Case Study: Complete Pain Assessment and Multimodal Approach to Pain Management

MARY BETH PARTYKA MSN
ADULT NURSE PRACTITIONER
ADVOCATE CHRIST MEDICAL CENTER
ADULT PAIN SERVICE

Program Objectives

- Identify the components of a comprehensive pain assessment
- Discuss various medications used in the management of pain
- List the steps required to effectively use the Illinois Prescription Monitoring Program Website
- Review options to stratify risk when considering the use of opioids for chronic pain management

Impact of Poorly Managed Pain

- Millions suffer from acute and chronic pain every year
- Impact of poorly managed pain:
  - Tremendous burden on our country in healthcare costs, rehabilitation and lost worker productivity
  - Overwhelming emotional and financial burden on patients and their families
  - Results in longer hospital stays, increased rates of rehospitalization and increased outpatient visits
  - Decreased ability to function fully leading to lost income and insurance coverage and increased rates of disability
Pain Assessment Components

- Intensity
- Location
- Radiation
- Duration
- Description
- Aggravating Factors
- Allaying Factors
- Past Medical History

Let's take a look at each component individually.

Pain Intensity
Why Use Patient Self Report?

- Pain is a 100% subjective experience
- No test can measure pain intensity
- The experience of pain encompasses much more than just the physical stimulus, other factors that influence pain intensity include:
  - Emotional state
  - Past experience with pain
  - Coping skills
  - Cultural background
  - Contextual components

Numerical Rating Scale (NRS)

- This scale is used for Adult Patients able to self-report pain intensity
- The NRS is a 0-10 scale where, 0=no pain, 10=worst pain ever
- Note: A pain management intervention is recommended for an NRS score greater than stated pain goal

*While pain intensity is an important component of a comprehensive pain assessment, it should NEVER be the only factor when developing or implementing a pain management plan.
Numerical Rating Scale (NRS)

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain</td>
<td>Moderate pain</td>
<td>Worst possible pain</td>
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Pain Goal

- The pain goal is established by the patient
- The purpose of establishing a pain goal is to identify how much pain can exist without interfering with function and quality of life
- It is important to have a discussion with the patient to determine what a realistic goal is based on patient history and underlying pathology

Case Example

Mr. Smith is a 57 y/o male 2 days post below the knee amputation due to non-healing wound and dry gangrene. You ask Mr. Smith, “what would be an acceptable pain goal for you?”. Mr. Smith replies, “well no pain of course”. You then ask Mr. Smith if he believes “No Pain” is a realistic pain goal 2 days post his leg amputation, he replies “ya, I guess not”. You then ask Mr. Smith, “what level of pain would allow you to get adequate sleep, participate in physical therapy and perform activities of daily living?”. Mr. Smith says, “I think a pain goal of 4 would be good”. You tell Mr. Smith that is a realistic goal and together you’ll work to achieve it.
Location, Radiation and Onset

- **Location**: Have patient point to site of pain.
- **Radiation**: Does the pain spread to another location?
- **Onset**: When did the pain start?
  - Did the pain just start following a surgery or injury?
  - Has the patient been living with this pain for months or years?
  - A patient may have both acute pain and chronic pain.
    - Example: The patient has acute pain after a vaginal hysterectomy, but has had chronic left knee pain for 5 years.
  - The onset of pain will have a significant impact on the development of a safe and effective pain management plan.

Quality=Description of Pain

- **Nociceptive Pain**: Normal process of stimuli that damages normal tissue or has the potential to do so if prolonged; usually responsive to non-opioids and opioids.
  - **Somatic nociceptive pain**
    - Arises from bone, joints, skin, connective tissue
    - Usually aching or throbbing in quality
    - Well localized
  - **Visceral nociceptive pain**
    - Arises from visceral organs such as the heart and pancreas
    - Intermittent, cramping
    - Poorly localized

- **Neuropathic Pain**: Abnormal processing of sensory input by the peripheral or central nervous system; treatment usually includes adjuvant analgesics.
  - Injury or damage to the central nervous system or peripheral nervous system.
  - Multiple sclerosis
  - Diabetic peripheral neuropathy
  - Quality described as shooting, burning, “electric shock”, tingling, numbness
Alleviating & Aggravating Factors

- What makes the pain better?
  - Medication
  - Ice
  - Heat
  - Immobilization

- What makes the pain worse
  - Activity
  - Positioning
  - Emotional distress
  - Lack of sleep

Past Medical History (PMH)

- Knowing your patient’s overall condition and PMH will have a major impact on the development of a safe and effective pain management plan.

  - Stomach ulcers/GI bleed
  - Renal disease
  - Cardiac disease
  - Depression
  - Substance abuse
  - Chronic pain
  - Chronic opioid use
  - Home medication list

Pain Management Interventions

Pharmacological Modalities

- Medication Groups
  - Non-Opioids
    - Analgesics
  - NSAIDs

- Adjunct medications
  - Anticonvulsants
  - Antidepressants
  - Muscle relaxants
  - Topical preparations

- Opioids
  - Combination opioids
  - Short-acting and long-acting preparations
  - Multiple routes of administration
Acetaminophen

- Well tolerated analgesic
- Few adverse effects
- Recommended dose up to 4gms/24hrs
- Reduce maximum dose to 50%-75% in patients with hepatic insufficiency or history of alcohol abuse
- Found extensively in combination products

Non-Steroidal Anti-inflammatory Drugs (NSAIDs)

- Anti-inflammatory effect
- Opioid-dose sparing effect
- Caution in patients with:
  - History of renal insufficiency
  - Dehydration
  - History of coagulation defect/anticoagulation use
  - History of GI ulceration, bleeding or perforation
  - Fluid retention or heart failure

