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Hip Fracture in the Frail Elderly

Making the Case for Early Integration of Palliative Care and Timely Hospice Referral

Mary Atkinson Smith ▼ Kristi Acker ▼ Lisa Torres

With the projected increase of an aging population in the upcoming decades, coupled with increasing elderly longevity, the incidence of hip fractures among this vulnerable population is expected to grow. Current evidence reveals high mortality rates within 6 months to 1 year among frail elderly patients who suffer hip fracture. In addition, the presence of multiple chronic conditions negatively impacts mortality rates in this vulnerable population. The purpose of this article is to discuss both the importance of integrating early palliative care and the appropriateness for hospice referral among frail elderly hip fracture patients. Moreover, the role nurses' play in early recognition of the need for palliative and/or hospice services among this vulnerable population will be explored.

An upcoming challenge in healthcare is the aging population 65 years of age and older, which is expected to grow from 43.1 million in 2012 to 83.7 million by the year 2050 (U.S. Census Bureau, 2014). Moreover, there is an expected increase of individuals 80 years of age and older from 11.3 million in 2010 to 30.9 million in 2050 and those 90 years of age and older to increase from 1.9 million in 2010 to 8.0 million in the year 2050 (U.S. Census Bureau, 2014). With the expected increase in the elderly population, the concern grows for the projected rise of hip fractures among this vulnerable population.

Hip fractures are expected to increase 12% by 2030, coupled with 68% of elderly individuals living with at least 2 chronic medical conditions (National Council on Aging, 2016; Stevens & Rudd, 2013). The presence of multiple chronic conditions and impaired cognition may significantly reduce successful rehabilitation of the frail elderly following a hip fracture. With the 1-year average mortality rate among the elderly residing in a nursing home, following a hip fracture, being 47%, the early integration of palliative care and timely hospice referral is vital when it comes to promoting comfort and improving the quality of life (Neuman et al., 2014). This article will discuss the considerations of integrating palliative care and timely hospice referral among the frail elderly who have sustained a hip fracture.

Review of the Literature

A cohort study conducted by Castronuovo, Pezzotti, Franzo, DiLallo, and Guasticchi (2011) revealed a greater risk for mortality among elderly hip fracture patients with increased age and frailty, male gender, cognitive impairment, and other preexisting comorbidities. Preexisting comorbidities and patient's age have a significant influence on the prognosis of frail elderly patients following a hip fracture (Carpintero et al., 2014). The preexisting comorbidities may also serve to further influence the mortality rate within the first 6 months following a hip fracture and warrant the appropriateness of early integration of palliative care and timely hospice referral. Preexisting comorbidities may include cognitive impairment such as dementia or delirium, cancer, congestive heart failure (CHF), cardiovascular disease, and chronic obstructive pulmonary disease (Castronuovo et al., 2011).

The presence of comorbidities among the elderly prior to surgery increases the incidence for developing postoperative complications that may further contribute to mortality (Meessen et al., 2014). The development of certain postoperative complications, such as pneumonia in the presence of a comorbidity such as CHF, can nearly double an elderly patient's risk for mortality (Hamlet et al., 1997). The mortality rate 30 days following a hip fracture is 9% and increases to 17% if the patient has a preexisting comorbidity (Carpinterio et al., 2014). If CHF is present prior to or develops after sustaining a hip fracture, the mortality rate 30 days following a hip fracture increases to 65%. The development of pneumonia after sustaining

Mary Atkinson Smith, DNP, FNP-BC, ONP-C, RNFA, Nurse Practitioner, Starkville Orthopedic Clinic, Starkville, MS; Associate Professor of Nursing, Olivet Nazarene University, Bourbonnais, IL (mary@nurseslead.com).

Kristi Acker, DNP, FNP-BC, AOCNP, ACHPN, Assistant Professor and Family Nurse Practitioner Program Coordinator, The University of Alabama, Tuscaloosa; Oncology/Hematology Nurse Practitioner, Manderson Cancer Center, DCH, Tuscaloosa, AL.

Lisa Torres, DNP, MSN, FNP-BC, PNP-BC, Nurse Practitioner, Mayo Clinic Primary Care, Jacksonville, FL; Instructor, Mayo Clinic Health Sciences, Rochester, MN; Adjunct Professor, South University, College of Nursing and Public Health, Savannah, GA.

The authors have disclosed no conflicts of interest.

