Evaluation of Terminal-Stage Cancer Patients Needing Palliative Care in the Emergency Department

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Abstract

Aim: There are many difficulties in providing palliative care in the emergency department (ED). However, emergency physicians have to be qualified in palliative care. The aim of this study was to describe the characteristics of palliative care patients admitted to the ED and to determine the current state of such patients in the ED.

Materials and Methods: The study included 153 terminal-stage cancer patients who needed palliative care and were admitted to the ED over a period of a year. The demographic characteristics, complaints, time duration in the ED, and characteristics of multiple admissions to the ED were evaluated.

Results: The mean age of the patients was 69±3 years and the male/female ratio was 1.3. The most common complaint was nausea-vomiting (37%), followed by pain (32%). Lung cancer was the most common cancer type. Furthermore, 47.7% of the patients had multiple admissions to the ED. The hospitalization rate decreased as the number of admissions increased.

Conclusion: EDs play an important role in the management of palliative care patients. The importance of palliative care should be emphasized to increase emergency physicians' knowledge, experience, and skills about providing proper care to these patients. *(JAEM 2015; 14: 12-5)*

Key words: Palliative care, emergency department, cancer

Introduction

Palliative care, which is based on improving the quality of remaining life, is a support system that is directed toward control of symptoms and other problems. It includes all emergencies of patients which lead to the death throughout the process (1).

Palliative care not only aims at providing comfort but also includes symptom management and admission to hospice centers or hospitals when required. It aims to perform medical control and to support patients and families during this long and hard process (2). Consequently, it aims to increase the quality of life (3). Such patients often refer to emergency departments (EDs) as well as palliative care centers or centers that perform medical control (4, 5).

The symptoms of palliative care patients generally include pain, nausea, vomiting, acute dyspnea, bleeding, acute anxiety, delirium, and seizures in the ED (6). Management of palliative care emergencies is focused on the symptoms, rather than the primary disease, and also includes the emotional, physical, and social aspects of the patients, caregivers, and families, which are different from those in other emergencies (3). The ED has a unique approach on its own and has started drawing much attention in the literature, particularly by ER physicians, with an increasing number of admissions of palliative care patients to the ED around the world (7, 8). There are some radical approaches to ED care and also limitations due the physical conditions, such as problems caused by the size, crowdedness, loud environment, and limited circumstances in many cases (8). Emergency physicians who work in a hospital with no palliative care center or team have to be qualified in palliative care skills in order to provide most accurate approaches to palliative care patients and families. Therefore, evaluation of palliative care patients presenting to the ED is important for elucidating the characteristics and current state of such patients.

Thus, in the present study, we aimed to analyze patients in need of palliative care and to indicate the necessity of palliative care in terms of patients and the ED.

Materials and Methods

The protocol of this study was approved by the Gaziosmanpaşa University Institutional Ethics Committee. Between January 2011 and January 2013, a total of 279 cancer patients were admitted to

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the ED. Of these, 153 patients who required palliative care were evaluated retrospectively. In the present study, all cancer patients who were admitted to the ED during the study period were determined using the ENLIL-HIS (Eroglu Information Systems, Eskisehir, Turkey) database that we use in our hospital. The medical records of all cancer patients were evaluated and patients who needed palliative care were selected. The inclusion criteria were as follows: patients with end-stage cancer and those in whom treatments aimed at stopping or reducing the disease were terminated. The patients' demographic characteristics such as age and gender, number of admissions to the ED, patients' complaints, and the result of their stay were obtained and recorded in the study forms.

Statistical analysis

The data were analyzed using Statistical Package for Social Science version 15.0 (SPSS Inc., Chicago, IL, USA). Descriptive analyses were performed for gender, cancer type, complaints on admissions, and hospitalization rate and the results were presented as frequencies and percentages. Normality assumption was evaluated using the Kolmogorov-Smirnov test and it was found that there were no problems with normality. The mean and standard deviation was reported for variables having normal distribution. The Kruskal-Wallis test was applied for variables with more than 2 levels. The chi-square test for independence of observations was performed for other analysis. Statistical significance was set at an alpha level of 0.05.

Results

A total of 153 palliative care patients were admitted to the ED. Their mean age was 69.2±3.2 years. There were 86 male and 67 female patients, and the mean age of the male and female patients was 71.7±2.6 years and 68.6±3.4 years, respectively. The age groups and gender parameters are provided in Figure 1.

