Update in Hospice and Palliative Care

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Abstract

The objective of this update, presented at the 2017 Annual Assembly of the American Association of Palliative and Hospice Medicine (AAHPM) and the Hospice and Palliative Nurses Association (HPNA), is to identify, summarize, and critique a sampling of research from the prior year that has the potential for marked impact on hospice and palliative clinical practice. Eight reports of original research published between January 1, 2016 and December 31, 2016 were identified through a systematic PubMed search using the terms “hospice” and “palliative care,” a hand search of 22 leading healthcare journals, and discussion with experts in the field. Candidate articles were ranked based on the study’s methodological quality, appeal to a breadth of palliative care clinicians across different settings, and potential clinical practice impact. We summarize the eight articles with the highest ratings and give recommendations for clinical practice.

Keywords: hospice clinical care; palliative clinical care; state of science; update in hospice; update in palliative care

Introduction

THE OBJECTIVE of this update, presented at the 2017 Annual Assembly of the American Association of Palliative and Hospice Medicine (AAHPM) and the Hospice and Palliative Nurses Association (HPNA), is to identify, summarize, and critique a sampling of research from the prior year that has the potential for marked impact on hospice and palliative clinical practice. Eight reports of original research published between January 1, 2016 and December 31, 2016 were identified through a systematic PubMed search using the terms “hospice” and “palliative care,” a hand search of 22 leading healthcare journals, and discussion with experts in the field. Candidate articles were ranked based on the study’s methodological quality, appeal to a breadth of palliative care clinicians across different settings, and potential clinical practice impact. We summarize the eight articles with the highest ratings and give recommendations for clinical practice (Table 1).

Palliative Care in Diverse Contexts

Summary and Main Findings

Patients with advance cancer commonly visit the emergency department (ED), for a multitude of avoidable physical and/or emotional reasons.² These authors conducted a randomized clinical trial (RCT) of ED-initiated palliative care (PC) consultation compared with usual care in a large urban ED. The intervention arm received a comprehensive interdisciplinary PC team consultation by the inpatient PC team on the same or following day of ED admission. Patients admitted to the hospital, continued to be followed by the PC team daily and were referred to the outpatient PC clinic if PC needs continued postdischarge. The primary outcome was a change in the quality of life (QOL) from baseline to 12 weeks as measured by the Functional Assessment of Cancer Therapy-General. Secondary outcomes were depression, one-year survival, and healthcare utilization. The study showed that there

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TABLE 1. RECOMMENDATIONS FOR CLINICAL HOSPICE AND PALLIATIVE CARE PRACTICE EMERGING FROM SELECTED ARTICLES

<i>Recommendation</i>	<i>Reference</i>
Start	
Consider	
Stopping the use of risperidone and haloperidol for the management of delirium in patients with serious illness being treated in the PC setting	Agar et al. ¹¹
Developing approaches to improve treatment decisional regret among minority parents of pediatric cancer patients	Mack et al. ¹⁵
The unclear impact on family caregivers' perceptions of patients' pain management if involving them in hospice care plan meetings	Parker et al. ¹³
The many challenges of facilitating adoption of guideline-based pain strategies to reduce pain among older NH residents	Ersek et al. ⁵
The use of gabapentin, cromolyn sodium, topical capsaicin, ondansetron, and paroxetine for the treatment of pruritus	Siemens et al. ⁹
Using a transitional home-based PC program with monthly follow-up for patients with end-stage HF posthospital discharge	Wong et al. ³
Initiating PC consultations in the emergency department in advanced solid cancer patients	Grudzen et al. ¹
Continue	
Advocating for the proven benefit of specialty PC services to patients and their families	

HF, heart failure; NH, nursing home; PC, palliative care.

was a significantly higher QOL at 12 weeks in the intervention group compared with the usual care group. There were no differences in depression, healthcare utilization, or survival.

Strengths and limitations

This was a high-quality RCT conducted in a large urban academic medical center. The trial was conducted within the routine patient care flow of the site's ED and had a wide range of racial and ethnic groups, socioeconomic statuses, and cancer types. The study's limitations included having a small sample size, being single-site only, and having relatively high proportions of missing data due to illness or death.

Clinical bottom line

ED-initiated PC consultations in patients with advanced solid tumor cancers improved their QOL at 12 weeks and had no impact on survival, hospice use, hospital length of stay, ICU admissions, or depression.

