MINI REVIEW

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Challenges with the Emergency Departments Use among Cancer Patients; a Mini Review

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ABSTRACT

According to the studies the rate of emergency departments use among cancer patients exceed those of general population; however, there are differences based on cancer type, initial treatments, socioeconomic status, disease stages, health insurance status and so on. Patients' symptoms and the severity of complications are varied as well. The emergency departments are actively involved in different stages of cancer management such as primary diagnosis, ongoing treatments and end-of-life period. Cancer patients usually have more serious complications and need more specialized cares at the end of life period, during chemotherapy and surgical treatments. Understanding the reasons for such visits could be useful in the development of dedicated interventions for preventing unnecessary emergency department visits, which is discussed in this mini-review.

Keywords: Cancer emergency, Emergency Department, Acute cancer representations, Emergency cancer management, End-of-life care

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INTRODUCTION:

The International Agency for Cancer Research (IARC) reported that 18.1 million new cancer cases and 9.6 million cancer deaths happened in 2018 based on the global cancer statistics with focusing on geographic diversity in 20 regions of the world[1]. The most common cancers in males were the stomach, prostate, colorectal, bladder, and lung cancers while breast, colorectal, stomach, thyroid cancers and leukemia were the most common cancers among females[1]. It reported that about 110,000 cancer cases and nearly 56,000 patients died of cancer in Iran in 2018[2].

Cancer increasingly recognized as a chronic disease rather than a fatal illness. Recently there are substantial achievements, related to the different biomarkers and predictive factors, novel molecular targeted therapeutics and improved imaging and surgical techniques. However, there is much work to do for patients to receive ongoing high-quality care with the right specialized expert oversight in a suitable place at the appropriate time.

Emergency representations are another aspect of cancer treatment. The aim of the present review is showing the emergency representation involvement in different stages of cancer management such as primary diagnosis, ongoing therapies and end-of-life period.

Primary diagnosed cancer patient in emergency departments

In the United Kingdom, about 20%–25% of new cancer cases diagnosed following an initial presentation to the hospital emergency departments with the age of older than 70 years[3]. Patients who primary diagnosed with cancer in the emergency departments have more advanced disease and poorer outcomes. Chest complaints, anemia, bowel obstruction, abdominal pain, and generalized weakness are included in the symptoms on presentation[3]. According to a study in emergency department use by recently diagnosed cancer patients in California, the most emergency department visits (68%) occurred within 180 days of diagnosis. The incidence of emergency department use for all cancer types was 17% in 30 days, 35% in 180 days and 44% in 365 days of diagnosis[4].

Factors associated with emergency department attendance in cancer patients

The emergency department uses varied according to the age groups, ethnicity, health insurance, socioeconomic status, disease stages and initial treatments. Patients with higher stages of cancer visited the emergency departments more than whom with lower stages. Frothy percent of Patients who treated with chemotherapy, 48.6% of patients with surgical removals, 27.1% of whom with radiation therapy and 9.5% of patients who exposed to hormone therapies visited the emergency departments within 180 days of diagnosis. Patients with lung, breast, colon and prostate cancers were the most emergency department visitors within 180 days of diagnosis[4].

Bringing together data from 30 original studies and more than one million patients in five countries identified three demographics, five clinical, and 13 environmental factors associated with emergency departments attendance by patients with cancer in their last month of life[5].

The demographic factors (men; 58.2% and black race), clinical factor (lung cancer; 59.5%), and environmental factors (low socioeconomic status and no palliative care 59.4%) was associated with an increased risk of emergency department attendance by patients with cancer in their last month of life[5].

Initial treatments and symptoms

The causes of emergency department visits in cancer patients treated with antineoplastic were; 63% due to the tumor, 31% due to the chemotherapy toxicity and

6% due to other causes. Fever or infection in 65%, pain in 50% and febrile neutropenia in 42% of the patients with chemotherapy toxicity was reported. Management of the pain, fever and the neutropenia declared as the most pressing concerns with the patients[6].

