“Palliative Care for the Internist: 15 Ways to Improve Care for Your Patients with a Life-limiting Illness"

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Disclosure: There are no relevant financial relationships to disclose regarding this presentation

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My Background

- Internal Medicine - Washington University/BJH
- Hospice & Palliative Care Fellowship University of Pittsburgh Medical Center
- PhD Program, Clinical and Translational Science, University of Pittsburgh
- Chief Medical Officer, BJC Hospice
Presentation Outline

- Background
- Communication Pearls
- Polypharmacy Pearls
- Symptom Management Pearls
  - Constipation
  - Nausea
  - Depression
  - Pain
  - Agitation
  - Secretions
# Palliative Care Versus Hospice Care

## Palliative Care
- Focus on improving quality of life and controlling symptoms
- At any point in a serious illness
- Patients often continuing curative therapies including chemotherapy and hospitalizations
- Home support varies by program
- Medications and equipment often have copays

## Hospice Care
- Focus on improving quality of life and controlling symptoms
- Prognosis less than 6 months
- Focus on comfort focused therapies with patients often desiring to be at their homes without intensive therapies
- Home support includes home nurses, social workers, chaplains, and NPs/physicians
- Medications and equipment are typically without copays
The Problem
Family Perspectives on Aggressive Cancer Care Near the End of Life

Alesi A. Wright, MD, MPH; Nancy L. Kosting, MD, MPH; John Z. Ayanian, MD, MPP; Elizabeth A. Chrischilles, PhD; Katherine L. Kahn, MD; Christine S. Ritchie, MD, MPH; Jane C. Weeks, MD, MSc; Craig C. Earle, MD, MSc; Mary B. Landon, PhD

**Importance** Patients with advanced-stage cancer are receiving increasingly aggressive medical care near death, despite growing concerns that this reflects poor-quality care.

**Objective** To assess the association of aggressive end-of-life care with bereaved family members’ perceptions of the quality of end-of-life care and patients’ goal attainment.

**Design, Setting, and Participants** Interviews with 1146 family members of Medicare patients with advanced-stage lung or colorectal cancer in the Cancer Care Outcomes Research and Surveillance study (a multiregional, prospective, observational study) who died by the end of 2011 (median, 144.5 days after death; interquartile range, 85.0-551.0 days).

**Exposures** Claims-based quality measures of aggressive end-of-life care (ie, intensive care unit [ICU] admission or repeated hospitalizations or emergency department visits during the last month of life, chemotherapy =2 weeks of death, no hospice or =3 days of hospice services, and deaths occurring in the hospital).

**Main Outcomes and Measures** Family member-reported quality rating of “excellent” for end-of-life care. Secondary outcomes included patients’ goal attainment (ie, end-of-life care congruent with patients’ wishes and location of death occurred in preferred place).

**Results** Of 1146 patients with cancer (median age, 76.0 years [interquartile range, 65.0-87.0 years]; 55.8% male), bereaved family members reported excellent end-of-life care for 53.3%. Family members reported excellent end-of-life care more often for patients who received hospice care for longer than 3 days (58.8% [352/599]) than those who did not receive hospice care or received 3 or fewer days (43.1% [236/547]) (adjusted difference, 16.5 percentage points [95% CI, 10.7 to 22.4 percentage points]). In contrast, family members of patients admitted to an ICU within 30 days of death reported excellent end-of-life care less often (45.0% [66/148]) than those who were not admitted to an ICU within 30 days of death (52.3% [520/995]) (adjusted difference, −9.4 percentage points [95% CI, −18.2 to −0.6 percentage points]). Similarly, family members of patients who died in the hospital reported excellent end-of-life care less often (42.2% [194/460]) than those who did not die in the hospital (57.4% [394/686]) (adjusted difference, −17.0 percentage points [95% CI, −22.9 to −11.1 percentage points]). Family members of patients who did not receive hospice care or received 3 or fewer days were less likely to report that patients died in their preferred location (40.0% [152/380]) than those who received hospice care for longer than 3 days (52.3% [287/544]) (adjusted difference, −34.4 percentage points [95% CI, −41.7 to −27.0 percentage points]).