Summary and Main Findings

There are an estimated 26 million people with heart failure (HF) worldwide with over 1 million hospitalizations per year in the United States and Europe.⁴ The authors conducted a multisite RCT comparing usual PC posthospitalization to home with or without a specifically designed transitional PC program for patients with end-stage heart failure (TCP-ESHF) (New York Heart Association Stages II–IV). Discharged patients with ESHF referred to outpatient PC from three hospitals in Hong Kong were eligible to participate in the study. In addition to usual PC, the intervention group received a predischarge assessment and weekly home visits/telephone calls from a PC qualified nurse care manager for the first four weeks posthospital discharge then monthly. The primary outcome measure was hospital readmissions at 4 and 12 weeks postdischarge. Secondary outcomes were symptoms, functional status, QOL, and satisfaction with care. The study sample included 84 patients; 41 in the TCP-ESHF arm

and 43 in the usual care arm. As compared with the usual care group, the TCP-ESHF group had a lower 12-week readmission rate (TCP-ESHF 33.6% vs. control 61.0%, $p=0.009$) and fewer mean number of readmissions (intervention 0.42 [0.10] and control 1.10 [0.16], $p=0.001$) The TCP-ESHF group had significantly higher clinical improvement in symptom intensity, QOL, and satisfaction with care, as compared with the usual care group.

Strengths and limitations

This was a high-quality multisite RCT conducted in an urban setting. Limitations included a high loss to follow-up rate, a small sample size, and a significantly higher New York Heart Association (NYHA) class in the usual care group. Although there is a concern for generalizability due the small sample size and the study setting of Hong Kong only, a similar ESHF sample population in the United States is easy to identify.

Clinical bottom line

An intensive 4-week transitional home-based program with monthly follow-up reduced readmissions at 12 weeks and improved symptoms, QOL, and satisfaction with care among patients with ESHF transitioning home from hospital.

Symptom Management

Summary and Main Findings

Up to 84% of nursing home (NH) residents experience pain that negatively affects QOL.^{6–8} The objective of this study was to test whether pain management practices could be improved in NHs by implementing a set of investigative team-developed pain management algorithms through intensive training sessions and site champions. These algorithms were disseminated in pocket-sized handbooks to nursing staff and included 11 evidence-based decision trees for general pain assessment; assessment and treatment of

pain in nonverbal residents; appropriate prescribing and titration of acetaminophen, nonsteroidal anti-inflammatory drugs, opioids, and adjuvant pain medications; and assessment and management of medication side effects. A cluster RCT compared this pain management Algorithm group (ALG) with a control group of NHs, the nursing staff of which received four 1-hour classes on basic pain management Education group (EDU). NH residents 65 years and older with moderate-to-severe pain were eligible. The primary outcome was certified nursing assistant (CNA) assessment of residents' usual pain during the previous week from 0 (no pain) to 12 (the most intense pain imaginable).

Twenty-seven NHs (ALG group $k = 13$; EDU group $k = 14$) having a total of 485 participating residents (ALG group $n = 259$; EDU group $n = 226$) were randomized in the study. Baseline CNA-reported pain in both groups improved slightly from baseline to six months; however, there were no statistically significant differences in these change scores between groups. Adherence to recommended pain practices between the ALG and the EDU groups between baseline and six months was also not statistically different.

Strengths and limitations

This was a well-designed cluster RCT, and participating NHs were diverse in terms of facility characteristics of size, for profit or not for profit, and quality ratings. Limitations of the study were that NH residents were predominantly white and female, the NHs were located in only one state, there was a notable lack of provider/prescriber involvement, and a lack of sensitive pain measurement tool.

Clinical bottom line

A set of algorithms combined with intensive diffusion strategies to encourage adoption of evidence-based pain practices was no better than basic education in reducing pain among older NH residents.

Summary and Main Findings

Pruritus is a distressing and often tortuous symptom that negatively affects QOL and can be difficult to manage.⁹ This was a Cochrane systematic review of 50 RCTs that included 1916 participants that tested 39 different pharmacological treatments for pruritus.¹⁰ The authors used a standardized data extraction process and performed risk of bias and quality of evidence assessments to determine levels of evidence from high to low quality for each pharmacological agent.

Five drugs (gabapentin, topical capsaicin, ondansetron, naltrexone, cromolyn sodium) had a moderate level of evidence in uremic patients with chronic renal failure or end-stage renal disease. In patients with cholestatic pruritus, there was no high-quality evidence supporting effective treatment agents and a sparse number of RCT regarding treatment options. There were two RCTs using naltrexone with only a moderate grade of quality of evidence and three RCTs using rifampin with low-grade quality of evidence. There was one RCT with paroxetine; the study did not differentiate for uremic or cholestatic pruritus. There was a moderate level of evidence to support its relief of pruritus.

Strengths and limitations

The authors performed a high-quality Cochrane review. However, the wide assortment of medications, heterogeneity of the patient populations, lack of high-quality RCTs, and high rates of missing data prohibited meta-analysis.