DOI: 10.1097/NOR.0000000000000381

a hip fracture increases the 30-day mortality rate to 43% (Roche, Wenn, Sahota, & Moran, 2005).

According to Neuman et al. (2014), patients who sustain a hip fracture while residing in a long-term care facility have an even greater risk for mortality within 12 months of sustaining a hip fracture. In a research study conducted by Neuman et al. (2014), the average length of survival among the frail elderly residing in a long-term care facility after sustaining a hip fracture is 377 days. Within 6 months of sustaining a hip fracture, 36% of the nursing home residents died within 6 months and 47% died within 1 year. Neuman et al. (2014) found that the factors that lessen survival following a hip fracture include increasing age, the presence of advanced comorbidities, a significant decline in cognitive function, and continued dependence with activities of daily living.

In a recent study by Ritchie et al. (2016), frail elderly patients who suffer hip fracture and are medically vulnerable prior to the fracture occurrence are in greater need for specialty palliative care in order to reach optimal quality of life. Ritchie et al. (2016) compared 856 older adults with hip fractures with 851 age-, gender-, and race-matched controls. The authors reported that older adults with hip fractures experienced significantly higher premorbid functional vulnerability such as with activities of daily living dependency (25.7% vs. 16.1%). Other functional vulnerabilities in the medical vulnerable older patient with hip fracture included increased dementia (16.2% vs. 7.3%) and higher use of helpers (41.2% vs. 28.7%) as compared with the control population. Additional healthcare differences included both higher morbidities and healthcare utilizations, and poorer life expectancies in the medically vulnerable population (Ritchie et al., 2016).

Mortality and Morbidity

Understanding mortality and morbidity related to hip fractures in the frail elderly and how this relates to the integration of palliative care and appropriateness of timely hospice referral is essential. As previously mentioned, the length of survival among the frail elderly residing a nursing home following a hip fracture is 377 days, with 36% dying within 6 months and 47% dying within 1 year (Neuman et al., 2014). In addition to increased mortality related to hip fractures, there is also significant morbidity because only 50% of elderly hip fracture patients return to their previous level of function with 10%–20% of patients being discharged to skilled nursing facilities following the fracture residential or nursing care placement (NHS Institute for Innovation and Improvement, 2016). These statistics alone serve to support the importance of integrating palliative care principles in this vulnerable, high-risk population, in addition to the need for appropriate and timely hospice referral following a hip fracture.

Nurses caring for frail elderly patients following a hip fracture need to be mindful of high-risk comorbidities that may increase the incidence of mortality and poor outcomes and further warrant the need for integration of palliative care and appropriateness of early hospice referral. It may prove beneficial if existing comorbidities are identified upon hospital admission and further highlighted upon hospital discharge so that they are passed along to the receiving postdischarge facility and staff, whether it is home health or a skilled nursing facility. The following high-risk comorbidities may contribute to increased mortality and an increased incidence of postoperative complications among frail elderly hip fracture patients and alert the nurse to the need for integrating palliative care and appropriate and timely hospice referral (Belmont, Garcia, Romano, Nelson, & Schoenfeld, 2013; Koh, Chen, Petrella, & Thind, 2013):

- Existing comorbidities such as CHF, chronic pulmonary conditions, renal failure, diabetes, and obesity
- Impaired cognition such as delirium, dementia, or Alzheimer's disease
- History of repeated falls
- Gait imbalance
- Significant nutritional deficits with low lymphocyte count and low total albumin
- Poor prognosis for independent ambulation
- Imbalance between pain management and functionality

Table 1 lists the high-risk comorbidities that increase the incidence of mortality and adverse outcomes among the frail elderly who sustain a hip fracture.

Considerations for Integrating Palliative Care

Other considerations nurses should be aware of, in addition to the presence of comorbidities, include the following: general psychosocial and physical status, patient and/or caregiver wishes and goals, community resources, intervention costs, and outcomes of prior

Table 1. High-Risk Comorbidities That Increase the Incidence of Mortality and Adverse Outcomes Among the Frail Elderly Who Sustain a Hip Fracture

- Existing comorbidities such as congestive heart failure, chronic pulmonary conditions, renal failure, diabetes, and obesity
- Impaired cognition such as delirium, dementia, or Alzheimer's disease
- History of repeated falls
- Gait imbalance
- Significant nutritional deficits with low lymphocyte count and low total albumin
- Poor prognosis for independent ambulation
- Imbalance between pain management and functionality
- Increasing dependence with activities of daily living

Data from Koh (2013).

therapies. Because of the complexities surrounding hip fractures in the elderly including economic and caregiver burdens, access to palliative care should be a priority. In addition to expert management of physical symptoms, integrating the specialty of palliative care can improve coordination and transition of care, provide expert psychosocial and spiritual assessments, and help address ethical concerns. Integrating palliative care can prove instrumental for optimizing quality of life for frail elderly patients with hip fractures and their caregivers alike. Many of those caring for this vulnerable population will be family members. Often referred to as the "Sandwich Generation," these caregivers are important healthcare extenders and provide both care and support to multiple generations and may have multiple health concerns as well (Parker & Patten, 2013).

