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LEUKEMIA (A AGUAYO, SECTION EDITOR)

Palliative Care in Patients with Leukemia: When and How?

Marieberta Vidal[1] · **David Hui**[1] · **Eduardo Bruera**[1]

Abstract

Purpose of Review Patients with hematologic malignancies get more aggressive treatment and the end-of-life, more ICU deaths, and prolonged hospital stays. In comparison to solid tumors, their access to palliative care and hospice is less.

Recent Findings Multiple factors seem to play a role including curative goals, different treatment options, stronger relationship between patients and oncologist, symptom burden, and limitations of hospice care.

Summary Improving the perception of palliative care in these patients, characterizing their needs, and more education can help to increase referrals and access to palliative care. Innovative ways to improve integration between hematology-oncology and palliative care are needed.

Keywords Palliative care · Leukemia · Hematologic malignancy · Supportive care · Hematology · EOL

Introduction

Palliative care in cancer patients aims to improve their quality of life through a multidisciplinary approach to symptom management. This includes addressing physical, psychosocial, and spiritual issues patients experience while dealing with a life-threating illness. Patients with advanced cancer typically experience multiple symptoms, the most common of which are pain, depression, anxiety, confusion, fatigue, breathlessness, insomnia, nausea, constipation, diarrhea, and anorexia. Palliative care aims to relieve suffering in all stages of disease, and is not limited to end-of-life care [1, 2]. Within an integrated model of medical care, palliative care is provided at the same time as curative or life-prolonging treatments.

Despite the new therapies available now for advanced hematologic malignancies, patients with refractory leukemia have a poor prognosis and often die of their disease. During the course of the disease, these patients experience a significant symptom burden due to physical and psychological distress. In comparison, solid tumor patients with hematologic malignancies have been shown to receive suboptimal care at end-of-life [3–5]. These patients access palliative care less frequently and later as compared to solid tumor patients. They are more prone to receive aggressive interventions including chemotherapy, ICU admissions, and prolonged hospital stays at the end-of-life [6–11]. Despite this, the access to palliative care for these patients is much less than patients with solid tumors. As shown by Elsayem et al., the diagnosis of a hematologic malignancy is a major predictor for low palliative care access [12]. Multiple reasons contribute to this observation including disease trajectory, patient characteristics, oncology team preferences, and patient-perceived prognosis [9, 13, 14•].

Access to Palliative Care/Integration

The patients with hematologic malignancies received more intensive care at the end-of-life, but there is a difference in the use of palliative care team in them in comparison to solid tumor patients. As shown by Hui, there are different models for palliative care integration along the course of the disease (see Fig. 1). Currently, palliative care referral for leukemia patients is most common in the last weeks of life (Fig. 1A). This correlates with the association of palliative care with only end-of-life. The integration model introduces palliative care at the moment of diagnosis of the advanced illness and increases through the course of the disease (Fig. 1B). There could be variations to this model depending on the severity of symptoms (Fig. 1C).

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✉ Marieberta Vidal
mvidal@mdanderson.org

[1] Palliative, Rehabilitation and Integrative Medicine, The University of Texas MD Anderson Cancer Center, 1515 Holcombe Boulevard, Unit 1414, Houston, TX 77034, USA

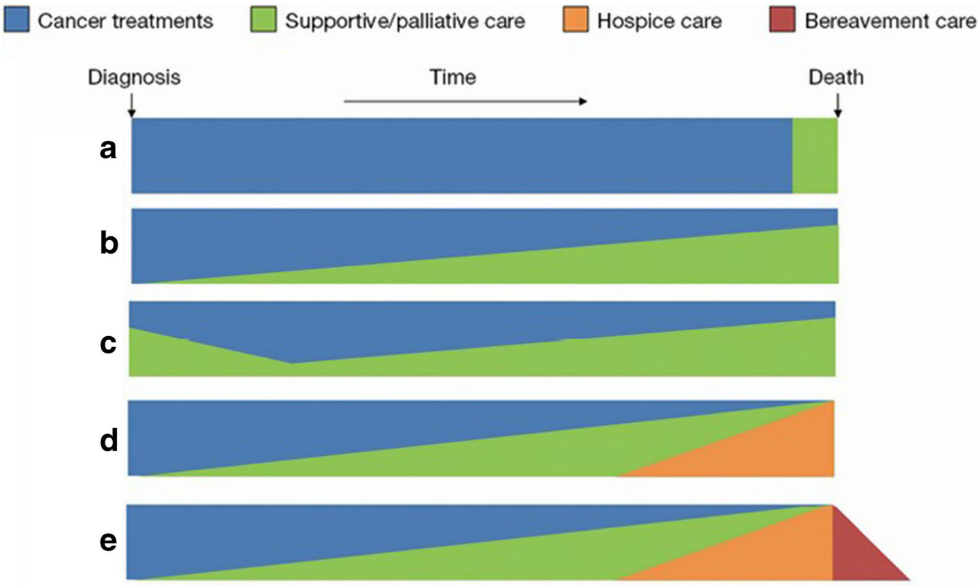

Fig. 1 Palliative care integration models. Republished with permission of AME Publishing Company, from Hui D, Bruera E. "Models of Integration of Oncology and Palliative Care," *Ann Palliat Med*. 2015 Jul;4 (3): 89–98; permission conveyed through Copyright Clearance Center, Inc.

