Palliative Care - Does food make a difference?

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Consultant Dietitian
What is palliative care?

- Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and the relief of suffering by means of early identification and assessment, and treatment of pain and other problems whether they be physical, psychosocial and spiritual (WHO, 2007).
What can be done about food and nutrition?

– National guidance

– Which patients are we talking about?

– What are the problems?
  – Alterations in food intake and symptoms
  – Family / carer dynamics
  – Psychological effects

– How can we address the problems?
National documents

- Professional consensus statement of nutritional care in palliative care patients (2009)

- Macmillan Durham Cachexia Pathway (2007)
Consensus Statement

- Nutritional care
  - Identification of nutritional needs
  - Individualised care
  - Understanding goal – quality of life
  - Holistic approach
- Knowledge and training of staff (qualified and unqualified)
- Organisational services to meet nutritional needs

http://www.helpthehospices.org.uk/
Which patients are we addressing?

- Increasingly patients receiving palliative treatment towards eg. Chemotherapy, radiotherapy
- Treatment given with the aim of relieving symptoms or reducing progression of disease

- Example: Patient with metastatic Ca ovary admitted with bowel obstruction. Surgery to relieve bowel obstruction, commenced chemotherapy, surgery to refashion stoma, proceed to more chemotherapy.

Which patients are most at risk?

Bozzetti, 2009  Support Care Cancer 17: 279-284

- Study of nutritional screening in oncology outpatients
- Patients at diagnosis, therapy or follow up
- 1000 patients screened to assess nutritional risk
  - Screened on weight
  - BMI (< 20 kg/m²)
  - Weight loss in last 3 months
  - Reduced dietary intake in the last 3 months
## Results

**Bozzetti, 2009  Support Care Cancer  17: 279-284**

<table>
<thead>
<tr>
<th>Primary tumour</th>
<th>Mean % weight loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oesophagus</td>
<td>16%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>15%</td>
</tr>
<tr>
<td>Stomach</td>
<td>12%</td>
</tr>
<tr>
<td>Colon-rectum</td>
<td>5%</td>
</tr>
<tr>
<td>Lung</td>
<td>7%</td>
</tr>
<tr>
<td>Head and neck</td>
<td>8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tumour stage</th>
<th>Mean % weight loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.1%</td>
</tr>
<tr>
<td>1</td>
<td>6.0%</td>
</tr>
<tr>
<td>2</td>
<td>7.4%</td>
</tr>
<tr>
<td>3</td>
<td>8.3%</td>
</tr>
<tr>
<td>4</td>
<td>6.9%</td>
</tr>
</tbody>
</table>
Weight loss and cachexia
Nutritional Status in palliative care
Nutritional assessment of palliative care patients

- Inpatient and outpatient population
- Physical examination
  - Appearance of skin, lips, tongue
  - Loss of subcutaneous fat
  - Oedema, ascites
  - Body temperature
- Body weight compared to ideal body weight (USA standards)
- Bioimpedance
- Triceps skinfold thickness, mid arm circumference and calculation of mid-arm muscle area
- BMI

Sarhill et al, 2003   Support Care Cancer  11: 652-659
Nutritional assessment: Results

- Study population 352 patients (180 men and 172 women)
- All had metastatic cancer with lung as the most common primary
- Whether a patient had ‘cachexia’ was decided on physical examination indicated by loss of subcutaneous fat
  - 48% judged to have clinical cachexia
  - Of these 95% had anorexia
- Median BMI was 23.6 kg/m²
  - BMI was normal or high in 87% of patients
  - Of those patients with high BMI 11% had mid arm muscle area (AMA) consistent with severe muscle mass reduction
  - Severe muscle mass reduction was seen in 30% of patients and in 78% of these BMI was either normal or increased
- Evidence of fat storage deficiency in 51% of patients and again BMI was usually (86%) either normal or increased

Sarhill et al, 2003   Support Care Cancer 11: 652-659
# Nutritional assessment: Results

## Comparison of cachectic males and females

<table>
<thead>
<tr>
<th>Variables</th>
<th>Females (n = 70) (%)</th>
<th>Males (n = 99) (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight loss last 6 months</td>
<td>99</td>
<td>100</td>
<td>0.2</td>
</tr>
<tr>
<td>Decreased AMA</td>
<td>93</td>
<td>95</td>
<td>0.3</td>
</tr>
<tr>
<td>Decreased TSF</td>
<td>93</td>
<td>35</td>
<td>0.000001</td>
</tr>
<tr>
<td>Decreased AMA and TSF</td>
<td>89</td>
<td>34</td>
<td>0.00001</td>
</tr>
<tr>
<td>Weight loss last month</td>
<td>89</td>
<td>85</td>
<td>0.001</td>
</tr>
<tr>
<td>Increased BMI (above normal)</td>
<td>23</td>
<td>28</td>
<td>0.4</td>
</tr>
<tr>
<td>Increased REE</td>
<td>16</td>
<td>44.5</td>
<td>0.00008</td>
</tr>
</tbody>
</table>
Conclusions

1. Most patients had severe weight loss
   - BMI was normal in most
   - Men lost weight more frequently and severely than women
   - Females lost fat and protein whereas males lost more body protein

2. Neither weight loss nor anorexia alone were sufficient to define cachexia. Absolute number of GI symptoms correlated with severity of weight loss.