**Conclusions and Relevance** Among family members of older patients with fee-for-service Medicare who died of lung or colorectal cancer, earlier hospice enrollment, avoidance of ICU admissions within 30 days of death, and death occurring outside the hospital were associated with perceptions of better end-of-life care, whereas factors associated with aggressive care were associated with poorer perceptions of end-of-life care.
Among patients with metastatic non–small-cell lung cancer, early palliative care led to significant improvements in both quality of life and mood. As compared with patients receiving standard care, patients receiving early palliative care had less aggressive care at the end of life but longer survival. 11.6 months vs. 8.9 months, P=0.02
Key Communication Skills

- Disclosing bad news
- Communicating prognostic information
- Addressing patients’ and families’ emotions
- Discussing end-of-life options including hospice
### 1) Disclosing Bad News (SPIKES)

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Setting</strong></td>
<td>Quiet location/tissues/pagers off</td>
</tr>
<tr>
<td><strong>Perception</strong></td>
<td>Ask what they have been told/believe</td>
</tr>
<tr>
<td><strong>Invitation</strong></td>
<td>Permission to discuss prognosis</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td>Provide information without jargon</td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td>Acknowledge emotions</td>
</tr>
<tr>
<td><strong>Summary</strong></td>
<td>Discuss next steps</td>
</tr>
</tbody>
</table>
2) NURSE Statements

- **Naming emotion**
  “I can’t imagine how frustrating this must be.”

- **Understanding**
  “If a doctor told me that I would be frustrated and have trouble trusting.”

- **Respecting**
  “All of us are so impressed with what a great job you have done taking care of Jack.”

- **Supporting**
  “We will be with there to support you through the rest of Jack’s illness.”

- **Exploring**
  “Could you share more about what “X” means to you?”
3) Tips for Talking about Hospice

• Talk first about what hospice is and the support it can provide long before you use the word “hospice”
• Learn how to address the hope for miracle or that God will intervene to help their loved one
• Know the power of “I wish” statements
• “What would your loved one say if they were doing the talking”
Other Tips

• It is okay to cry in front of your patients/families and they are almost always touched by it
• Expect to get some bizarre reactions when sharing really bad news
• Think of a really anxious situation you encountered before entering a challenging goals of care discussion. It will help ground you before entering these often emotional draining conversations
4) Preparing Families for End-of-Life

- Symptoms to make patients/families aware of:
  - 1) Delirium/agitation
  - 2) Secretions
  - 3) Respiratory changes
  - 4) Mottling/Cyanosis
Patient Experience in the Last Week of Life

End-of-Life Dreams and Visions:  
A Longitudinal Study of Hospice Patients’ Experiences

Christopher W. Kerr, MD, PhD; James P. Donnelly, PhD; Scott T. Wright, BA; Sarah M. Kuszczak, BS; Anne Banas, MD; Pei C. Grant, PhD; and Debra L. Luczkiewicz, MD.

Abstract

**Background:** End-of-life dreams and visions (ELDVs) have been well documented throughout history and across cultures. The impact of pre-death experiences on dying individuals and their loved ones can be profoundly meaningful.

**Objective:** Our aim was to quantify the frequency of dreams/visions experienced by patients nearing the end of life, examine the content and subjective significance of the dreams/visions, and explore the relationship of these factors to time/proximity to death.

**Methods:** This mixed-methods study surveyed patients in a hospice inpatient unit using a semi-structured interview. Sixty-six patients admitted to a hospice inpatient unit between January 2011 and July 2012 provided informed consent and participated in the study. The semi-structured interviews contained closed and open-ended questions regarding the content, frequency, and comfort/distress of dreams/visions.

**Results:** Fifty-nine participants comprised the final sample. Most participants reported experiencing at least one dream/visions. Almost half of the dreams/visions occurred while asleep, and nearly all patients indicated that they felt real. The most common dreams/visions included deceased friends/relatives and living friends/relatives. Dreams/visions featuring the deceased (friends, relatives, and animals/pets) were significantly more comforting than those of the living, living and deceased combined, and other people and experiences. As participants approached death, comforting dreams/visions of the deceased became more prevalent.

**Conclusions:** ELDVs are commonly experienced phenomena during the dying process, characterized by a consistent sense of realism and marked emotional significance. These dreams/visions may be a profound source of potential meaning and comfort for the dying, and therefore warrant clinical attention and further research.