Integration of Palliative Care

Integrating specialty palliative care concurrently with disease-modifying treatment is appropriate at any age and at any stage of a serious illness (Center to Advance Palliative Care, 2017). Furthermore, palliative care ideally is incorporated throughout the continuum of disease by addressing not only physical needs of patients but also the intellectual, emotional, social, and spiritual well-being of patients and their caregivers (National Quality Forum, 2012). Because of the high mortality rate related to hip fractures in the frail elderly, the integration of interprofessional palliative care is of utmost importance. Integrating palliative care for the frail elderly patient and caregiver(s) improves patient outcomes and quality care by allowing for proactive discussions for goals of care and patient preference. Furthermore, the interprofessional palliative care teams help spur open communications about difficult, yet important topics and help facilitate open discussions concerning the benefits and burdens of therapies for managing hip fractures (Kavalieratos et al., 2016).

Palliative Care Versus Hospice Care

The term "palliative care" is often used interchangeably with the term "hospice care." This misconception often hinders the integration of palliative care services, in addition to appropriate and timely hospice referral. Hospice is an excellent example of palliative care; however, it is exclusive to end of life, whereas palliative care can be introduced at any point in the disease continuum, such as with definitive treatment of hip fracture in frail elderly patients. There is a general assumption and/or belief among healthcare providers and community members alike that palliative care equates solely to end of life (Kavalieratos et al., 2016). This interpretation is incomplete and limiting. Therefore, more education is needed to transform the present culture's overall understanding of both palliative care and hospice care and the role they play in the care of frail elderly hip fracture patients (Institute of Medicine, 2011).

Palliative care includes an interprofessional healthcare team representing medical, nursing, social work, and chaplaincy, just to name a few. Traditionally, specialty palliative care required inclusion of eight foundational domains as follows: structure and process; physical aspects of care; psychological and psychiatric aspects of care; social aspects of care; spiritual, religious, and existential aspects of care; cultural aspects of care; care of the patient at end of life; and lastly, ethical and legal aspects of care (National Quality Forum, 2006). As palliative care evolves, the domain of care for the patient at end of life will continue for hospice but will have a diminished focus in other settings, thus allowing for greater access to palliative care.

Transitioning to Hospice

At some point along the palliative care continuum, patients may enter a phase where the transition to hospice care is appropriate and warranted. Historically, most people viewed death as a natural part of life; however, advancing medical technologies to cure disease have supported the notion that death is something to avoid (Granda-Cameron & Houldin, 2012). Such technology may have the potential to assist patients and families in avoiding the awareness of mortality, as well as supporting the feeling of immortality. Although a significant percentage of Americans polled do not want to die in the hospital, 85% still do (Arnold, Finucane, & Oxenham, 2013). End-of-life medical care incurs high cost in addition to conflicting with patient preferences and often with no change in outcome (Obermeyer et al., 2014).

While advanced disease states often require intensive and painful interventions, they are not always associated with improved outcomes, nor preferred by patients and families (Torres, Lindstrom, Hannah, & Webb, 2016). Yet, oftentimes, patients do not receive timely and appropriate referrals to hospice, which enables patients and family members the full benefit of hospice services (Kruse, Parker Oliver, Wittenberg-Lyles, & Demiris, 2013). Likewise, patients who are not hospice appropriate may fail to receive specialized palliative care management when needed due to the lack of palliative care resources, awareness, and communication between disciplines.