Cancer patients in their last month of life who suffer from more significant comorbidity, lung or head and neck cancer and a higher number of previous emergency department visits are among whom visited the emergency departments multiple times[7].

Among the advanced cancer patients who died in the hospital within seven days of an emergency department visit, the most common symptoms in order are breathlessness, pain, body weakness or lethargy, and decreased appetite or anorexia. These are general symptoms associated with progression of the disease and may indicate that the patient is approaching the terminal phase[8,9].

In the emergency departments attendance with cancer in six final months to two last weeks of life, the most common reasons of the visit were abdominal pain, dyspnea, pneumonia, malaise and fatigue, and pleural effusion[10].

Results of a study in the United States in six years estimated that among a total of 696 million emergency department visits in adult patients, a total of 29.5 million (4.2%) made by cancer patients[11]. The most common cause of emergency department visit was breast, prostate and lung cancer. Pneumonia in 4.5%, nonspecific chest pain in 3.7% and urinary tract infection in 3.2% of adult cancer patients were the most common primary reasons for their attendance. Septicemia and intestinal obstruction were associated with the highest odds of inpatient admission[11].

The study of three health centers in Texas from a total of 3.4 million emergency department visits, cancer patients were older and more hospitalized than non-cancer patients. Pneumonia, influenza, fluid and electrolyte disorders, and fever were significant predictive factors for hospitalized cancer patients while coronary artery disease, cerebrovascular disease, and heart failure were essential factors for non-cancer patients' hospitalization[12].

DISCUSSION:

Studies show that the rates of emergency departments use among cancer patients exceed those of the general population. However, there are differences in study populations by cancer type, initial treatments, age groups, socioeconomic status, disease stage and health insurance status. Patients' symptoms varied according to the cancer type, disease stage and initial treatments. Cancer patients in their end of life period usually have more severe complications as well as those with chemotherapy and surgical procedures. These patients typically need more specialized attention than none-cancer patients visiting the emergency departments.

Numerous patients usually crowd emergency departments and the staffs are generally busy with their work, so the cancer patient, especially whom with low immunity and upper disease stages, may not receive adequate cares in the proper time. It is essential to identify whether patients with cancer were attending emergency departments because of the low facilities of oncology clinics to accommodate them, and emphasized that emergency department staffs need to be adequately trained and supported to offer optimum care to these patients[13].

Cancer patients consumed more emergency department resources than Non-cancer patients. Given the differences in characteristics and diagnoses between these two groups, emergency department physicians must pay special attention to cancer patients and be familiar with their unique set of oncologic emergencies[12].

Nurses usually play an essential role in cancer treatment, training of the patients and management of the cancer symptoms and also developing a patient-cen-

tered treatment. Nurses may have an active collaboration to improve the quality of care and reduce potentially avoidable emergency department visits[13].

Close to the end of life period of many of the cancer patients, emergency department visits may be avoidable. Realizing the reasons for emergency departments visits could be helpful in the development of appropriate interventions for preventing their occurrence[10].

It must be focused on pre-emptive management of breathlessness and pain to improve end of life care strategies. The patients' families should be prepared for symptoms like body weakness and appetite loss, which may signal a progression of the disease by the community programs. Supportive and palliative care interventions will need to implemented in the emergency department setting for managing the advanced cancer patients[8].

Chemotherapy-related emergency department presentations have considerable clinical and cost implications for patients and the healthcare system. Strategies to improve emergency department management of chemotherapy complications which have significant clinical and cost implications for patients and reduction in preventable emergency department presentations have substantial effects to boost cancer patients' quality of life and reducing the cost of cancer care. After receiving chemotherapy, Patients require the specialized care to manage distressing symptoms, as they are at significant clinical risk because of immunosuppression and may not exhibit the usual signs of critical illness. A team approach in emergency department staffs may improve care for patients receiving chemotherapy and increase the effective use of healthcare resources[14].

CONFLICT OF INTERESTS:

The authors have no conflict of interests to declare.

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