5) Transportable Physician Orders for Patient Preferences TPOPP (Missouri POLST equivalent)

![Image of Transportable Physician Orders for Patient Preferences TPOPP](image-url)
Minimizing Polypharmacy
Chemotherapy Use, Performance Status, and Quality of Life at the End of Life

Holly G. Prigerson, PhD; Yuhua Rao, PhD; Monisha A. Shah, MD; Elizabeth Pauli, MD; Thomas W. LeBlanc, MD, MA; Bryan J. Schneider, MD; Melissa M. Garrido, PhD; M. Carrington Reid, MD, PhD; David A. Berlin, MD; Kerin B. Adelson, MD; Alfred I. Neugut, MD, PhD; Paul K. Masejewski, PhD

IMPORTANCE Although many patients with end-stage cancer are offered chemotherapy to improve quality of life (QOL), the association between chemotherapy and QOL amid progressive metastatic disease has not been well-studied. American Society for Clinical Oncology guidelines recommend palliative chemotherapy only for solid tumor patients with good performance status.

OBJECTIVE To evaluate the association between chemotherapy use and QOL near death (QOD) as a function of patients' performance status.

DESIGN, SETTING, AND PARTICIPANTS A multi-institutional, longitudinal cohort study of patients with end-stage cancer recruited between September 2002 and February 2008. Chemotherapy use (n = 158 [50.6%]) and Eastern Cooperative Oncology Group (ECOG) performance status were assessed at baseline (median = 3.8 months before death) and patients with progressive metastatic cancer (N = 312) following at least 1 chemotherapy regimen were followed prospectively until death at 5 outpatient oncology clinics in the United States.

MAIN OUTCOMES AND MEASURES Patient QOD was determined using validated caregiver ratings of patients' physical and mental distress in their final week.

RESULTS Chemotherapy use was not associated with patient survival controlling for clinical setting and patients' performance status. Among patients with good (ECOG score = 1) baseline performance status, chemotherapy use compared with nonuse was associated with worse QOD (odds ratio [OR], 0.35; 95% CI, 0.17-0.75; P = .01). Baseline chemotherapy use was not associated with QOD among patients with moderate (ECOG score = 2) baseline performance status (OR, 1.06; 95% CI, 0.51-2.21; P = .87) or poor (ECOG score = 3) baseline performance status (OR, 1.34; 95% CI, 0.46-3.89; P = .59).

CONCLUSIONS AND RELEVANCE Although palliative chemotherapy is used to improve QOL for patients with end-stage cancer, its use did not improve QOD for patients with moderate or poor performance status and worsened QOD for patients with good performance status. The QOD in patients with end-stage cancer is not improved, and can be harmed, by chemotherapy use near death, even in patients with good performance status.
6) Risks and Benefits of Statins in Advanced Illness

Statin in Advanced Illness (Survival Impact)

No. at risk
- Continued statin therapy: 192, 149, 105, 64, 47, 32, 21
- Discontinued statin therapy: 189, 135, 93, 68, 52, 36, 26

Survival Probability vs. Days, No.
## Statins in Advanced Illness: Impact on Quality of Life

<table>
<thead>
<tr>
<th>Domain Measure</th>
<th>Estimate (95% CI)</th>
<th>Favors Discontinuation</th>
<th>Favors Continuation</th>
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<tbody>
<tr>
<td><strong>Quality of life</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Overall</td>
<td>0.18 (-0.28 to 0.64)</td>
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</tr>
<tr>
<td>Physical</td>
<td>-0.08 (-0.43 to 0.26)</td>
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<tr>
<td>Psychological</td>
<td>0.39 (-0.02 to 0.80)</td>
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<tr>
<td>Well-being</td>
<td>0.32 (0.00 to 0.64)</td>
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<tr>
<td>Support</td>
<td>0.53 (0.16 to 0.90)</td>
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<tr>
<td>Total</td>
<td>0.26 (0.02 to 0.50)</td>
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<td><strong>Symptoms</strong></td>
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<tr>
<td>Standard items</td>
<td>-2.19 (-5.01 to 0.63)</td>
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<tr>
<td>Statin items</td>
<td>-0.23 (-1.39 to 0.93)</td>
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<tr>
<td>All items</td>
<td>-2.45 (-6.02 to 1.12)</td>
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<td><strong>Performance status</strong></td>
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<td>AKPS scale score</td>
<td>-0.80 (-4.11 to 2.50)</td>
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<td><strong>Medications</strong></td>
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<tr>
<td>Total medications</td>
<td>-0.67 (-1.29 to -0.05)</td>
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<tr>
<td>Regular</td>
<td>-0.25 (-0.77 to 0.27)</td>
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<tr>
<td>PRN ≥1/2 d</td>
<td>-0.19 (-0.46 to 0.08)</td>
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<tr>
<td>PRN &lt;1/2 d</td>
<td>-0.11 (-0.32 to 0.11)</td>
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<tr>
<td>Satisfaction</td>
<td>0.08 (-0.05 to 0.20)</td>
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</table>
7) Challenges of Calcium Supplementation in Patients with Advanced Disease