Hospice care for the frail elderly with advanced chronic comorbidities who experience a hip fracture is designed to provide benefits to not only the patient but also the family and caregivers (Ahles et al., 2005). Hospice is defined as an interdisciplinary team consisting of physicians, nurses, social workers, chaplains, and volunteers, and provides supportive, caring services (National Hospice and Palliative Care Organization [NHPCO], 2015). The Medicare hospice benefit covers many services for patients and families including (a) pain management, (b) assistance with all nonphysical aspects of the dying process, (c) medication management, (d) supporting families in caring for the patient, (e) speech and physical therapy, (f) respite care, and (g) bereavement care to family and friends (NHPCO, 2015). Table 2 lists the hospice benefits that might be advantageous for frail elderly patients with a hip fracture. Most patients receive one of four levels of care: (a) routine home care, (b) general inpatient care, (c) continuous care, or (d) respite care (NHPCO, 2015).

Table 2. Advantageous Hospice Benefits for Frail Elderly Hip Fracture Patients

- Management of pain
- Assistance with the nonphysical aspects of the dying process
- Management of medications
- Family caregiver support
- Speech and physical therapy
- Respite care
- Bereavement care for family and friends

Data from NHPCO (2015).

To elaborate, physician and nurse team members in hospice care are specially trained to deliver palliative care at end of life, which may vary for some patients who are not at the end-of-life phase. Hospice team members provide expert pain control and symptom management. Furthermore, social workers specialize in bereavement support and facilitation of family communication, chaplains provide spiritual guidance, and volunteers assist with sitting, errands, and driving to appointments. Earlier hospice referrals among frail elderly patients with advanced chronic conditions who sustain a hip fracture may result in better quality of life for the patient and may alleviate much needless suffering and distress for the patient and the caregivers (Cheraghlou et al., 2016; Ghesquiere, Thomas, & Bruce, 2016).

Barriers to Palliative and Hospice Care

There are existing barriers that impede the integration of palliative care services and timely referral for hospice care among frail elderly hip fracture patients. These barriers may include, but are not limited to, lack of knowledge regarding the purpose, benefits, and existence of palliative services and hospice care, lack of optimal utilization of integrative palliative care and timely hospice referral, and the lack of clear communication related to these barriers. These barriers may be present among healthcare providers as well patients and their family members (Torres et al., 2016).

Because of these existing barriers, nurses should challenge themselves to gain a greater understanding of the expanding use and integration of palliative care principles for all patients facing serious illness. According to the Hospice and Palliative Nurses Association (2014), "Palliative care throughout the continuum of illness involves addressing the physical, intellectual, emotional, social and spiritual needs and facilitating patient autonomy, access to information, and choice." (*Palliative Nursing: Scope and Standards of Practice*, p. 1). Nurses should educate themselves to recognize hospice-qualifying patients for optimal utilization of hospice services (Waldrop & Meeker, 2012).

Steps suggested by Hutcheson (2011) to integrate hospice and/or palliative care into daily thought are as follows: (a) learning how to determine prognosis, nurses must be able to differentiate between curative care and care that prolongs life, (b) taking time to determine the patient's goals of care, (c) keeping the notion of referring to hospice when a terminally ill or frail elderly patient is admitted, and (d) use of hospice flyers as a source of information for providers and patients. Open communication between nurses and patients may be the best way to achieve these goals (Garner, Henager, Kirchner, & Sullivan, 2011).

Continuing education for nurses to develop and promote clear communication skills is necessary and allows for teaching of tools and mnemonics for improvement in communication. This can also be beneficial when approaching the nurse practitioner, physician, or physician assistant about initiating a palliative plan of care or obtaining a palliative care consult for elderly patients who have sustained a hip fracture and are not hospice eligible.

Nurses can minimize the aforementioned barriers by being familiar with various palliative care models that are used within their organization and the available palliative care and hospice resources that are available within the community (Bharadwaj et al., 2016). In addition, nurses being familiar with hospice patient qualifications and being aware of existing advanced comorbidities and cognitive impairment among frail elderly patients who experience a hip fracture can minimize barriers to timely hospice referral. As mentioned previously, nurses must be able to recognize hospice-qualifying patients for timely hospice referral and optimal utilization of hospice services (Waldrop & Meeker, 2012). Failure to detect the signs and symptoms that are indicative of an end-of-life process can interfere with the family and patient's ability to make informed decisions and lead to subsequent overutilization of healthcare resources through unnecessarily repeated hospital admissions (Close & Long, 2012).

