care and treatment of diseases such as cancer.

Declarations

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Conflict of Interest

The authors declare that no conflict of interest.

Ethics Approval

The study was approved by the Istanbul University Non-Interventional Clinical Ethical Committee (protocol no: 050.01.04.-49376, date: 10.03.2021).

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