Symptoms of Hypercalcemia

- Constipation
- Fatigue
- Dyspepsia
- Depression
- Anxiety
- Cognitive decline
- Agitation
- Anorexia
- Nausea
- Polyuria
8) Success of Drug Discontinuation: Anti-hypertensives

<table>
<thead>
<tr>
<th>Drug Group</th>
<th>Patients Using Drug, No.</th>
<th>DD Suggested, No. (%)</th>
<th>DD Actually Performed, No. (%)</th>
<th>Specific Compliance, %</th>
<th>Eventual DD Success Rate, %</th>
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<tbody>
<tr>
<td>Antihypertensives</td>
<td>95</td>
<td>58 (61)</td>
<td>50 (53)</td>
<td>86</td>
<td>84</td>
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<tr>
<td>β-Blockers</td>
<td>26</td>
<td>15 (58)</td>
<td>11 (42)</td>
<td>73</td>
<td>67</td>
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<tr>
<td>Calcium channel blockers</td>
<td>22</td>
<td>13 (59)</td>
<td>11 (50)</td>
<td>85</td>
<td>85</td>
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<tr>
<td>Disothiazide</td>
<td>11</td>
<td>11 (100)</td>
<td>10 (91)</td>
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<td>ACE inhibitors</td>
<td>32</td>
<td>9 (28)</td>
<td>8 (25)</td>
<td>89</td>
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<tr>
<td>α-Blockers</td>
<td>8</td>
<td>6 (75)</td>
<td>2 (25)</td>
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<td>Nitrates</td>
<td>5</td>
<td>5 (100)</td>
<td>5 (100)</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Furosemide</td>
<td>18</td>
<td>14 (78)</td>
<td>13 (72)</td>
<td>92</td>
<td>79</td>
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<tr>
<td>Aspirin</td>
<td>24</td>
<td>2 (8)</td>
<td>2 (8)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Statins</td>
<td>26</td>
<td>18 (69)</td>
<td>14 (54)</td>
<td>78</td>
<td>72</td>
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<tr>
<td>Sulfonylurea</td>
<td>6</td>
<td>5 (83)</td>
<td>5 (83)</td>
<td>100</td>
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<tr>
<td>Metformin</td>
<td>11</td>
<td>5 (45)</td>
<td>3 (27)</td>
<td>60</td>
<td>60</td>
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<tr>
<td>H₂ blockers</td>
<td>8</td>
<td>8 (100)</td>
<td>6 (75)</td>
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<tr>
<td>Omeprazole</td>
<td>18</td>
<td>10 (56)</td>
<td>9 (50)</td>
<td>90</td>
<td>90</td>
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<tr>
<td>Benzodiazepines</td>
<td>36</td>
<td>36 (100)</td>
<td>35 (97)</td>
<td>97</td>
<td>97</td>
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<tr>
<td>SSRIIs</td>
<td>33</td>
<td>13 (39)</td>
<td>11 (33)</td>
<td>85</td>
<td>77</td>
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<tr>
<td>Other antidepressants</td>
<td>12</td>
<td>10 (83)</td>
<td>9 (75)</td>
<td>90</td>
<td>90</td>
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<tr>
<td>Antipsychotics</td>
<td>8</td>
<td>3 (37)</td>
<td>3 (37)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Levodopa-carbidopa</td>
<td>10</td>
<td>7 (70)</td>
<td>5 (50)</td>
<td>71</td>
<td>71</td>
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</table>

Medications Associated with Constipation

- Opioids/tramadol
- (methadone and fentanyl are the least constipating)
- Amiodarone
- Antacids (Tums)
- Antidepressants
- Antihistamines (Benadryl)
- Calcium
- Calcium Channel Blockers (Norvasc, Diltiazem, Verapamil)
- Iron
- Zofran
9) Opiate-induced Constipation

• “the passage of small, hard feces infrequently and with difficulty”
• 10% of all people > 65
• 50% of all patients on admission to hospice
• Up to 90% of patients on opioids will experience constipation at some point!
Randomized, Double-Blind, Placebo-Controlled Trial of Oral Docusate in the Management of Constipation in Hospice Patients

Yoko Tarumi, MD, Mitchell P. Wilson, Olga Szafran, MHSA, and G. Richard Spooner, MD, CCFF, FCFP

Department of Oncology (Y.T.), Faculty of Medicine and Dentistry (M.P.W.), and Department of Family Medicine (O.S., G.R.S.), University of Alberta, Edmonton, Alberta, Canada

Abstract

Context. The stool softener docusate is widely used in the management of constipation in hospice patients. There is little experimental evidence to support this practice, and no randomized trials have been conducted in the hospice setting.

