Cancer Pain Management: Illustrative Stories

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Objective: Discuss the care of the cancer patient experiencing pain

Why nurses?

• Most likely to have the most impact on improving pain management for their oncology patients
• Focused on assessment and management of single and multiple symptoms
• Monitor level of adherence with plan and side effects
• Serve as the intermediary and advocate between the patient and the provider to optimize the pain management plan

Why an interdisciplinary team approach?

• Pain is multidimensional

PHYSICAL

Emotional

Social

Spiritual

TOTAL PAIN

Bone or Soft Tissue Pain
Weary at Grief Pain
Respiratory Pressure
Nerve Damage Pain

Guering

Depression
Stress
Accommodation

Search for meaning
Religious roots

Integration

Relief confusion
Financial issues

Cancer-related Pain Etiologies and Prevalence

<table>
<thead>
<tr>
<th>Cancer Etiologies</th>
<th>Prevalence %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Tumor Involvement</td>
<td>70%</td>
</tr>
<tr>
<td>Diagnostic procedures/evaluation</td>
<td>20%</td>
</tr>
<tr>
<td>i.e. bone marrow biopsy</td>
<td></td>
</tr>
<tr>
<td>Antineoplastic therapy</td>
<td>30%</td>
</tr>
<tr>
<td>Illness unrelated to cancer</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Multiple pain generators</td>
<td>80%</td>
</tr>
<tr>
<td>(34% have more than 4 or more pain generators)</td>
<td></td>
</tr>
<tr>
<td>Later phase of illness</td>
<td>70%</td>
</tr>
</tbody>
</table>

Types of Pain

- **Nociceptive pain** - results from activations of nociceptors in normal warning system
  - Somatic pain - arises from bone, joint, muscle, skin or connective tissue.
    - “sharp, throbbing, aching or pressure like”, well localized pain
  - Visceral pain - originating from stretching or distension of thoracic or abdominal viscera
    - “cramping or gnawing or deep aching or poorly localized if related to obstruction process

Treat with Opioids and non Opioids

Types of Pain

- **Neuropathic Pain**
  - Pain that results from nerve involvement from tumor invasion or injury
  - Depending on the nerve root involved, the pain can radiate down that nerve root
    - A lesion in the lumbar spine can radiate to groin, knee or ankle.
  - Peripheral neuropathy is peripherally generated nerve damage often caused by chemotherapy
  - Can be a result of diabetes, post herpetic neuralgia
  - Injury from surgery or radiation can cause nerve damage
  - Described as “burning, shooting, pins and needles”

In addition to opioid and adjuvant analgesics, antidepressants and anticonvulsants are first line therapy

Cancer Pain Assessment

Subjective process: more of an art than science
Self report is the gold standard
Pain Location
Pain Duration
Intensity
Onset
Alleviating Factors
Aggravating Factors
Side Effects with Present Regimen
Quality of Life Impact
Advantages and Disadvantages of Scales

<table>
<thead>
<tr>
<th>Scale Type</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical Rating Scale</td>
<td>Simple and widely accepted</td>
<td>Requires conceptual ability to correlate a sensation with numbers</td>
</tr>
<tr>
<td>Visual Analogue Scale</td>
<td>Simple, universally used for many symptoms</td>
<td>Requires the ability to conceptualize, and the ability to see the line and draw</td>
</tr>
<tr>
<td>Verbal Rating Scale</td>
<td>Does not require the ability to make correlations, more descriptive</td>
<td>Requires categorical techniques for statistical analysis</td>
</tr>
<tr>
<td>Descriptors</td>
<td>Easy to understand</td>
<td>Relationship between descriptors is unknown; may be culture specific</td>
</tr>
</tbody>
</table>

Fisch & Burton 2007

Some Helpful Questions

- Tell me how you have spent the last few days
- Help the patient describe the symptom-present limited multiple choice as well as open ended questions
- Verify by summarizing-anything else to add?
- What does the symptom make you think about?

