

Integrating palliative care principles in orthopaedic management of end-stage musculoskeletal conditions: a path towards holistic patient-centered care

Jeff Walter Rajadurai OR ¹, Likhit CS ², Shailesh Kumar ² and K.Purushothaman ³

¹ Associate Professor, Department of Orthopaedics, Madha Medical College & Research Institute, Chennai, India.
Research Scholar, Department of Orthopaedics, Meenakshi Medical College Hospital & Research Institute (MMCHRI), Meenakshi Academy of Higher Education and Research (MAHER), India.

² Assistant Professor, Department of Orthopaedics, Madha Medical College & Research Institute, Chennai, India.

³ Senior Resident, Department of Orthopaedics, Madha Medical College & Research Institute, India.

International Journal of Science and Research Archive, 2025, 14(02), 1290-1293

Publication history: Received on 06 January 2025; revised on 11 February 2025; accepted on 14 February 2025

Article DOI: <https://doi.org/10.30574/ijjsra.2025.14.2.0480>

Abstract

Given the end-stage conditions of these musculoskeletal afflictions, it should be more common to find incorporation of palliative care philosophy in orthopaedic surgery as the best approach to adopt holistic-centered care. Patients typically have chronic and debilitating pain, loss of function, and never wholly recover from irreversibly degenerative conditions. Orthopaedic interventions were usually geared toward acute resolution of injuries as well as physical restoration. However, for patients with terminal bone cancer, severe osteoarthritis, or frailty fractures, curative treatment options merged with therapies for the management of symptoms and enhancing quality of life assume center stage. By embracing palliative care ideas, orthopaedic surgeons might increase their ability to treat not only physical symptoms but also the psychological, emotional, and social elements of patient care. Pain, emotional support, shared decision-making, and comprehensive treatment are all basic principles of palliative care. This article discusses such principles and their importance in orthopaedic practice. It further underlines the significance of a multidisciplinary approach, where orthopaedic surgeons and palliative care specialists, along with the rest of the healthcare providers, are all brought together. The overall aim is therefore to enhance the quality of life for such patients with non-curative conditions. This article urges the need to integrate palliative care into orthopaedic management to provide caring patient-centered outcomes for those suffering with end-stage musculoskeletal diseases.

Keywords: Palliative Care; Orthopaedic Surgery; Musculoskeletal Diseases; Pain Management; Patient-Centered Care

1. Introduction

Thus, management of end-stage musculoskeletal conditions presents a very different challenge in the practice of orthopaedic surgery, where restoring mobility and function, in general, is often not possible. Advanced conditions, like metastatic bone disease or severe osteoarthritis, are conditions that have progressed too far for curative surgery to take a place, yet surgery still is a meaningful approach for the management of symptoms and improvement of quality of life [\[1\]](#). These kinds of diseases usually impose on the patients a severe chronic pain and functional restrictions together with other psychological distress factors that strongly reduce their quality of life [\(2\)](#). Therefore, in this context, palliative care is an extremely important part of the treatment process, as it enables physicians to consult with and fulfill the multidimensional needs of patients.

Traditionally associated with end-of-life care in oncology, palliative care has increasingly been valued for management of other chronic and life-limiting diseases, including those musculoskeletal diseases [\(3\)](#). According to the World Health

* Corresponding author: Dr.Jeff Walter Rajadurai OR

Organization, palliative care is defined as "an approach that improves the quality of life of patients facing life-threatening illness through the prevention and relief of suffering by means of early identification, impeccable assessment, and treatment of pain and other physical, psychosocial, and spiritual issues (4)." Integration of palliative care principles into the practice of orthopaedics contributes to surgeons having more comprehensive and patient-centered approaches to the management of end-stage musculoskeletal conditions by adding a holistic perspective toward the care that they provide their patients (5).

In this review, we discuss the implementation of palliative care in the orthopaedic setting, focusing on pain management, psychosocial support, and the benefits of a multidisciplinary treatment approach. Finally, this paper discusses how shared decision-making can allow empowerment of the patient and result in treatment aligned with his or her goals and values, therefore improving ultimately patient outcomes and satisfaction.

2. Palliative Care and Orthopaedics: A Paradigm Shift

In a more general sense, integration of palliative care in the management of orthopaedic conditions signifies a conceptual shift in dealing with end-stage musculoskeletal conditions. In orthodox orthopaedic practice, the surgery intends mainly to restore function and mobility (6). However, in the case of advanced or terminal musculoskeletal diseases, surgery would not be considered all the time for the patient. Since in most cases, the best alternatives to surgery are recommended to patients, surgery is not considered the mainstay of treatment, but rather the aim and ultimate goal for patients to regain their functional activity and mobility (7). Such cases shift the focus of medical interventions from healing procedures to the quality of life experienced by the patient, which is attained through efficient control of symptoms, pain, and psychosocial care [8].