Objectives. To assess the efficacy of docusate in hospice patients.

Methods. This was a 10-day, prospective, randomized, double-blind, placebo-controlled trial of docusate and sennosides vs. placebo and sennosides in hospice patients in Edmonton, Alberta. Patients were included if they were age 18 years or older, able to take oral medications, did not have a gastrointestinal stoma, and had a Palliative Performance Scale score of 20% or more. The primary outcome measures were stool frequency, volume, and consistency. Secondary outcomes were patient perceptions of bowel movements (difficulty and completeness of evacuation) and bowel-related interventions.

Results. A total of 74 patients were randomized into the study (35 to the docusate group and 39 to the placebo group). There were neither significant differences between the groups in stool frequency, volume, or consistency, nor in difficulty or completeness of evacuation. On the Bristol Stool Form Scale, more patients in the placebo group had Type 4 (smooth and soft) and Type 5 (soft blobs) stool, whereas in the docusate group, more had Type 3 (sausage like) and Type 6 (mushy) stool ($P=0.01$).

Conclusion. There was no significant benefit of docusate plus sennosides compared with placebo plus sennosides in managing constipation in hospice patients. Docusate use should be considered on an individual basis. J Pain Symptom Manage 2013;45:2–13. © 2013 U.S. Cancer Pain Relief Committee. Published
# Bristol Poop Chart

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Status</th>
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<tbody>
<tr>
<td>1</td>
<td>Separate hard lumps</td>
<td>Very constipated</td>
</tr>
<tr>
<td>2</td>
<td>Lumpy and sausage like</td>
<td>Slightly constipated</td>
</tr>
<tr>
<td>3</td>
<td>A sausage shape with cracks in the surface</td>
<td>Normal</td>
</tr>
<tr>
<td>4</td>
<td>Like a smooth, soft sausage or snake</td>
<td>Normal</td>
</tr>
<tr>
<td>5</td>
<td>Soft blobs with clear-cut edges</td>
<td>Lacking fibre</td>
</tr>
<tr>
<td>6</td>
<td>Mushy consistency with ragged edges</td>
<td>Inflammation</td>
</tr>
<tr>
<td>7</td>
<td>Liquid consistency with no solid pieces</td>
<td>Inflammation</td>
</tr>
</tbody>
</table>
Lubiprostone vs Senna in postoperative orthopedic surgery patients with opioid-induced constipation: A double-blind, active-comparator trial

Christina M Marciniak, Santiago Toledo, Jungwha Lee, Michael Jesselson, Jillian Bateman, Benjamin Grover, Joy Tierny

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Jungwha Lee, Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL 60611, United States
Michael Jesselson, University of Chicago Medical Center, Chicago, IL 60637, United States
Jillian Bateman, Joy Tierny, The Rehabilitation Institute of Chicago, Chicago, IL 60611, United States
Benjamin Grover, Chicago College of Osteopathic Medicine, Chicago, IL 60515, United States

Author contributions: Marciniak CM, Toledo S, Jesselson M, Bateman J and Lee J designed the research project; Marciniak day or Senna (generic) two capsules administered daily for six days. Subjects were assessed using the patient assessment of constipation (PAC)-symptoms (PAC-SYM) and the PAC-quality of life (PAC-QOL) scales measured at baseline and Day 7; Subjects were assessed daily for secondary measures included the Bristol stool scale bowel consistency, specific bowel symptom score (Nausea, cramping, straining, completeness, abdominal pain, time per lavatory attempt, assistance needed), adverse events and rescue medications required. Function was measured using the functional independence measure (FIM) at admission and discharge; length of stay (LOS) and missed treatments due to gastrointestinal
10) Pearls for Treating Depression at End-of-life

