SYMPTOM MANAGEMENT: CANCER PAIN
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Objectives
- Explore cancer pain
- Discuss barriers
- Manage pain in special populations
- Discuss pain treatment therapies

Pain

The International Association for the Study of Pain states:
- Pain is defined as an unpleasant, multidimensional sensory and emotional experience associated with actual or potential tissue damage or described in relation to such damage

Characteristics of Pain
- Acute pain
  - Less than 6 mo.
- Chronic pain
  - Longer than 3 mo
- Breakthrough pain
  - Transient increase over background pain
- Refractory/Intractable pain
  - Inadequately controlled despite aggressive measures
Types of Pain

- Nociceptive Pain
  - Somatic pain
    - Bone/joint/connective tissue
  - Visceral pain
    - Distension/compression
- Neuropathic Pain
  - Peripheral neuropathic pain
  - Centrally mediated pain
  - Sympathetically maintained pain

Physiology of Pain

- Transduction
  - Stimulus
- Transmission
  - Message relay
- Perception
  - Pain experience
- Modulation
  - Release of neuromediators

Cancer Pain

- 53% of patients receiving treatment
- 59% of advanced cancer patients
- 1/3 of patients post-curative treatment
- 90% of cancer pain can be controlled with currently available medications
Risk Factors of Cancer Pain

- Disease Related
  - Type of cancer
  - Bone metastases
  - Visceral pain
  - Nerve compression/injury

- Treatment Related
  - Chemotherapy
  - Radiation therapy
  - Chronic pain related to cancer surgery

Pain management

Analgesics

- Goals of Therapy
  - To reduce the effect of noxious stimuli caused by thermal, chemical, or mechanical injury that elicits pain
  - To improve quality of life

- Types of Analgesics
  - Nonopioids
  - Opioids
  - Adjuvants

Pain Management

- Neuropathic Pain
  - Trial antidepressant/anticonvulsant; topical; specialist
  - Mild Pain (0-3)
    - Non-opioid analgesics; short-acting opioid; bowel regimen; treat side effects; psychosocial support; education
  - Moderate Pain (4-6)
    - Mild treatment + titrate short-acting opioid

- Severe Pain (7-10)
  - Mild treatment + Moderate treatment + reassess and modify; long-acting opioid; specific pain problems; specialty consultation
Case Study

83 yo with end-stage breast CA

Case Study

- Mets to ribs and right lung
- Hx: Right mastectomy, radiation, HTN, dementia
- Admitted from SNF r/t increased SOB d/t right pleural effusion
- Thoracentesis improved symptoms
- Goal: comfort and symptom management

Case Study Cont.

- During hospital admission, she called out frequently, appeared restless, and was observed rubbing her right chest wall.

What does the nurse need to consider when evaluating the patient's pain status?

a) Patients with dementia experience less pain than those without dementia.

b) The patient may have difficulty expressing her pain.

c) The patient will require more pain medication than most patients.

d) Patients with dementia should not be asked to self-report pain.

Special Populations: Age

- Older adult
  - Polypharmacy
  - Increased sensitivity
  - Appropriate pain scale
  - Confusion/poor vision
  - Home supervision
  - Cost

- Pediatric
  - Developmental age
  - Appropriate pain scale
  - Dose by weight
Polypharmacy
- Adverse drug reaction increases with number of drugs
- Duplication of therapy
- Drug-drug interactions
- Drug-disease interactions
- Adherence
- Cost

Case Study Cont.
- PAIN-AD nonverbal score 7/10
- PRN meds: oxycodone 5mg PO q8hrs, acetaminophen 650mg PO q6hrs

PAINAD

<table>
<thead>
<tr>
<th>ITEMS</th>
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<th>1</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>Breathing</td>
<td>Normal</td>
<td>Occasional labored breathing</td>
<td>Severe labored breathing; long periods of apneusis</td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>None</td>
<td>Occasional nausea</td>
<td>Severe nausea; vomiting</td>
</tr>
<tr>
<td>Sleep</td>
<td>Rested</td>
<td>Occasional disturbances in sleeping</td>
<td>Disturbed sleep; frequent waking up</td>
</tr>
<tr>
<td>Facial expression</td>
<td>Relaxed</td>
<td>Slightly tensed</td>
<td>Severe facial grimacing</td>
</tr>
<tr>
<td>Body language</td>
<td>Relaxed</td>
<td>Occasional restlessness</td>
<td>Disturbed body language; frequent warding</td>
</tr>
<tr>
<td>Communication</td>
<td>Normal</td>
<td>Slightly impaired</td>
<td>Severe impairment; inability to communicate</td>
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Case Study Cont.
- What would be the best approach to manage the patient's pain?
  - a) Offer only oxycodone for severe pain
  - b) Administer acetaminophen as needed for moderate pain
  - c) Alternate between doses of oxycodone and acetaminophen
  - d) Consider oxycodone around the clock
WHO Stepladder