Clinical bottom line

The current evidence-based recommendations for pharmacological treatment for pruritus ranges from moderate to very low-quality evidence, although there is enough evidence to suggest a few potentially useful treatments in patients with renal disease.

Summary and Main Findings

Delirium is a profoundly distressing and common condition seen in the PC setting.¹² This study aimed to determine if risperidone or haloperidol are effective in the reduction of delirium-associated symptoms in patients receiving PC when compared with placebo. The study was a double-blind, parallel-arm, dose-titrated placebo-controlled RCT involving 11 inpatient hospices/hospital PC units in Australia. Adult participants ($n = 247$) meeting three standard delirium diagnosis criteria enrolled in the study. Dosing of risperidone and haloperidol was based on previous RCTs: a standardized loading dose along with the first dose, then a maintenance dose every 12 hours was administered to patients with delirium. Titration up on dose could occur daily based upon the most recent Nursing Delirium Screening Scale. Risperidone and haloperidol dosing was based on age less or greater than 65. All patients received an individualized treatment plan for reversible causes of delirium and non-pharmacological measures.

The primary outcome was the change between the baseline delirium symptom score and the average of the last two scores on day three. The secondary outcomes were the daily Memorial Delirium Assessment Scale (MDAS) score, lowest delirium symptoms score, daily dose of midazolam, extrapyramidal symptoms, and survival. Both those in the risperidone and haloperidol arm had significantly higher delirium symptom scores than those in the placebo group, with the risperidone group having slightly greater delirium symptoms when compared with the haloperidol group at study end.

Daily delirium symptom scores were higher in patients taking risperidone or haloperidol than those in receiving placebo. Participants in the risperidone arm had a statistically significant higher MDAS score per day than the placebo arm. MDAS per day scores were also higher in the haloperidol arm in comparison to the placebo arm, but was not statistically significant. Extrapyramidal effects were significantly greater in both the risperidone and haloperidol arms compared with the placebo arm. On each study day, midazolam use was significantly lower in the placebo arm compared with both treatment arms. For overall survival, those receiving risperidone and haloperidol were more likely to die than those receiving placebo, 29% and 73%, respectively.

Strengths and limitations

To the authors' knowledge, this study is the first adequately powered RCT of its type in patients receiving PC.

The study population included patients with cancer, limiting generalizability to other diseases. The majority of participants had mild-to-moderate delirium scores at baseline and those with irreversible causes of delirium were not excluded, limiting generalizability of the findings to those with severe delirium. The use of oral solution only excluded participants that were unable to swallow and resulted in the withdrawal of participants that developed swallowing difficulty. The non-pharmacological management measures used were not addressed in the study for comparison between groups.

Clinical bottom line

Among patients receiving PC, individualized management of delirium resulted in lower delirium scores and symptoms than treatment with oral risperidone or haloperidol. Haloperidol was associated with decreased survival.

Focus on the Family in Palliative Care

Summary and Main Findings

Family caregivers of hospice patients perform a wide variety of healthcare tasks for their care recipients on hospice, including managing pain, and yet most of these caregivers are untrained and worry about performing tasks safely. Hospice interdisciplinary teams (IDT) meet routinely to develop, evaluate, and modify a patient's care plan, including their pain management regimen¹⁴ and hence inclusion of family caregivers in weekly IDT meetings may increase their ability to effectively manage patients' pain.

In this four-year RCT conducted in three Midwestern hospices, a web conferencing intervention called Assessing Caregivers for Team Intervention Through Video Encounters (ACTIVE) that facilitated family and patient virtual or telephonic attendance at weekly hospice IDT meetings was tested against usual care. Four hundred sixteen hospice patients were randomized into either the ACTIVE or usual care arm with 208 patients and 223 caregivers in each group. The primary outcome was the caregiver's perception of pain management. Secondary outcomes were caregiver QOL, patient pain level, and caregiver anxiety.

There were no statistically significant differences in the primary and secondary outcomes. Subanalyses showed that caregivers of noncancer patients reported better pain control than those of patients with cancer. There was also an increased time cost associated with reviewing the cases of ACTIVE patients compared with usual care (six minutes per patient vs. three minutes). Qualitative interviews with ACTIVE family caregiver participants concerning what was helpful about participation in the IDT meetings included receiving health-literate sensitive communication about the patient's condition, feeling more knowledgeable about pain management, and receiving psychosocial and emotional support from the IDT.

Strengths and limitations

This high-quality, multisite RCT included hospice patients with cancer and noncancer diagnoses. Standardized scales were used in the study, however, there were validity issues identified with using the Caregiver Pain Medicine Questionnaire, which measured the primary outcome. The sample

was also mostly white and rural dwelling, which may limit translation to more diverse and urban populations.