- SSRIs often have a considerable time to action in patients with significant comorbid illness
  - (median time of 6+ weeks for a 50% reduction in the symptoms in Star*D trial.)
- Mirtazapine
  - Advantages include quicker relief, appetite stimulation and reduction in insomnia
- Ritalin offers quick relief for many refractory patients but trials are mixed
- Ketamine has demonstrated very encouraging preliminary results
  - Earliest studies IV and intranasal
Rapid response to methylphenidate as an add-on therapy to mirtazapine in the treatment of major depressive disorder in terminally ill cancer patients: A four-week, randomized, double-blinded, placebo-controlled study

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Received 15 October 2013; revised in revised form 20 November 2013; accepted 11 January 2014

Abstract
This is a 4-week, randomized, double-blind, placebo-controlled study to examine the effects of methylphenidate as an add-on therapy to mirtazapine compared to placebo for treatment of depression in terminally ill cancer patients. It involved 88 terminally ill cancer patients from University of Malaya Medical Centre, Kuala Lumpur, Malaysia. They were randomized and treated with either methylphenidate or placebo as add on to mirtazapine. The change in Montgomery-Åsberg Depression Rating Scale (MADRS) score from baseline to day 3 was analyzed by linear regression. Changes of MADRS and Clinical Global Impression-Severity Scale (CGI-S) over 28 days were analyzed using mixed model repeated measures (MMRM). Secondary analysis of MMRM response rates, defined as 50% or more reduction from baseline score. A significantly larger reduction of Montgomery-Åsberg Depression Rating Scale (MADRS) score in the methylphenidate group was observed from day 3 (β = 6.14; 95% CI [−1.33, 8.64]). Response rate (defined as 50% or more reduction from baseline MADRS score in the methylphenidate treated group) was significantly higher in methylphenidate than in placebo group (44% vs. 24%, respectively). Mean change from baseline of the Clinical Global Impression-Severity Scale (CGI-S) was significantly lower in the methylphenidate group compared to placebo group (ΔCGI-S methylphenidate −2.2 ± 0.5 vs. ΔCGI-S placebo 0.2 ± 0.5). These results suggest that methylphenidate may have a rapid onset of action as an add-on therapy to mirtazapine for treatment of moderately severe depression in terminally ill cancer patients.
Methylphenidate for Treating Depression in Patients with Advanced Cancer

Comparison of Mean FSAS Scores for Placebo- and MP-Treated Groups at Baseline (Day 0) and Day 14

<table>
<thead>
<tr>
<th>Variable</th>
<th>Placebo Mean ± SD</th>
<th>MP Treatment Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>6.95 ± 2.37</td>
<td>5.06 ± 2.69</td>
</tr>
<tr>
<td>Depression</td>
<td>3.94 ± 3.06</td>
<td>2.84 ± 3.05</td>
</tr>
<tr>
<td>Well-being</td>
<td>5.67 ± 1.77</td>
<td>4.90 ± 2.09</td>
</tr>
<tr>
<td>Fatigue</td>
<td>6.30 ± 2.33</td>
<td>5.17 ± 2.37</td>
</tr>
<tr>
<td>Depression</td>
<td>3.86 ± 2.67</td>
<td>2.79 ± 2.75</td>
</tr>
<tr>
<td>Well-being</td>
<td>4.70 ± 2.15</td>
<td>5.00 ± 2.34</td>
</tr>
</tbody>
</table>

SD = standard deviation.
Scores 0—best; 10—worst.

Abstract

Context. Fatigue is highly prevalent in populations with advanced illness and is often associated with depressed mood. The role of psychostimulant therapy in the treatment of these conditions remains ill defined.

Objective. To evaluate the response of fatigue and depression in patients with advanced illness to thrice daily doses of methylphenidate (MP) as compared with placebo.

Methods. In a randomized, double-blind, placebo-controlled trial, 30 hospice patients, both inpatients and outpatients, who had fatigue scores of at least four on a scale of zero to 10 (0 = no fatigue and 10 = worst fatigue), were randomized to receive either 3 mg of MP at 8 am and 12 noon or placebo. Doses of MP were thrice daily every three days according to response and adverse effects. Those patients were monitored daily by telephone and visited by a research nurse. On Study Days 0 (Baseline), 3, 7, and 14, Fatigue was assessed using the Piper Fatigue Scale as the primary outcome measure and validated by the Visual Analogue Scale for Fatigue and the Edmonton Symptom Assessment Scale (ESAS) fatigue score. Subjects in inpatient facilities were interviewed or observed by staff on an identical schedule. Depressive symptoms were assessed by the Beck Depression Inventory and the Center for Epidemiologic Studies Depression Scale, and the ESAS depression score. Primary statistical analysis was conducted using repeated measures multivariate analysis of variance.