Fisch & Burton 2007

Best Practice Approach to Pain Assessment in the Cognitively Impaired

- **Ask**-if he/she is experiencing pain
  - Use yes/no questions
  - Try using words: hurt, ache, sore
- **Look**-for behavioral signs of discomfort
- **Investigate**-recent behavioral changes that might be due to pain
  - Behavior: aggressive, disruptive, withdrawn
  - Activity: eating, sleep, sudden changes in routine
  - Mental status: crying, confusion, irritability

Davies (2013) ELNEC/Snow Geriatrics 2005

Messages to Convey to Patients and Families

- There is no benefit to suffering with pain
- Pain can usually well controlled with oral medications
- Morphine or morphine like medications are often used to relieve pain. When they are used to treat cancer pain, addiction is rarely a problem. If they are used now, they will still be effective later.
- Doctors and nurses cannot tell if you are having pain unless you tell them
Treatment of Cancer Pain

1. Modify the source
   1. Treat the cancer, includes palliation
   2. Treat infection and inflammation
2. Alter the central perception of pain
   1. Analgesia
   2. Antidepressants
   3. Anxiolytics
   4. Interfere with pain transmission to and within the central nervous system
4. Nonpharmacologic and complementary treatments

Opioids: Essential Considerations

• Previous opioid exposure
• Severity and nature of disease (s)
• Age of patient
• Extent of cancer, particularly hepatic and renal involvement altering opioid kinetics
• Route of administration, available formulations, and cost
  
  Groothuis (2012) ELNEC presentation slides

Goal

• Meaningful pain reduction with continued function and minimized side effects
• Dose is gradually increased until adequate analgesia and function is improved or until intolerable or unmanageable side effects
• No maximum or correct dose
• Dose titration in hospital- every 4-24 hours
• Outpatient 2-7 days, 20-50% change, 3 days to reach steady state

For Continuous Pain

• Regular ATC dosing with BTP dosing available
• Convert to use of long acting formulations with BTP dosing
• Use the same opioid if possible
• Opioid naïve are patients who are not receiving on a daily basis (MS 60 mg, Oxycodone 30 mg, Hydromorphone 8 mg is transition threshold) and greater than 1 week
• Remember your pharmokinetics
Stepwise Approach to Conversion

1. Comprehensive pain assessment
2. Determine the daily total opioid dose
3. Use a conversion table to convert to new opioid
4. Individualize dose
   - More aggressive conversion for uncontrolled pain
   - Less aggressive conversion for well controlled pain
5. Follow up and continual reassessment

Titrating Opioids

- Initial fixed and Rescue doses

  - Controlled Pain
    - No change
  - Moderate Pain
    - 25-50% increase
  - Severe Pain
    - 50-100% increase
Incident Pain
Related to specific
precipitating events
such as movement

Idiopathic Pain
Not related to any
identifiable event or
specific cause

End of dose
Failure
Occurs during the period before the next dose is due

Breakthrough Pain

- Moderate to Severe in intensity
- Comes on rapidly, reaches peak intensity in 3-5 minutes
- Lasts 15-20 minutes
- Usually 4-7 times a day
- Three types
- Will drive your treatment plan

Adverse Effects of Opioids

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<tr>
<th>Common</th>
<th>Less Frequent</th>
<th>Rare</th>
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<tr>
<td>Constipation</td>
<td>Urinary retention</td>
<td>Allergy</td>
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<tr>
<td>Nausea</td>
<td>Pruritus</td>
<td>Respiratory depression</td>
</tr>
<tr>
<td>Sedation</td>
<td>Severe myoclonus</td>
<td></td>
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<tr>
<td>Dry mouth</td>
<td>Confusion</td>
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<td>Psychotomimetic effects such as</td>
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<td>hallucinations &amp; nightmares</td>
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Breakthrough Pain

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Adverse Effects of Opioids

- Constipation
- Nausea
- Sedation
- Dry mouth
- Urinary retention
- Pruritus
- Severe myoclonus
- Confusion
- Psychotomimetic effects such as hallucinations & nightmares
- Postural hypotension
- Vertigo
- Allergy
- Respiratory depression