Clinical bottom line

An intervention to include family caregivers in hospice care plan meetings through telephone or videoconference did not show significant improvements in caregivers' perceptions of pain management, QOL, anxiety, or patient pain ratings.

Summary and Main Findings

Cancer is the second most common cause of death for children in the United States. Parents of children with cancer face challenging decision making about treatment and care across the cancer trajectory. This prospective cohort study evaluated decisional regret among parents making cancer treatment decisions for their children. The study setting was the Dana Farber Cancer Institute/Boston Children's Hospital and the Children's Hospital of Philadelphia. The primary outcome of the study was the prevalence of decisional regret among parents within 12 weeks of their child's cancer diagnosis. Secondary outcomes included factors for heightened regret about treatment decisions, such as parent and child characteristics, parent psychological state, information and communication quality, and trust with the child's oncologist. Of the 565 eligible parents, 364 completed all survey items. Sixteen percent of parents had heightened decisional regret, 39% had no regret, and 45% had mild regret. Factors associated with heightened regret were parental depression or anxiety, high struggle with illness, high peaceful illness acceptance, and low information quality. Nonwhite race parents reported heightened regret compared with white parents. Parents who reported high prognostic disclosure, high information quality, complete trust in their physician, and held their ideal role in decision making were less likely to have decisional regret.

Strengths and limitations

The study was well designed, used validated instruments, and had a mix of hematological and solid tumor malignancies. The study sample was predominately white, English speaking, and treated at a major tertiary cancer center, potentially limiting its generalizability to unlike populations. The authors note that regret could emerge at months to years and the 12-week assessment time point for regret does not capture this. The study provides clinically relevant information about the prevalence and associated risk factors for regret in parents of children with cancer.

Clinical bottom line

In this prospective cohort study, 16% of parents reported regret relating to treatment decisions. Racial and ethnic minority parents were at heightened risk.

The Effectiveness of Palliative Care

Summary and Main Findings

Multiple RCTs have reported improvements in QOL, symptom control, cost containment, and survival associated with PC services.^{17–20} This systematic review and meta-

analysis summarize the latest RCTs of PC in persons with life-limiting illness and its estimated association with PC outcomes, including patient QOL, symptom burden, and survival. Data on 12,731 patients and 2479 caregivers from 43 RCTs across different care settings were included in the review. The majority (69.7%) of the RCTs included patients with cancer and those with HF (32.5%) in the United States (72%). Risk of bias (low, high, unclear) was assessed using the Cochrane Collaboration's Tool²¹ with subjective (patient-reported outcomes) and objective outcomes (survival) evaluated separately for each trial.

Twenty-four trials (55.8%/4576 patients) assessed patient QOL with 85.7% being conducted in an ambulatory setting and over a majority of patients with cancer (71.4%) (12 high risk of bias, 7 low risk, 5 unclear risk). There was a statistically significant improvement in QOL for those receiving palliative at one- to three-month follow-up, but no difference noted at the four- to six-month follow-up time point when sensitivity analyses restricted to low risk of bias trials. Twenty-nine trials assessed PC interventions for physical symptoms (17 high risk of bias, 7 low risk, and 5 unclear risk). Ten trials pooled regardless of risk bias, indicated statistically and clinically significant reduction of symptom burden at one- to three-month and four- to six-month follow-up, but there was extremely high heterogeneity. Restricting the sensitivity analyses to trials with low risk of bias (four trials), PC was not associated with change in symptom burden at either of the follow-up time points. Survival was evaluated in 17 trials (8196 patients) (10 high risk of bias, 2 low risk, 5 unclear risk). Seven trials pooled regardless of risk bias, indicated no survival benefit associated with PC. Restricting the sensitivity analyses to trials with low risk of bias (two trials), there were conflicting findings regarding survival benefit.

Strengths and limitations

This review involved a broad reaching search that was consistent with the philosophical components of PC interventions yielding RCTs that may not have been identified with a narrower search criterion. Additional strengths of the review includes multiple raters of the RCTs using standardized protocols and measures, heterogeneity among studies, and use of risk bias assessment independently rated by two investigators. Trials included in the review represented multiple countries with various serious illness through their trajectory. Some limitations of the review were: several trials had critical missing data that precluded their inclusion the meta-analysis; quasi-experimental studies were excluded from the review, some of which showed benefits of PC; and some studies were not included due to lack of reporting trial duration and attrition rates.

Clinical bottom line

In the meta-analysis of RCTs, PC was associated with improvements in QOL and symptom burden at one to three months, but not with improved survival.

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Author Disclosure Statement

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