Recently, orthopaedic surgeons have realized the importance of principles of palliative care in the treatment of patients with terminal diseases such as metastatic bone disease, advanced osteoarthritis, and inoperable fractures. The last three conditions may be accompanied with untimely intractable pain, significant functional impairment, and psychological suffering that requires more than just physical measures (9). Orthopaedic surgeons, while embracing the principles of palliative care, could therefore assist in alleviating the additional spectrum of physical symptoms of diseases as well as emotional, psychological, and spiritual suffering in many patients approaching the end of life (10).

It also stresses the individualized approach, where each care plan is tailored to the needs, preference, and value of each patient [11]. The solution ensures that the patients are always engaged in decision-making and that their quality of life becomes their priority. The orthopaedic surgeon's scope now begins from purely technical to become compassionate by providing holistic, patient-centered care [12].

3. Holistic Care and Multidisciplinary Collaboration

The management of end-stage musculoskeletal conditions will require a multi-disciplinary approach involving orthopaedic surgeons and their teams, palliative care specialists, pain management teams, physiotherapists, psychologists, and social workers (13). This is because all aspects of the needs of the patient would be taken care of from the physical to the psycho-emotional and social elements. The holistic approach of the palliative care brings it within the reach of demands pressed by patients with life-limiting musculoskeletal conditions because its goal is enhancement of their well-being in every possible way, rather than confining itself to mere outcomes at the physical level of care only [14].

Pain management stands as one of the most central components in orthopaedic palliative care. Patients suffering from advanced musculoskeletal diseases are severely challenged with regard to pain (15). This might seriously hurt the quality of life. Co-management with the pain management team plays an important role in the identification of the most potent pain relief practice by either pharmacological intervention with opioids and non-steroidal anti-inflammatory drugs or through non-pharmacological measures with physiotherapy, CBT, and relaxing techniques (16). In any case, the ultimate goal is optimal management of pain while avoiding side effects with maximal patient ability to participate in meaningful activities.

Another significant thing is psycho-emotional care since a patient may face emotional and existential issues due to the terminal or life-limiting illness. Many patients experience anxiety, depression, even lose hope, which can further worsen their physical and even more so their emotional sufferings (17). The addition of psychologists and counsellors to the care team will be helpful in supporting the suffering caused by the illness and overall quality of life created by orthopaedic surgeons for patients [18].

4. Pain Management in Orthopaedic Palliative Care

Pain is perhaps the most common and distressing symptom of end-stage musculoskeletal conditions (19). Pain management will therefore stand at the center of palliative care in orthopaedics. Chronic incapacitating pain in patients with metastatic bone disease, severe osteoarthritis, or fractures can often render these patients unable to function normally or have their usual quality of life (20). In these instances, treatment is not aimed at healing from the roots of the disease but rather alleviating pain and making the patient comfortable.

Pharmacological interventions, including opioids, NSAIDs, and adjuvant analgesics, are very beneficial in the management of pain in such patients [21]. However, patients with palliative care also receive a wide array of non-pharmacological interventions, such as physical therapy, acupuncture, and CBT [22]. Such interventions can decrease the patient's level of pain, improve mobilization, and increase the overall well-being.

Besides the anatomical changes, end-stage musculoskeletal conditions bring a large quantity of psychological and emotional pain that often aggravates the subjective feeling of pain in many patients(23). Therefore, in orthopaedics, palliative care cannot bypass other aspects of pain for relief-fostering intervention. Increasingly recognized in recent years, holistic pain management strategies are today being advocated by orthopaedic surgeons to improve the quality of life for their patients (24).

5. Future Directions and Conclusion

Palliative care in orthopaedic surgery will bring forth a new and promising approach to the management of end-stage musculoskeletal conditions. With an aging population and an increased number of patients who are in an advanced, life-limiting stage of musculoskeletal diseases, a growing number of holistic and patient-centered care will be required[[25, 26]]. Thus, it behoves orthopaedic surgeons to embrace this paradigm shift and align palliative care principles into their practice.

Pain management, psychological support, shared decision-making—the orthopaedic surgeon can play an even more holistic role by considering all the elements. Another area that underlines the particular multidisciplinary nature of palliative care is that patients are likely to be treated in a way that best maximizes quality of life, in conjunction with any other interventions provided. This review points out the need for incorporating palliative care into orthopaedics and encouraging a more patient-centered approach that focuses on quality of life rather than curative results.

In conclusion, the future of orthopaedics lies in the adoption of palliative care principles because patients with end-stage musculoskeletal conditions are going to be treated with care that is compassionate and comprehensive. This integration will improve patient outcomes but will also enrich the overall patient experience, making orthopaedic care relevant and responsive to the needs of an ageing population.