Implications for Nursing

Proactive patient-centered communication, a hallmark of the palliative care model, aims to lessen delays in unrelieved symptom burden, unfavorable institutional economic outcomes, and moral distress for healthcare providers and caregivers alike with the initiation of proactive patient-centered communication beginning with the nurse (Callaway, 2012). The burden of care often falls on family members who, by default, become responsible for providing and managing direct care of their frail elderly loved one who experiences a hip fracture. The complexities of caring for elderly family members with acute hip fracture, along with compounding multiple chronic conditions, quickly put family caretakers at risk. Psychosocial risks for family caretakers can be related but not limited to educational or work absenteeism, diminishment in quality-of-life measures, and compromises in family and/or social dynamics. Therefore, nurses must advocate for the inclusion of palliative care principles early and often, especially at the onset of an acute hip fracture in the frail elderly. Furthermore, nurses must also be cognizant in recognizing when and if a need for transitioning to hospice care is appropriate in an effort to provide quality, safe, and patient-centered care for the frail elderly patient who experiences the unfortunate, but increasingly common, hip fracture.

The timing and appropriateness of hospice referral can be a challenge for nurses and other healthcare providers. As previously mentioned, there are a number of factors to be considered in elderly patients who sustain a hip fracture. Understanding that the diagnosis of hip fracture alone does not meet eligibility criteria for hospice admission, nurses must be vigilant to frequently assess and communicate both patient and nursing goals, in order to successfully transition from broad palliative care to more specific end–of-life care, in a timely and appropriate fashion.

Although there is a lack of precise hospice eligibility criteria available for referring frail elderly patients who are rehabilitating poorly following a hip fracture, there are other factors nurses may be mindful of that can help determine hospice appropriateness. Factors to consider for hospice appropriateness among this vulnerable population include assessing for the number of emergency department visits and hospital readmissions and evidence of poor nutritional state, as evidenced by severe hypoalbuminemia, unintentional weight loss, the presence of decubiti, and home and/or bed confinement (Torres et al., 2016).

The concept of frailty itself can be a significant predictor of morbidity and mortality within 6 months of a hip fracture (Kua, Ramason, Rajamoney, & Chong, 2016). Earlier recognition of the need for palliative care or hospice referral by the nursing staff can facilitate more timely referrals to palliative care or hospice, maximize a patient's quality of life as well as his or her family's quality of life by avoiding painful interventions, improve symptom management, and support the bereavement journey (Fairfield et al., 2012). Nurses are also in a prime position to positively impact challenging factors related to morbidity and mortality associated with frail elderly who have hip fractures, in addition to addressing the concerns of family members (Jack, O'Brien, Scrutton, Baldry, & Groves, 2015).

Unfortunately, sparse research exists for identifying measurable benefits of early integration of palliative and hospice care in the frail elderly population that sustain hip fractures. There is strong evidence to support early integration of palliative care in patients with chronic illness such as cancer, chronic obstructive pulmonary disease, and CHF, among others. It appears only logical to extrapolate the aforementioned beneficial outcomes, as they would apply to elderly patients who experience hip fracture when it comes to increased comfort and improved quality of life, patient-centered goal setting, and caregiver support.

Because of gaps in palliative care access, patients not suitable for hospice referral may fail to receive palliative care support services including interdisciplinary team interventions aimed to properly manage physical, spiritual, and psychosocial symptoms associated with serious illness (Rome, Luminais, Bourgeois, & Blais, 2011). By better understanding the differences between palliative care and hospice and championing early integration of palliative care services, nurses are better able to provide support and ultimately improve patient outcomes. More information on palliative care and hospice can be accessed from the following: National Hospice and Palliative Care Organization at www.nhpco.org; and Center to Advance Palliative Care at www.getpalliaitivecare.org and/or www.capc.org.

Conclusion

An increase in the aging population over the coming decades will eventually lead to an expanded number of frail elderly patients who experience hip fractures coupled with existing multiple chronic conditions and the increased potential for cognitive impairment. Both palliative care and hospice services for the frail elderly focus on increasing quality of life and promoting comfort in a patient-centered approach. For frail elderly patients with multiple chronic conditions who experience a hip fracture, palliative care serves to promote comfort and management of symptoms whereas a continuous decline in physical or cognitive function during rehabilitation following a hip fracture may warrant a referral for hospice services. Early recognition by nurses of the need to integrate palliative care or initiate an evaluation for hospice referral serves to positively benefit frail patients with hip fractures and their family members by encouraging patient-centered care that promotes comfort and a desirable quality of life. Nurses play a pivotal role in leading and transforming patient care by advocating for patient centric, palliative approaches for managing frail elderly patients with complex medical conditions who suffer hip fractures.

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