Step 1: Non-opioids +/- Adjuvant

Step 2: Opioids for mild to moderate pain +/- Non-opioids +/- Adjuvants

Step 3: Opioids for moderate to severe pain +/- Non-opioids +/- Adjuvants

Case Study Cont.
- Pain improved with around-the-clock oxycodone
- Discharged to SNF on Hospice
- 2 weeks later: moaning, restless, increased RR, pocketing pills
- Placed on morphine drip with IV lorazepam q4hrs
- Symptoms improved

Case Study Cont.
- The patient’s son arrived from out of town for a visit. After seeing his mother, the son became visibly upset and asked to see the nurse. He was angry and asked, “What are you people doing, trying to kill her with this morphine?” How can the nurse best address the son’s concerns?
  - a) Agree with the son’s concerns, and ask the physician to decrease the rate.
  - b) Validate the son’s distress, and ask him to tell you more about his concern.
  - c) Tell the son that morphine does hasten death, but at least his mother is comfortable.
  - d) Refer the son to his sister, the power of attorney, for more information.

Case Study
54 yo with chronic low back and post-thoracotomy pain
Case Study

- Construction worker with lung cancer
- Chronic back pain r/t work injury
  - Oxycodone CR 10 mg BID
  - Percocet 5/325 mg q4 – 6hrs prn
- Pre-surgery pain 3/10 with meds
- 3 days post-surgery pain 5/10
  - Hydromorphone PCA breakthrough and continuous
- Same day surgeon weaned him off PCA
- R chest tube still in place

Case Study Cont.

- “With past use of opioids, I’d feel better having him receive only oral pain medications”
- PCA D/C’d next day
  - Oxycodone CR 10mg PO BID
  - 2 Percocet PO q4hrs moderate pain
  - Hydromorphone 2mg PO q2hrs severe pain
- Pain 7/10, angry, knocking items off tray table
- “Never appeared” to be in pain
- “I’m worried that he is over exaggerating his pain”

Case Study Cont.

- Which of the following should not be included in the nurse’s assessment of pain?
  - a) Assess aggravating and alleviating factors of pain
  - b) Ask the patient to describe the pain (e.g., sharp, shooting, burning)
  - c) Disregard the patient’s report of pain on the NRS if the patient does not show any behavioral signs of pain.
  - d) Consider the patient’s history of opioid use, which may include tolerance and the need for higher doses of pain medication to achieve adequate pain management.

Barriers to care

<table>
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<tr>
<th>Patient Related</th>
<th>Provider Related</th>
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<tbody>
<tr>
<td>Fear of addiction</td>
<td>Fear of addiction</td>
</tr>
<tr>
<td>Worry of disease recurrence</td>
<td>Poor pain assessment</td>
</tr>
<tr>
<td>Side effects</td>
<td>Regulations</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>Side effects</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>Lack of knowledge</td>
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Cancer Pain Assessment

- Assess for all types of acute and chronic pain
- Reassure that most cancer pain can be relieved safely, quickly, and effectively
- Basic and ongoing professional education for clinicians on effective cancer pain assessment

Case Study Cont.

Addiction is defined as

- a) A physiologic state characterized by a decrease in the effects of a drug after chronic administration, or by a need for a higher dose to maintain effectiveness.
- b) The physiologic adaptation of the body to the presence of an opioid. Withdrawal symptoms occur when opioids are discontinued, the dose is abruptly reduced, or when an antagonist is added.
- c) A neurobiologic disorder characterized by impaired use of drugs for nonmedical reasons, a craving for drugs, and continued use despite harm.
- d) Escalating demand for medication, asking for medication before the prescribed interval time, and obtaining medications from others. Behavior resolves when pain is effectively treated.

Addiction

- Tolerance: when taken regularly
- Physical dependence: all patients when taken regularly
- Psychological dependence: ADDICTION

Special Populations: Complicated

- The patient with comorbid psychiatric and coping difficulties
  - Structure
  - Psychotherapy
- The addicted patient
  - Maximum structure
  - Limited supply
  - Long-acting opioids of low street value
  - Recovery program
  - Psychotherapy
Case Study Cont.