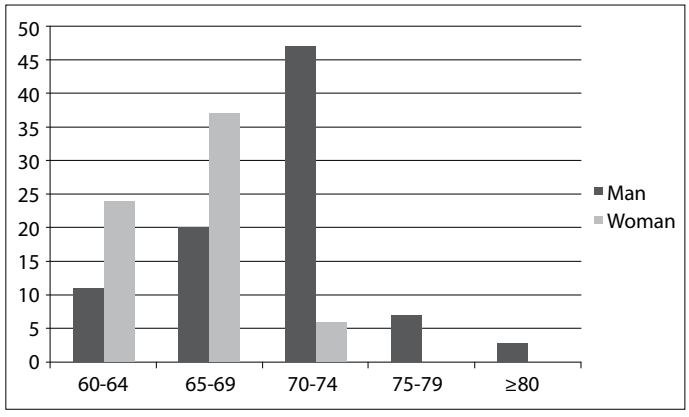

Figure 1. Evaluation of palliative care patients in terms of age and gender

The most common complaint of the palliative care patients was nausea-vomiting, followed by pain and weakness. Complaints with less than 5% occurrence (such as fever, bleeding, and dyspnea) were classified as "others" and they summed up to 20.5% in total.

With respect to the cancer type, 43% of all palliative care patients had lung cancer and 26% had colorectal cancer.

The number of admissions to the ED was evaluated and multiple admissions were considered in 3 groups: more than 1 visit, between 3 and 5 visits, and more than 5 visits. According to the findings, only 80 (52.3%) palliative care patients were admitted to the ED once; 39 (25.5%) patients had more than 5 admissions, 23 (15%) had between 3 and 5 admissions, and 11 (7.2%) had more than 1 admission (Table 1). With regard to multiple admissions, the percentage of male patients was significantly higher than the percentage of female patients (p=0.01). Patients with more than 5 admissions were evaluated according to their complaints. The most common complaint was nausea-vomiting, followed by pain. The rate of pain, nausea-vomiting, and dyspnea was found to be statistically higher among male patients than among female patients (Table 1).

The rate of hospitalization was 3.2%. The hospitalization rate was calculated in terms of multiple admissions. Accordingly, the hospitalization rate decreased as the number of admissions increased. There is a significant negative association between multiple admissions and hospitalization (p=0.01) (Table 2).

The multiple admissions were evaluated with regard to the number of tests ordered on each visit (total blood count, biochemical tests, arterial blood gas test, X-Ray etc.), time duration in the ED, and rate of presentation with the same complaints. A mean number of 6±1 test were ordered for patients who had more than 5 admissions. According to the time duration in the ED, the ratios were close to each other. The rate of presentation to the ED with the same complaints was 8.2±0.5 for patients who had more than 5 admissions; the rate of presenting with the same complaints was high even for the other groups of multiple admissions (Table 3). The mean time duration in the ED was 7.2±1.6 h. Two palliative care patients (1.3%) died in the ED.

Discussion

In the present study, it was observed that palliative care patients comprise a large proportion of cancer patients, with a percentage as high as 54.8%. It is hard for palliative care patients who live in cities that do not have palliative care units to follow-up regularly and consult regarding their problems. Although most patients present to

Table 1. Evaluation of multiple admissions in terms of complaints and gender

	Male			Female				
Number of admissions	**>5**	**3-5**	**1-3**	**>5**	**3-5**	**1-3**	**Total**	**p**
Nausea-vomiting	9	7	5	4	2	0	27	0.01
Pain	15	8	0	2	2	1	16	0.01
Loss of appetite	4	2	3	1	0	0	10	0.05
Dyspnea	3	1	1	1	1	1	8	0.01
Total	31	18	9	8	5	2	73	

Table 2. Evaluation of hospitalization rate and multiple admissions

Number of admissions	Number of patients	Hospitalization rate (mean±SD)	p
>5	39	0.8±2	0.1
3-5	23	1.2±3	0.06
1-3	11	5.4±5	0.01
SD: standard deviation			

Table 3. Evaluation of multiple admissions in terms of the number of tests ordered, time duration in the ED, rate of presentation with the same complaints