Some of the barriers for early access to palliative care are the misconceptions of being a synonym for hospice care. A recent study found that hematology oncologists view palliative care as end-of-life more frequently as compared to solid tumor oncologists who view it more as a team that will co-manage complex patients [15]. Some of the barriers to early integration include unrealistic patient expectations, concerns from the clinician about taking away hope, and clinician unrealistic expectations [16••]. The term "supportive care," "palliative care," and "hospice" have been used to define different stages in the trajectory of illness though they are different they also overlap. New drugs are available and some of them such as target therapies and immunotherapy have lower toxicity compared to chemotherapy. We have seen an increase of cancer treatment until the end-of-life, particularly among young patients and patients with hematologic malignancies [17]. Understanding that active treatments do not necessarily exclude supportive care is key to get early access in this population. In the last month of life, patients with hematologic malignancies have a tendency to have more ER visits, hospital admissions, and ICU stays [9]. Early access to palliative care for these patients could address their physical and psychosocial distress with the intent to ameliorate their suffering [18••, 19•, 20].

Why? How Is the Hematologic Cancer Patient Different from the Solid Tumor Patient?

Patients with hematologic malignancies go through a very unique set of challenges and experiences not necessarily present in solid tumor patients. Unlike many patients with advanced solid tumors, patients with advanced hematologic cancers can still be treated with curative intention especially for acute leukemia. The aggressive, prolonged, and invasive nature of treatments such as high-dose chemotherapy, target therapies, and bone marrow/stem cell transplants tend to occur in an acute care setting [10, 21].

Initially, the complications are more frequently associated to leukemia and later to chemotherapy. Frequently, the patients spend weeks in the hospital. The long duration of hospitalization allows the medical team, the patient, and family to really get to know each other well. Therapy is typically intense and involves prevention and treatment of complications. Antibacterial, antiviral, and antifungal medications are used to prevent and treat infections. Transfusions are used for the treatment of bone marrow dysfunction; pain medications and parenteral nutrition are used to treat mucositis.

The hematology-oncology team establishes a closer relationship with these patients as they are usually seen and followed more often, sometimes even weekly. Thus, the longer and stronger the relationship, the more common it is for the oncology team to want to address the supportive care issues themselves. Due to the culture of the treatment, the hematologist-oncologist tends to be more of a type II oncologist focusing on the biomedical issues. Their attitudes and beliefs guide their approach to symptom care and EOL issues of these patients. Thus, the primary focus is more on cancer treatment and less focus on end-of-life discussions [18••, 19•, 22•].

The symptom burden and the presentation can vary among hematological malignancy patients at different stages of their disease (see Fig. 2). For example, patients with solid tumors could present a more specific nociceptive type of pain syndrome, while leukemia patients have a more generalized pain presentation due to marrow infiltration. Zimmerman et al. found that among patients with leukemia, the most prevalent symptoms were drowsiness, lack of energy, dry mouth, weight

Fig. 2 Symptom burden in patients with leukemia

loss, pain, insomnia, worrying, and difficulty concentrating and feeling sad [23]. Among hematologic patients referred to palliative care, there is a higher frequency of drowsiness and confusion as compared to solid tumor patients. This could be complex due to the multiple-medication regimens used on these patients. On the other hand, the majority of leukemia patients have low blood counts requiring frequent blood draws and transfusions. Patients with low blood counts can present fatigue or higher incidence of bleeding episodes that can impact their quality of life. Hospice teams often do not provide transfusion support causing a limitation in access for these patients. Also, hematopoietic growth factors, expensive antibiotics, and prophylaxis are not an option in hospice due to cost. Some of these things could be considered symptom control and improve the quality of life of these patients. Considering these, it is difficult for patients and families to transition to hospice care at an earlier time [6, 10, 20, 23–25].

Solutions/Future Directions

There is a need for increased referral to a palliative care specialist for patients with leukemia. In order to improve the perceptions of palliative care among the hematology-oncology practitioners, implementation of a more collaborative model is important. Addressing the consult team as supportive care instead of palliative care could diminish misconceptions about the care (Hui oncologist). Education is very important to improve the perception of future physicians too. Increasing the exposure of trainees by fellowship rotation in palliative care and educational conferences in symptom management can enhance the notion of the benefits of the early referral to supportive care.

Expanding the access to hospice with a negotiated plan of treatment may allow patients to benefit from hospice care while still receiving needed services. Patients with palliative/supportive care early in their diagnosis will transition easier to hospice care when appropriate.

Establishing more focus research in this special population is needed to consolidate the evidence. It will help understand and characterize patient needs. Understanding the differences among the different types of leukemia, their trajectory, and symptom burden as disease progresses can identify timing and ways to introduce palliative care as part of the treatment plan. Novel ways to improve integration between palliative care and management of hematologic malignancies are another important step to be able to reach more of these patients.

Conclusion

Hematologic malignancies are unique. It is important to develop a hematologic malignancy palliative care transition model. Early integration is still important in preparing this patients and families to deal with their illness and treatment. Changing perceptions of patients and medical team about palliative/supportive care is key. Integration of both palliative care and leukemia therapy makes perfect sense. The outcomes for patients receiving the aggressive chemotherapy are improved with better symptom control. The primary team has many concerns to deal with besides the symptoms. Previous research shows that when there is a specific team focused on symptoms, the symptom control is improved. This will be translating in less suffering for patients and families.

Compliance with Ethical Standards

Conflict of Interest Marieberta Vidal, David Hui, and Eduardo Bruera declare they have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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•• Of major importance

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