Side Effects in the Acute Setting

- Sedation
  - Assessment of sedation is a more reliable way of detecting any opioid-induced respiratory depression than decreased respiratory rate
  - Reach for the oxygen not the Narcan first, try to arouse and stimulate
  - Breathing, ensure adequate ventilation
  - OPIOID TOLERANT DOES NOT MEAN NOT AT RISK
  - MAY HAVE ADDITIONAL RISK FACTORS WITH MULTIPLE CO-MORBIDITIES

### Side Effects in the Acute Setting

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Basic Bowel Regimen: Mush, Push, Gush

The following bowel regimen mnemonic is easy for patients to remember:

“MUSH”: Docusate stool softener, acts as a detergent to break up and “soften” the hard stool. Take 1-2 capsules once or twice a day.

“PUSH”: is the colonic stimulant effect provided by senna or bisacodyl, which acts like a “whip” on the bowel to get it moving. Take 1-2 tablets at bedtime and titrate as needed.

“GUSH”: refers to an osmotic laxative, such as polyethylene glycol (Miralax), which works by drawing fluid into the colon. Mix a 17 g scoop in juice and drink daily.

Sedation/Fatigue

- Scheduling of the medication
- Slow titration of the medication, dose reduction, opioid rotation
- Add a stimulant
  - Caffeine
  - Methylphenidate (Ritalin) 2.5-5 mg AM and midday
  - Dextroamphetamine (Dexadrine)
  - Modafinil (Provigel)
  - Donepezil (Aricept)

Treatments for Neuropathic Cancer Pain

**TCA’s**
- Amitriptyline (Elavil)
- Desipramine (Norpramin)
- Doxepin (Silenor)
- Imipramine (Tofranil)
- Nortriptyline (Pamelor)

**Opioids**
- Lidocaine Patches

**SNRI’s**
- Duloxetine (Cymbalta)
- Minapram (Savella)
- Venlafaxine (Effexor)

**Antiepileptics**
- Gabapentin (Neurontin)
- Pregabalin (Lyrica)

**Other Adjuvants**

**Corticosteroids**
- Dexamethasone (Decadron)
- Prednisone

**Non-Opioids**
- NSAIDS
- Acetaminophen

**Dual Mechanism Analgesic**
- Tramadol (Ultram)
- Tapentadol (Nucynta)
Nonpharmacologic Pain Treatments

Cognitive Behavioral
- Relaxation
- Imagery
- Distraction

Physical Measures
- Heat
- Cold
- Repositioning
- TENS

Complementary therapies
- Massage
- Acupuncture
- Music Therapy
- Energy Therapies

Role of Invasive ("Anesthetic") Procedures
- Intractable pain*
- Intractable side effects*
- Optimal pharmacologic management can achieve adequate pain control in 80-85% of patients
  - The need for more invasive modalities should be infrequent
  - When indicated, results may be gratifying

Goal in Assessing and Managing Pain
- Providing adequate pain and symptom control
- Decrease distress caused by pain in the patient and family
- Provide an acceptable sense of control
- Relieve caregiver burden
- Strengthen relationships
- Optimize QOL
- Enhance meaning of life and illness, providing personal growth

Clinical Pearls
- Assessment: Opioid or Opioid Tolerant? Is the patient a smoker and/or past/present substance abuse
- Treatment: Know the peak effects of your opioids, make sure you think "DDI" with systemic treatments
- Beware of treating the "number" ratings are useful, but are unidimensional construct
- Practice conversions with each other, pharmacists, try different tools, become competent in equianalgesia 101
- Anticipate side effects and equip your patients with tools/RX
- Teach self management: Provide, encourage a pain journal, whom and how to call, universal precautions
- Offer up suggestions for nonpharmacologic and teaching related to deep breathing, distraction, and use of music—enhance their tool box options!
References

Opioid Calculator Tool http://opioidcalculator.practicalpainmanagement.com/

References