Non-Steroidal Anti-inflammatory Drugs (NSAIDs)

- Types of non-steroidal anti-inflammatory drugs
  - Ibuprofen
  - Ketorolac
  - Naproxen
  - Celecoxib
Adjuvant Drugs

- These are drugs with specific indications that have been found to be effective for neuropathic type pain.
  - Anticonvulsants
    - gabapentin
    - pregabalin
    - carbamazepine
  - Antidepressants
    - SNRI
      - duloxetine
      - venlafaxine
    - TCAs
      - amitriptyline
      - nortriptyline

Skeletal Muscle Relaxants

- cyclobenzaprine
- diazepam
- metaxalone
- baclofen
- tizanidine
Topical Preparations
- Lidocaine patch (Lidoderm patch)
- Lidocaine gel
- Capsaicin
- Diclofenac topical (Flector patch)

Opioids
- Opioids act by attaching to specific proteins called opioid receptors, which are found in the brain, spinal cord, gastrointestinal tract, and other organs in the body. When these drugs attach to their receptors, they reduce the perception of pain.
- Opioids can also produce drowsiness, mental confusion, nausea, constipation, and, depending upon the amount of drug taken, can depress respiration. Some people experience a euphoric response to opioid medications, since these drugs also affect the brain regions involved in reward.
- Patients can be classified as either:
  - Opioid naïve: a patient who has NOT taken opioids on a consistent basis
  - Opioid tolerant: a patient who HAS taken opioids on a consistent basis
- Opioid naïve patients are at higher risk for opioid related side effects

Types of Opioids
- Oral
  - Short-Acting (hydrocodone, oxycodone)
  - Long-Acting (extended release morphine, extended release oxycodone)
- Elixirs (Lortab elixir, Roxanol)
- Parenteral (morphine, dilaudid, fentanyl)
- Transdermal (fentanyl patch)
- Patient Controlled Analgesia (PCA)
- Epidural Analgesia
### Opioid Side Effects

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Management Strategies</th>
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<tr>
<td>Respiratory Depression</td>
<td>Monitor level of sedation</td>
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<td></td>
<td>Reduce dose</td>
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<tr>
<td></td>
<td>Narcan</td>
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<tr>
<td>Constipation</td>
<td>Prevent with laxative/stool softener</td>
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<tr>
<td>Nausea/Vomiting</td>
<td>Antiemetic/good bowel regimen</td>
</tr>
<tr>
<td>Sedation/Confusion</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Pruritus</td>
<td>Benadryl</td>
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### Definitions

- **Physical Dependence**: The physiological adaptation of the body to the presence of an opioid. It is defined by the development of withdrawal symptoms when opioids are discontinued, when the dose is reduced abruptly or when an antagonist (e.g., naloxone) or an agonist-antagonist is administered.

- **Tolerance**: A physiological state characterized by a decrease in the effects of a drug (e.g., analgesia, nausea or sedation) with chronic administration.

### Definitions

- **Misuse**: Use of a medication (for a medical purpose) other than as directed or as indicated, whether willful or unintentional, and whether harm resulted or not. Example: using a opioid to treat anxiety.

- **Abuse**: Any use of an illegal drug, or the intentional self-administration of a medication for a nonmedical purpose such as altering one’s state of consciousness, for example getting “high.”
Definitions

Addiction: A primary, chronic neurobiologic disease with genetic, psychosocial and environmental factors influencing its development and manifestation. It is characterized by behaviors that include one or more of the following:
- Impaired control over drug use
- Compulsive use
- Continued use despite harm
- Craving

How to Talk with Patients about Substance Use Disorder

- Be nonjudgmental—patients are more likely to be forthcoming
- Start with sweeping questions ("How helpful have your medications been for you?"); rather than begin with questions about medication misuse.
- Ask questions about warning signs (Have you ever taken your pain medication for reasons other than pain?)
- Listen to what patients say about how and why they take their medications.
- Inquire about their willingness to try alternative non-opioid forms of pain therapy.

Strategies for Patients with Aberrant Opioid Use Behavior

- Always look at pathology
- Monitor functional status
- Query KPMI
- Obtain random urine toxicology screen
Opioid Risk Stratification Tools

- Opioid Risk Tool
- The Screener and Opioid Assessment for Patients with Pain-Revised
- Current Opioid Misuse Measure

- PainEDU | Inflexxion | Pain Education for Clinicians
- https://www.painedu.org
Case Study

- Mr. Jones is a 43 y/o construction worker with a history of persistent low back pain. He recently relocated to this area from Indiana and is seeing you in the office for the first time. He is requesting you prescribe Norco for his back pain stating: “that’s what my last doctor gave me.”

- Pain assessment questions:
- Other pertinent history:
- Screening tools:
- Plan:
Case Study

Ms. Jones is a 55 y/o patient with metastatic breast cancer to her sacrum. She has completed radiation therapy and is on her second round of chemotherapy. She asks if you can help her with pain control, reporting it is interfering with ADL.

Pain assessment questions:
Other pertinent history:
Screening tools:
Plan:

Case Study

Ms. Evans is a 79 y/o female with a history of advanced rheumatoid arthritis. She is having difficulty walking due to persistent pain in her hips and knees. She has been using Tylenol for pain but reports it “doesn’t do much good”

Pain assessment questions:
Other pertinent history:
Screening tools:
Plan:

References

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- http://journals.lww.com/oncology-times/Fulltext/2017/06100/Opioids_in_Oncology_Care.aspx