3. A significant correlation between the time from diagnosis to death and weight loss in the prior month

4. No single measure is adequate to evaluate nutrition or protein energy malnutrition. There was evidence of cachexia by bioimpedance, AMA or TSF despite normal or high BMI.

Sarhill et al, 2003 Support Care Cancer 11: 652-659
Dietary intake
Energy intake in Palliative care patients

143 Palliative care patients

24 hour recall to assess energy intake (day prior to hospitalisation)

Energy intake was 1334 ±589 kcal and lower than resting energy expenditure (Harris Benedict)

51% patients had daily intake lower than their REE

Bovio et al, 2009  Support Care Cancer, 17: 1317-1324
Dietary intake in cancer patients

- Study design
- 151 advanced cancer patients (lung, gastrointestinal, breast, prostate and other malignancies)
- Completed 3 day dietary diary
- Analysed dietary intake
- Examined dietary patterns depending on foods that contributed most to energy intake

Hutton et al, Am J Clin Nutr 2006; 84: 1163-70
Energy and nutrient intake depending on dietary pattern

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Population total</th>
<th>Milk and soup pattern</th>
<th>Fruit and white bread pattern</th>
<th>Meat and potato pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total energy</td>
<td>1610 ± 686</td>
<td>1307 ± 708</td>
<td>1508 ± 602</td>
<td>1743 ± 687</td>
</tr>
<tr>
<td>Energy kcal/ kg</td>
<td>25 ± 10</td>
<td>20 ± 10</td>
<td>23.7 ± 8.8</td>
<td>27.1 ± 10.1</td>
</tr>
<tr>
<td>Protein g</td>
<td>64 ± 29</td>
<td>56.7 ± 36.3</td>
<td>59.8 ± 25.6</td>
<td>68.5 ± 27.3</td>
</tr>
<tr>
<td>Protein g/kg body weight</td>
<td>1.0 ± 0.4</td>
<td>0.8 ± 0.5</td>
<td>0.9 ± 0.4</td>
<td>1.1 ± 0.4</td>
</tr>
</tbody>
</table>

Hutton et al, Am J Clin Nutr 2006; 84: 1163-70
Calorie intake by meal and number of eating episodes over 3 d in 151 patients with advanced cancer as recorded on 3-d dietary records

Hutton et al, Am J Clin Nutr 2006; 84: 1163-70
Symptoms
### Symptoms - increase risk of weight loss

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No appetite</td>
<td>38</td>
</tr>
<tr>
<td>Early satiety</td>
<td>27</td>
</tr>
<tr>
<td>Pain</td>
<td>23</td>
</tr>
<tr>
<td>Taste changes</td>
<td>20</td>
</tr>
<tr>
<td>Nausea</td>
<td>18</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>17</td>
</tr>
<tr>
<td>Constipation</td>
<td>14</td>
</tr>
<tr>
<td>Vomiting</td>
<td>11</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>11</td>
</tr>
<tr>
<td>Problems swallowing</td>
<td>9</td>
</tr>
<tr>
<td>Smells bother me</td>
<td>7</td>
</tr>
<tr>
<td>Mouth sores</td>
<td>1</td>
</tr>
</tbody>
</table>

Khalid et al, 2007

- Subjective Global Assessment
- 151 new patients (Lung and GI)
Symptoms in Palliative Care Patients

- Assessment of 352 palliative care patients
- 16 distinct GI symptoms
- Most common were weight loss, anorexia and early satiety
- Absolute number of GI symptoms correlated with severity of weight loss (p = 0.01)
- Other symptoms included diarrhoea, sore mouth/throat, decreased taste, odynophagia

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight loss</td>
<td>85</td>
</tr>
<tr>
<td>Anorexia</td>
<td>81</td>
</tr>
<tr>
<td>Early satiety</td>
<td>69</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>69</td>
</tr>
<tr>
<td>Constipation</td>
<td>59</td>
</tr>
<tr>
<td>Nausea</td>
<td>49</td>
</tr>
<tr>
<td>Bloating</td>
<td>43</td>
</tr>
<tr>
<td>Vomiting</td>
<td>38</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>37</td>
</tr>
<tr>
<td>Dyspepsia</td>
<td>35</td>
</tr>
<tr>
<td>Belching</td>
<td>35</td>
</tr>
</tbody>
</table>

