Preservation of the Quality of Life During and After Cancer Treatment

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Preservation of the Quality of Life

Learning Objectives

Upon completion of this presentation, the participant should be able to:

1. Identify the most prevalent physical and psychological long term effects related to head and neck cancer and its treatment.

2. Review strategies to manage the long term effects of cancer treatment and preserve the quality of life of head and neck cancer survivors.
Head and Neck Cancer (HNC)

- Accounts for about 3% of all cancers in the US
- About 62,000 new cases diagnosed annually
- Male to female ratio (3:1)
- Heightened cure rates
- Increasing number of HNC survivors
- Long term and late effects of multi-modal cancer treatment significantly impacts quality of life (QOL)
Cancer Survivorship

- Projected 18 million cancer survivors in US 2020
- Approximately 20,000 new HNC survivors annually
- Up to 70% of cancer patients report unmet physical and emotional needs during active treatment and survivorship care
- Need for interdisciplinary, multispecialty care models to address complex symptom burden
Quality of Life (QOL)

- QOL is a global measure of a patient’s sense of wellbeing, incorporating the domains of functional, physical, emotional and social well-being
<table>
<thead>
<tr>
<th>Long Term Effects</th>
<th>Late Effects</th>
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<tbody>
<tr>
<td>Dysphagia/Odynophagia</td>
<td>Lymphedema (int/ext)</td>
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<tr>
<td>Speaking/voice</td>
<td>Fibrosis</td>
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<tr>
<td>Xerostomia</td>
<td>Musculoskeletal (trismus)</td>
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<tr>
<td>Hyposalivation</td>
<td>Depression</td>
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<tr>
<td>Oral mucositis/pain</td>
<td>Ototoxicity</td>
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<tr>
<td>Eating/taste/smell</td>
<td>Cognitive dysfunction</td>
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<tr>
<td>Fatigue</td>
<td>Dental caries/oral health</td>
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<tr>
<td>Body Image/social isolation</td>
<td>GFI – 1/3 disabled</td>
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</tbody>
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HNC Long Term and Late Effects

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Dysphagia/Odynophagia

- Prevalent in 85% of patients
- Associated with surgery and radiotherapy
- Mechanisms
  - Damage to critical swallowing structures due to lymphedema, RT, surgery
  - Stricture formation late effect of RT (6 months- 5 years)
    20% incidence; IMRT may decrease incidence of stricture
- RCTs showed aggressive swallowing exercises during and immediately after RT significantly decreased incidence and severity of dysphagia
- Preventative strategies are effective in maintaining swallowing function
Oral Mucositis

- 90% prevalence among HNC patients
- Profound impact on clinical course and QOL
- No prophylactic therapy proven effective in HNC population
- Severity ranges from superficial erythema to full thickness mucosal ulcerations
- Aggressive symptom management, nutrition (PEG), enhanced hydration methods during last 2 weeks of RT, sig increase QOL
Oral mucositis- Pain Control & QOL

- RCT- Morphine oral rinses superior to magic mix
  15 ml of 2% morphine soln (2000mg morphine in 1000ml H20) q 3 hour rinse for 2 minutes
  Binds to mu receptor local application
  Poor transmucosal and sublingual absorption
- RCT – fentanyl transdermal patch effective and significantly improved QOL
- RCT – Doxepin rinse sig improved OM pain and QOL
- Gabapentin mean dose 2700 mg/day effective
Musculoskeletal Dysfunction

- Trismus reported in up to 45% of patients
  - Surgery and radiotherapy may damage TMJ and muscles of mastication, reduce ROM jaw
  - Jaw stretching exercises before treatment, use of jaw stretching device during treatment
- Neck and shoulder dysfunction in 40% of survivors with reduced ROM and pain
  - Physical therapy stretching and strengthening
  - Analgesics, antispasmodics, botulinum toxin
Cancer Related Fatigue

- Debilitating and prevalent among 70% of HNC patients
- Course peaks during treatment and may persist beyond 2 years
- Rule out subclinical hypothyroidism, nutritional deficits, metabolic derangements
- RCTs of structured exercise programs during CRT x 12 weeks up to 150 minutes weekly sig improved fatigue and QOL
- RCTs methylphenidate (5-40 mg daily) and modafanil (100-200 mg daily) sig improved fatigue and QOL
# Major Depression in Cancer: Prevalence

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>References</th>
<th>Prevalence (%)</th>
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<tbody>
<tr>
<td>Pancreas</td>
<td>Fras et al, 1967</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Joffe et al, 1986</td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal</td>
<td>Morton et al, 1984</td>
<td>40</td>
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<td></td>
<td>Davies et al, 1986</td>
<td></td>
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<td></td>
<td>Baile et al, 1992</td>
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<tr>
<td>Colon</td>
<td>Fras et al, 1967</td>
<td>13-25</td>
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<tr>
<td>Breast</td>
<td>Farber et al, 1984</td>
<td>18-25</td>
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<tr>
<td></td>
<td>McDaniel et al, 1993</td>
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<tr>
<td>Gynecologic</td>
<td>Evans et al, 1986</td>
<td>23</td>
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<tr>
<td>Hodgkin’s and NHL</td>
<td>Devlon et al, 1987</td>
<td>17</td>
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<tr>
<td>Gastric</td>
<td>Joffe et al, 1986</td>
<td>11</td>
</tr>
<tr>
<td>Acute Leukemia, Pre-BMT</td>
<td>Colon et al, 1991</td>
<td>1-8</td>
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Depression Treatment

- Cognitive Behavioral Therapy

- 7 acute antidepressant randomized, db, pc or comparative trials in cancer patients N=476

- Fluoxetine, 2 studies, N=251, 5 wk and 12 week all cancer types, advanced disease, superior to pbo

- Paroxetine, 1 study, N=40, 14 week trial, melanoma, prophylaxis vs. interferon depression, incidence of MDE paroxetine 11% vs pbo 45%

- Overall 14 studies, N=1541, open label, case controlled, suggest antidepressants are effective but magnitude of improvement and duration of treatment unclear
Preservation of the Quality of Life

Cancer treatment produces frequent, severe and debilitating long term/late effects that negatively impact QOL

Collaborative, multi-specialty care teams are needed to maximize patient function and QOL and minimize symptom burden among head and neck cancer patients.

- oncologists, speech pathologist, nutritionist, cancer rehabilitation, physical therapist, exercise physiologist, pain specialist, psychiatrist, social worker, dentist

Future studies on multi-modal preventative and therapeutic strategies are needed to address the complex needs of this population.

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