Compliance with ethical standards

Disclosure of conflict of interest

The authors have no conflict of interest.

References

- [1] Smith TJ, Temin S, Alesi ER, et al. American Society of Clinical Oncology provisional clinical opinion: The integration of palliative care into standard oncology care. *J Clin Oncol.* 2012;30(8):880-887.
- [2] Ripamonti CI, Bruera E, Dalal S, et al. Palliative care in advanced cancer patients. *CA Cancer J Clin.* 2011;61(5):354-376.
- [3] Ferris FD, Bruera E, Cherny N, et al. Palliative cancer care a decade later: accomplishments, the need, next steps—from the American Society of Clinical Oncology. *J Clin Oncol.* 2009;27(18):3052-3058.
- [4] World Health Organization (WHO). WHO definition of palliative care. Available at: <https://www.who.int/cancer/palliative/definition/en/>. Accessed 12 October 2024.
- [5] Morrison RS, Meier DE. Palliative care. *N Engl J Med.* 2004;350(25):2582-2590.

- [6] Swarm RA, Abernethy AP, Anhelescu DL, et al. Adult cancer pain: NCCN clinical practice guidelines. *J Natl Compr Canc Netw.* 2010;8(9):1046-1086.
- [7] Mercadante S, Portenoy RK. Opioid poorly-responsive cancer pain. Part 2: basic mechanisms that could shift dose-response for analgesia. *J Pain Symptom Manage.* 2001;21(3):255-264.
- [8] Carr DB, Goudas LC. Acute pain. *Lancet.* 1999;353(9169):2051-2058.
- [9] Becker G, Thyrian JR, Quandt S, et al. Which factors are associated with a high quality of life at the end of life? A population-based study in Germany. *BMC Palliat Care.* 2016;15(1):69.
- [10] Sleeman KE, de Brito M, Etkind S, et al. The escalating global burden of serious health-related suffering: projections to 2060 by world regions, age groups, and health conditions. *Lancet Global Health.* 2019;7(7):883-892.
- [11] Currow DC, Phillips J, Clark K. Using opioids in general practice for chronic non-cancer pain: an overview of current evidence. *Med J Aust.* 2016;204(8):305-309.
- [12] Stone P, Minton O. Cancer-related fatigue. *Eur J Cancer.* 2008;44(8):1097-1104.
- [13] Ferrell BR, Temel JS, Temin S, et al. Integration of palliative care into standard oncology care: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol.* 2017;35(1):96-112.
- [14] Davis MP, Walsh D. Epidemiology of cancer pain and factors influencing poor pain control. *Am J Hosp Palliat Care.* 2004;21(2):137-142.
- [15] Hjermstad MJ, Fainsinger R, Kaasa S, et al. Assessment and classification of cancer pain. *Curr Opin Support Palliat Care.* 2009;3(1):24-30.
- [16] Paice JA, Ferrell B. The management of cancer pain. *CA Cancer J Clin.* 2011;61(3):157-182.
- [17] Bruera E, Sweeney C, Willey J, et al. Pain intensity assessment by bedside clinicians and palliative care consultants: A retrospective study. *J Pain Symptom Manage.* 2003;25(5):420-423.
- [18] Doyle D, Hanks GW, Cherny N, et al. *Oxford Textbook of Palliative Medicine.* 4th ed. Oxford: Oxford University Press; 2011.
- [19] Hanks GW, Robbins M, Twycross R. *Morphine and its alternatives in cancer pain management.* New York: Churchill Livingstone; 1996.
- [20] Fainsinger RL, Bruera E. Supportive care in cancer patients. *Lancet.* 1991;337(8749):906-909.
- [21] Currow DC, Spruyt O, Hardy J, et al. Chronic non-cancer pain: a global survey of its impact on clinical practice and patient outcome. *Pain Pract.* 2013;13(7):562-568.
- [22] Zylicz Z, Twycross R. *Pain relief in advanced cancer.* London: Arnold; 2000.
- [23] Porter LS, Keefe FJ, Hurwitz H, et al. Measuring patient preferences for roles in cancer pain management: validation of a modified version of the control preferences scale. *J Pain Symptom Manage.* 2005;30(4):314-320.
- [24] Hawley P. Barriers to access to palliative care. *Palliat Care.* 2017;10:1178224216688887.
- [25] Chochinov HM, Kristjanson LJ, Hack TF, et al. Burden to others and the terminally ill. *J Pain Symptom Manage.* 2007;34(2):94-104.
- [26] Davis MP. Cancer pain. *Curr Oncol Rep.* 2010;12(4):248-253.