Number of admissions	Number of tests (mean±SD)	Time duration rate (mean±SD)	Rate of presentation with the same complaints (mean±SD)
>5	6±1	7.3±1.5	8.2±0.5
3-5	4±0.4	8.1±2	8.1±1
1-3	3±1.2	6.4±1.4	7.5±1.2
SD: standard deviation			

the ED for their problems, cancer patients may choose to present to oncology units rather than the ED. It explains higher number of admissions of palliative care patients than other cancer patients in the ED. We believe that this is one of the main reasons for unnecessary admissions to the ED. A study by Mercadante et al. (9) on palliative care patients reported that even phone consultations or intervention with a palliative care unit helps to reduce hospital admissions. In another study, it was stated that having a palliative care team reduces unnecessary ED admissions (10). Therefore, it is important for a hospital to establish a separate palliative care unit in order to respond to cancer patients' needs more effectively.

In advanced-stage cancer patients, pain, nausea, vomiting, loss of appetite, and shortness of breath are the main causes for presentation to the ED (11-14). In our study, nausea-vomiting and pain were particularly common among these patients. According to the literature, palliative care patients include a large proportion of advanced-stage cancer patients (6, 15). This means that physicians who provide palliative care need to improve their skills and knowledge about cancer emergencies.

The number of multiple admissions of the same patients was very high, suggesting that enough support or treatment for their symptoms could not be provided by the ED. The absence of palliative care units could be another cause. In addition, the number of tests ordered for the palliative care patients was quite high. Possibly, the absence of a private physician group to follow these patients increases laboratory or screening tests. In our opinion, emergency physicians evaluate a patient as a new patient each time. Therefore, unnecessary and excessive tests are performed for the underlying reasons, rather than for only the symptoms. This situation results in prolongation of the time duration in the ED, late treatment, and increased costs. Previous studies have indicated that palliative care centers reduce hospital costs (15, 16). An ED is a place to recognize problems immediately and provide acute treatment. More aggressive approaches to eliminate the problems and to ensure circulation are appropriate for emergency patients but obviously not for palliative care patients (2, 5, 17).

In the present study, we suggest that inadequate medication may be the reason for multiple admissions for the same complaints. In addition, emergency physicians may have trouble in the absence of palliative care consultancy. Because palliative care patients do not have physicians who regularly follow them up, they receive inadequate care and are therefore required to come back to the ED on account of persistent symptoms. This not only decreases the patients' quality of life but also has cost-related implications for both the patients and the hospital.

In the ED, patients are diagnosed depending on their symptoms at presentation and are treated accordingly. A symptom-oriented approach to these patients is not always possible because the current clinical state may not be clear to the emergency physicians. As seen in the current study, the number of tests ordered increases with the number of admissions. We believe that the increasing number of admissions may have directed the physician to follow a more deductive approach. For example, when an advanced-stage lung cancer patient presents to the ED on account of dyspnea, the physician may suspect pulmonary embolism because the symptoms are confusing.

In the study, the number of admissions was not found to be related to the hospitalization rate, although an increased frequency of admission to the ED reduced the number of hospitalizations. Nevertheless, it was seen that the hospitalization rate decreased with an increase in the number of admissions to the ED. On the other hand, there was a high rate of multiple admissions for the same complaints. A possible reason is that the emergency physician or consultant may have considered no need for hospitalization and symptomatic treatment may have been given considering the complaints to be part of the natural course of the disease. In our opinion, multiple admissions should be considered seriously because they may be a sign of a problem in the patient's follow-up treatment or inappropriate or irregular care at home.

The increased workload in the ED may prevent physicians from providing palliative care patients with the deserved attention and care (4). As the time duration in the ED increases, dissatisfaction would be higher. The mean length of stay in the ED (7±1.6 h) was found to be considerably long for an emergency condition. Dissatisfaction is inevitable for patients and their relatives when the examination phase prolongs (4). In the present study, the death rate was relatively low. It is believed that patients would have died at home or in other departments or another hospital.

Study limitations

We could not evaluate the medical records of other hospitals in our city. Therefore, the real death rates are not clear.

Conclusion

It is undisputed that emergency physicians need to have adequate knowledge about palliative care. Particularly, in hospitals without palliative care units, emergency physicians may face situations that require taking extra responsibility and being intuitive in new conditions. Most importantly, emergency physicians need to have effective management skills and they should direct patients to proper medical units; it is also important for them to be caring and sensitive.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Gaziosmanpaşa University Faculty of Medicine.

Informed Consent: Due to the retrospective nature of this study, informed consent was waived.

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