- Palliative care consult 5 days after surgery
  - Family meeting
    - Pain + nervous and uncomfortable
    - "Hospital a place to die"
  - Treatment plan agreed upon
    - Continuity of nursing care
    - Hydromorphone PO q2hrs round-the-clock
- Nonpharmacologic interventions
  - Heating pad, distraction, pet therapy
- 8 hours later pain 6/10

Total Pain

- Palliative care discussed total pain
  - Physical
  - Spiritual
  - Psychological
  - Social

Case Study

A 71 yo Woman With Metastatic Lung Cancer

- Newly diagnosed stage IV NSCLC
- 9-month hx vague chest, Lt shoulder, Lt rib pain
- Treated for RA with MTX & pred w/no relief
- X-ray: diffuse osteoporosis, degenerative change w/fracture of 6th Lt rib
- CT/PET: Mets to cervical, thoracic, lumbar spine, mult ribs, Lt scapula, iliac bones, sacrum, Lt femur
- Nodule Lt low lung with trace pleural effusion
- Pain 9/10
Case Study Cont.

- Ibuprofen 200mg PO BID
- Afraid of constipation
- Decreased appetite/losing weight
  - For cancer pain and the above assessment, you recognize that Ibuprofen is
    - a) Appropriate because she was concerned about constipation
    - b) Appropriate because she could become addicted with narcotic pain medications
    - c) An inappropriate drug for her disease
    - d) An inappropriate drug for her pain

Non-opioid Analgesics

- Acetaminophen
  - Reduce mild to moderate pain and fever
  - May cause liver damage
    - Do not exceed 4g/24hrs
- Anti-inflammatory agents
  - Reduce inflammation and mild to moderate pain
  - Symptom management
    - Bone metastases
  - Addition of NSAIDs can reduce opioid dose requirements

Case Study Cont.

- Hydromorphone 2mg PO q3hrs PRN
- Would not take medication because of constipation
  - What is the most appropriate response?
    - a) “Hydromorphone does not cause constipation.”
    - b) “Relieving pain is more important than having constipation.”
    - c) “Let's review information about a bowel regimen.”
    - d) “Patients who are older do not experience constipation.”

Opioids

- Most appropriate dose controls pain through 24 hours
- Long-acting and breakthrough options with constant pain
- Effective titration
  - Breakthrough dose
    - 10%--20% of long-acting dose
Opioids: Effects

- Adverse Effects of Opioids
  - Gastrointestinal
  - Respiratory
  - Central nervous system

- Opioid Withdrawal
  - Nausea/vomiting/diarrhea
  - Tachycardia
  - Chills
  - Anxiety/paranoia
  - Insomnia

Managing Constipation

- Constipation Management
  - Universal side effect
    - Prophylaxis
      - Stool softener
      - Bowel stimulant

- How Opioids Cause Constipation
  - Bind to opioid receptors in bowel
    - Decreased secretion and peristalsis
    - Increased smooth muscle tone and contractions
    - Reabsorption of water and electrolytes

Case Study Cont.

- Took 2mg hydromorphone PO q3hrs: pain 4/10
- Rest/appetite improved
- Daily bowel movement
- Week 4 chemotherapy c/o intermittent tingling in fingertips
- Able to write and use utensils
- 2 weeks later; tingling in fingers and toes “miserable”
- Unable to pick up or hold objects, can’t feel floor

Case Study Cont.

- Gabapentin 100mg PO BID for neuropathic pain
- “I know what gabapentin is because my sister took it. Am I going to have seizures now?”

- What is the most appropriate response regarding gabapentin?
  a) “Patients with lung cancer can get brain metastasis and have seizures.”
  b) “Gabapentin does help people like your sister who have seizures. However, in your case, it also can be prescribed to help with your type of numbness and pain in your fingers and toes.”
  c) “You will be able to sleep better with gabapentin.”
  d) “Gabapentin will help the pain in your chest.”
### Adjuvants
- **Anxiolytics**
  - Reduce anxiety associated with pain
- **Antidepressants**
  - Treat chronic pain depression
- **Anticonvulsants**
  - Treat neurologic pain

### Miscellaneous
- **Biphosphonates**
- **Radionuclides**
- **Intraspinal**
- **Radiation therapy**
- **Interventional/surgical**
- **Patient/family education**

### Complementary and Integrative Modalities
- **Alternative medical systems**
- **Energy therapies**
- **Exercise therapies**
- **Manipulative and body-based methods**
- **Mind-body interventions**
- **Nutritional therapeutics**
- **Pharmacologic and biologic treatments**
- **Spiritual therapies**

### Cannabis
- Has been used for medicinal purposes for thousands of years
- Illegal in the US, however legal in WA and other states
- Not approved by FDA for medical treatment

### Take Home Points
- Treat the underlying cause of pain
- Administer around the clock
- Manage breakthrough pain
- Oral preferred route
- Minimize side effects
- Review patient instructions
References