Sarhill et al, 2003  Support Care Cancer  11: 652-659
Study on the clarification of longitudinal symptoms during chemotherapy

- Japanese study
  - All cancer patients newly starting chemotherapy (lung, stomach or intestine, pancreas, bile duct, breast, ovary and uterus)
- Validated questionnaire
  - Open ended question about patient’s concerns
  - 0 – 10 numeric rating scale of 8 physical symptoms
  - Presence or absence of oral problems, fever and insomnia
- Quality of life (EORTC)
Results

- 462 patients (4000 questionnaires)
- Predominant problems
  - Psychosocial issues (insomnia, psychological distress, decision making)
  - Nutrition related issues (21%) (oral problems and appetite loss)
  - Fatigue

- Distress thermometer used to identify psychological distress. Increased likelihood of being higher in those with physical symptoms.
- Study published in 2 parts, initial study 18% referred to palliative care for management of new symptoms

Yamagishi et al, 2009   Journal of Pain and Symptom Management
Do changes in food intake and body composition matter?
Patients with metastatic GI cancer receiving chemotherapy
Those with no weight loss compared to those with weight loss at presentation

(Andreyev 1998  Eur J Cancer)

Wt Loss    \(N = 766\) \(O = 567\) \(E = 436.9\)
No Wt Loss \(N = 711\) \(O = 452\) \(E = 582.1\)
HR = 1.67   95% CI (1.48 - 1.83)
Chis = 67.77 df = 1 p < 0.00001

Number at risk
No Wt Loss  711  254  59  18  4
Wt Loss     766  149  38  11  4
Experience of weight loss in people with advanced cancer

- Patients, caregivers and specialist nurses were interviewed. Themes were presented as a model of the experience of weight loss
  - Visible weight loss
  - Proximity to death
  - Personal responsibility for weight
  - Physical weakness
  - Emotional weakness
  - Helplessness
  - Weight loss taboo

Hopkinson et al, 2005  Journal of Advanced Nursing  54 (3): 304-312
Quality of life: The Emotional Impact

- Study on palliative care patients and the emotional impact of changes in food intake
- Method: Patients and carers were interviewed using a semi-structured questionnaire.
  - Questions related to loss of appetite or difficulty eating
  - Rate them according to degree of concern

Holden C, 1991  The Hospice Journal 7 (3): 73 - 84
Rating of Anorexia relative to other problems

<table>
<thead>
<tr>
<th>Rating</th>
<th>Patient</th>
<th>Caregiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of great concern</td>
<td>1 (7%)</td>
<td>6 (43%)</td>
</tr>
<tr>
<td>Not as troublesome as other problems</td>
<td>9 (64%)</td>
<td>8 (57%)</td>
</tr>
<tr>
<td>Not of much concern</td>
<td>4 (28%)</td>
<td>-</td>
</tr>
</tbody>
</table>

Holden C, 1991  The Hospice Journal 7 (3): 73 - 84
What are the best interventions?
Does dietary intervention make a difference?

- Multi-centre randomised study in which 200 weight losing pancreatic cancer patients were randomised to receive 8 weeks of intensive nutrition intervention including a ONS with and without n-3 fatty acids.
- Primary outcome survival
- BUT groups were analysed on whether the patient continued to lose weight or were weight stable NOT on which supplement they took
- Survival greater for weight stable group compared to the weight losing group (difference in median survival 3 months)
- Characteristics of groups comparable at the start of the study

Davidson et al, 2004  Clinical Nutrition  23; 239-247
Weight loss - what nurses think.

- Macmillan, district, community and specialist cancer nurses interviewed about nutrition relating to patients with incurable solid tumours
- Grounded theory generated four common themes
  - Assessment of nutritional status
  - Impact of weight loss and eating related disorders
  - Acknowledging weight loss
  - Training for nurses

How patients cope

- Grounded theory approach was used in a 9 men and women with advanced cancer and anorexia
- Results
  - Shifted to conscious control of eating (rather than responding to hunger)
  - Harnessing the motivation to eat – eating as a necessity
  - Working around the limitations
  - Sustaining the shift – lower expectations, putting it into perspective

Shragge et al, 2007  Palliative Medicine  21: 227-233
How do we address the problems?

- Awareness of patient needs
- Good symptom control
- Information about suitable foods
- Information about suitable fluids
- Information about meal patterns
- Discussion about managing weight loss and poor food intake — managing expectations. Rationale for advice / intervention
- Consider use of appetite stimulants
- Awareness of the psychological aspects of food and family dynamics
- Alternative methods of feeding....