Results. Both MP and placebo-treated groups had similar measures of fatigue as baseline. Patient taking MP were found to have significantly lower fatigue scores (Piper Fatigue Scale, Visual Analogue Scale for Fatigue, and ESAS fatigue score) at Day 14 compared with baseline. The improvement in fatigue with MP treatment was dose dependent; the mean average effective dose was 10 mg on Day 3 and 20 mg on Day 14 (dose range of 10–80 mg). Placebo-treated individuals showed no

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THE WORLD'S BEST MEDICINE. MADE BETTER.
Interesting New Therapies!

11) Pearls for Treating Pain at End-of-Life

- Opiates can be titrated quickly if patients are carefully monitored
- Most typically start to schedule long-acting opioids if OME >30 mg
- Use caution in prescribing opiates in patients with renal failure
- Methadone can work wonders for patients refractory to other opioids
- If using Narcan in pt with chronic pain, dilute 0.4mg Narcan vial with 9mL of normal saline and give 1mL per minute.
- For uncomplicated painful bone metastases a single fraction of radiation can offer significant pain relief.
12) Benefits of Radiation Therapy in End-of-life

- Pain relief for uncomplicated bone metastases
  - pain relief typically starts within 2 weeks of treatment
  - partial response in 60-80% of patients at 4 weeks
  - complete relief in 30-50% of patients at 4 weeks

- Impact of early treatment of cord compression
  - Maintain ambulation and functional status
  - Maintain urinary/fecal continence and quality of life

- Some cancers respond better to radiation
  - Lymphoma, myeloma, small cell lung CA, breast CA, prostate CA, ovarian CA

Rubin EB, Buehler AE, Halpern SD. *States Worse Than Death Among Hospitalized Patients With Serious Illnesses.* JAMA Intern Med. 2016 PMID 24479808
Comparing Efficacy of Single Fraction vs Extended Courses of Radiation Therapy for Bone Metastases

- No statistically significant differences in pain control or pathologic fractures rate
- Higher increase in retreatment rate in single fraction group (20% vs 8%)
- Lower rates of toxicity in single fraction regimens
  - Appetite loss (56% vs 66%)
  - Vomiting (13 vs 23%)
  - Diarrhea (23% vs 31%)
  - Skin discoloration (14% vs 24%)

Table 5
Uncomplicated and complicated BoM PRO and pain responses for SFRT and MFRT.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Uncomplicated BoM</th>
<th>Complicated BoM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SFRT</td>
<td>MFRT</td>
</tr>
<tr>
<td>Improvement in Total score</td>
<td>80% (309)</td>
<td>83% (180)</td>
</tr>
<tr>
<td>Pain OR</td>
<td>75% (289)</td>
<td>75% (163)</td>
</tr>
<tr>
<td>Pain CR</td>
<td>22% (86)</td>
<td>21% (45)</td>
</tr>
<tr>
<td>Improvement in function</td>
<td>74% (213)</td>
<td>77% (118)</td>
</tr>
<tr>
<td>Improvement in symptom frustration</td>
<td>78% (264)</td>
<td>81% (156)</td>
</tr>
</tbody>
</table>

PRO = Patient Reported Outcomes; BoM = Bone Metastases; SFRT = Single Fraction Radiotherapy; MFRT = Multiple Fraction Radiotherapy; OR = Overall Response; CR = a post-RT score of zero.

International Variation in Practice Patterns Comparing Single-Fraction to Multi-fraction Radiotherapy

Review Article

International patterns of practice in radiotherapy for bone metastases: A review of the literature

