Pain Severity and Quality of Life in Older Adults Receiving Hospice Care

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Background: Cancer Pain

• 500,000 people die each year from cancer, ~½ of whom receive some hospice care

• 75% of cancer patients have pain at diagnosis
  ○ 100% in advanced and terminal stages of disease
  ○ Up to 90% experience breakthrough pain

• More than ½ with cancer > 65 years

Background: Cancer Pain and Hospice Care

Descriptive study by Strassels et al, 2006

- N=547,555; 86% home-based; Cancer 55%
  - At least one pain intensity score available for 45% of patients
  - 55% had NO assessment of pain intensity documented

Results (All patients)

• Moderate to severe pain 24.8% 1st and 25.9% last reported

• Last pain intensity score reported in persons with two or more pain scores—27.5% moderate or severe
Background: Quality of Life

- Hospice care
  - promotes quality of life
  - decreases distress from pain related symptoms (McMillan, 2002)
- Cancer pain has been found to impact QOL for both patients and caregivers (Kang, 2002; Lee et al., 2005; Sidd and al., 2005)
- Primary Complaints of Cancer
  - Lack of energy (89%)
  - Pain (83%)
  - Dry mouth (78%)
  - Shortness of breath (70%) (McMillan, 2002)

Purpose

- Examine the experience of pain in older adults with cancer receiving hospice care and its impact on QOL.
- Examine the effect of hospice care on pain and QOL in older adults with cancer.

Research Questions

1) What is the experience of pain for older adults with cancer in hospice when reported by the patient OR by the caregiver at end of life?
2) What is the average, least and worst pain experienced by patients in hospice at the end of life?
3) What is the overall QOL for older patients with cancer pain reported by the patients OR caregivers at the end of life?
4) Does admission to hospice result in a change in pain and QOL as reported by the patient at admission and two weeks after?
Inclusion Criteria

- Inclusion Criteria:
  - 55 years of age or older
  - Diagnosis of cancer
  - Newly admitted to a participating hospice
  - Receiving community-based hospice services

Background: Caregivers’ Report

- Caregivers are often used as proxy reporters of patient symptoms (Addison, Cline, Halpern, Zeisler, Paradise, 2007).
- Studies show that caregivers tend to overreport pain-related symptoms (Allen, Haley, Small, Williams, 2005; Redinbaugh, Logsdon, Yaffe, Tang, 2001).
- For this study, caregiver reports were obtained when patients were unable to self-report.

Sample

- 94 patients or their proxy reporters
- 40 patients completed independently
- 49 primary caregivers
- 5 combination of patient and caregiver.
- 345 baseline pt referrals, 27% response rate
Methods

- Telephone interviews
  - patient or caregiver
  - Baseline: within 72 hours of hospice admission
  - 2nd Interview: 7-10 days after baseline.

- Instruments: Brief Hospice Inventory (BHI) and Brief Pain Inventory (BPI)
  - BPI has strong reliability and validity testing (Cleeland & Ryan, 1994)
  - BHI preliminary studies only (Guo et al, 2001)

Statistical Methods

- One-sample paired T-test to evaluate changes between interviews.
- Student t-test were applied to check the difference between patient and caregiver groups.
  - No statistically significant difference between the two groups on the BPI, but significant differences noted on the BHI
  - BHI data was analyzed separately for interview 1 and 2.

Patient Demographics

<table>
<thead>
<tr>
<th></th>
<th>Patients Interview 1 (n=38)</th>
<th>Patients Interview2 (n=33)</th>
<th>Caregiver Interview 1 (n=34)</th>
<th>Caregiver Interview2 (n=37)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>52.6%</td>
<td>54.5%</td>
<td>54.3%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>47.4%</td>
<td>45.7%</td>
<td>45.6%</td>
</tr>
<tr>
<td>Age</td>
<td>&lt;65</td>
<td>18.4%</td>
<td>26.3%</td>
<td>21.1%</td>
</tr>
<tr>
<td></td>
<td>66-74</td>
<td>34.2%</td>
<td>34.3%</td>
<td>34.3%</td>
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<tr>
<td></td>
<td>75-84</td>
<td>34.2%</td>
<td>34.2%</td>
<td>34.2%</td>
</tr>
<tr>
<td></td>
<td>&gt;85</td>
<td>14.3%</td>
<td>6.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Race</td>
<td>Black</td>
<td>8.2%</td>
<td>5.7%</td>
<td>6.1%</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>91.8%</td>
<td>94.3%</td>
<td>93.9%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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</table>
Results: BPI Pain Severity

<table>
<thead>
<tr>
<th></th>
<th>Interview 1</th>
<th>Interview 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst Pain</td>
<td>4.55 (3.29)</td>
<td>3.76 (3.17)</td>
</tr>
<tr>
<td>Average Pain</td>
<td>2.64 (2.16)</td>
<td>2.51 (2.37)</td>
</tr>
<tr>
<td>Least Pain</td>
<td>1.07 (1.6)</td>
<td>1.03 (1.72)</td>
</tr>
<tr>
<td>Pain Right Now</td>
<td>1.59 (2.29)</td>
<td>1.62 (2.24)</td>
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</tbody>
</table>

*p ≤ 0.05

Results: BPI Quality of Life

<table>
<thead>
<tr>
<th></th>
<th>Interview 1</th>
<th>Interview 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Pain</td>
<td>4.82 (6.06)</td>
<td>5.21 (7.1)</td>
</tr>
<tr>
<td>Moderate Pain</td>
<td>2.98 (5.00)</td>
<td>2.53 (4.92)</td>
</tr>
<tr>
<td>Severe Pain</td>
<td>1.71 (3.99)</td>
<td>0.99 (3.29)</td>
</tr>
</tbody>
</table>

*p < 0.05, no statistically significant differences between interview 1 & 2

Results: BHI Pain Severity and QOL

<table>
<thead>
<tr>
<th></th>
<th>Interview 1</th>
<th>Interview 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Average Pain</td>
<td>Patient: 2.32 (2.56)</td>
<td>Patient: 2.45 (2.34)</td>
</tr>
<tr>
<td></td>
<td>Caregiver: 3.20 (2.64)</td>
<td>Caregiver: 3.43 (2.74)</td>
</tr>
<tr>
<td>Overall Quality of Life</td>
<td>Patient: 4.02 (3.44)</td>
<td>Patient: 4.26 (2.84)</td>
</tr>
<tr>
<td></td>
<td>Caregiver: 6.44 (2.53)</td>
<td>Caregiver: 8.44 (2.93)</td>
</tr>
</tbody>
</table>

Statistical Analysis showed that there was no difference between average pain measured by BPI and BHI.

*p ≤ 0.05, no statistically significant differences between interview 1 & 2
Discussion

- Worst pain ratings decreased significantly in the two weeks following admission.
- Hours spent in moderate and severe pain decreased following admission to a hospice facility, though not significant.
- Overall quality of life did not improve, which may be expected in this patient population.

Application

- Pain control in hospice continues to warrant further attention to improve patient outcomes.
- Prioritizing pain as a quality improvement focus
- Facilitate use of EBP recommendations for pain management

Future Research

- Further Analysis:
  - Exploration of pain severity impact on specific QOL indicators
- Exploration of the effects of hospice care in other painful diagnoses and in more diverse samples.
- Addressing the challenges of recruitment of frail elders at the EOL
References