Rachel McDonald, Edward Chow, Henry Lam, Leigha Rowbottom, Hany Soliman

Purpose: Radiation therapy is the standard treatment for symptomatic bone metastases. Several randomized control trials and meta-analyses have concluded a similar efficacy in pain relief when comparing single versus multiple fraction regimes. However, there continues to be reluctance to conform to published guidelines that recommend a single treatment for the palliation of painful bone metastases. The purpose of this literature review is to summarize international patterns of practice, and to determine if guidelines recommending single fraction treatment have been implemented in clinical care. Methods: A literature search was conducted in Ovid Medline, Embase, and Cochrane Central. Search words included, "bone metastases", "radiation therapy", "radiotherapy", "patterns of practice", and "dose fractionation". Both prospective and retrospective studies that investigated the prescription of radiotherapy to bone metastases using actual patient databases were included. Articles were excluded if they investigated hypothetical scenarios. Results: Six hundred and thirteen results were generated from the literature search. Twenty six articles met the inclusion criteria. Of these, 11 were Canadian, 8 were European, 6 were American, and 1 was Australian. The use of single fraction radiotherapy (SRT) ranged from 35 to 75%, but was generally lower in American studies. Choice of fractionation depended on a variety of factors, including patient age, prognosis, site of irradiation, and physician experience. Conclusion: Despite the publication of robust randomized control trials, meta-analyses, and clinical practice guidelines recommending the use of a single treatment to palliate uncomplicated bone metastasis, SRT is internationally underutilized.

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Economic Impact of Single-fraction Versus Multi-fraction Radiotherapy

Economic evaluation of single-fraction versus multiple-fraction palliative radiotherapy for painful bone metastases in breast, lung and prostate cancer

Lucie Collinson, Giorgi Kvishinadze, Nisha Nair, Melissa McLeod and Tony Blakely

Burden of Disease, Epidemiology, Equity and Cost Effectiveness Programme (BDEC), Department of Public Health, University of Otago, Wellington, New Zealand

Abstract

Introduction: Single- and multiple-fraction external beam radiotherapy (SFX-EBRT and MFX-EBRT) are palliative treatment options for localized metastatic bone pain. MFX is the preferred choice in many developed countries. Evidence shows little difference in how effectively SFX and MFX reduce pain. However, SFX is associated with higher retreatment and (in one meta-analysis) pathological fracture rates. MFX is, however, more time-consuming and expensive. We estimated the cost-effectiveness of SFX versus MFX for metastatic bone pain in breast, prostate and lung cancer in New Zealand.

Methods: We constructed a Markov microsimulation model to estimate health gain (in quality-adjusted life-years or QALYs), health system costs (in real 2011 NZ dollars) and cost-effectiveness. The model was populated using effect estimates from randomized controlled trials and other studies, and New Zealand cancer and cost data. Disability weights from the 2010 Global Burden of Disease study were used in estimating QALYs.

Results: Across all three cancers, QALY gains were similar for SFX compared to MFX, and per patient costs were less for SFX than MFX, with a difference of NZ$1469 (95% uncertainty interval $1112 to $1886) for lung cancer; $1316 ($810 to $1854) for prostate cancer and $1344 ($855 to $1846) for breast cancer. Accordingly, from a cost-effectiveness perspective, SFX was the preferable treatment option. Various sensitivity analyses did not overturn the clear preference for SFX.

Conclusion: For all three cancers, SFX was clearly more cost-effective than MFX. This adds to the case for desisting from offering MFX to patients with metastatic bone pain, from a cost-effectiveness angle.

Key words: bone pain; cost-effectiveness analysis; metastatic cancer; radiotherapy; single fraction.
13) Pearls for Treating Secretions at End-of-life

- Nothing works as well as we would like
- One survey of 391 caregivers found
  - Secretions occurred in 48% of patients
  - Of those with secretions, 2/3 of families found them highly distressing
  - Female caregivers who were not prepared were at highest risk
- Mixed evidence that minimizing fluid intake reduces secretions
- Minimize deep suctioning
- Scopolamine patches can contribute to delirium while glycopyrrolate does not cross the blood barrier

14) Pearls for Treating Agitation at End-of-life

- Identify under etiology when possible
  - infections, urinary retention, hypoxia, impaction, medications, pain, electrolytes, renal failure, hepatic failure etc.
  - If reversible, mean survival 40 days compared to 17 if not reversible

- Minimize high risk medications:
  - Anticholinergics, benzodiazepines, opioids, steroids, etc.

- Environmental factors
  - glasses, hearing aids, etc.

Recent controversy about efficacy of haloperidol / risperidone

Agitation and delirium at the end of life: "We couldn't manage him". JAMA. 2008 Dec 24;300(24):2898-910.
15) Supporting Caregivers

- 40-70% of family caregivers report clinically significant symptoms of depression
- 70% report caregiving had an impact on their employment
- One study found caregivers who reported “strain” had a 63% higher mortality rate than their non-caregiving peers

Questions?