Pain Management Considerations in Palliative Care

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Objectives

- By the end of this session, you should be able to:
  - Describe and assess pain as a symptom
  - Describe basic opiate pharmacotherapy
  - Perform basic opioid conversions
  - Identify the differences between dependence, tolerance and addiction
  - Describe common opiate adverse effects and their treatments

Pain as a Symptom

- Subjective
- Cannot
  - Rely on vital signs
  - Determine based on patient appearance or behavior
  - Determine pain level based on therapy or procedure
  - Assume sleeping patient has no pain
  - Assume a patient will verbalize their pain

Pain is in context

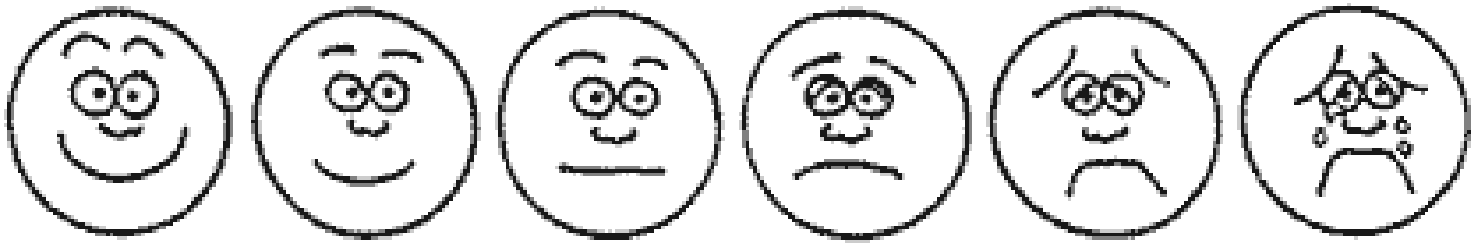
- Past experiences
- Spiritual beliefs
- Pressure or support from family/friends
- Social or economic realities
- Fear
- Hope

Pain Assessment

Assessing History of Pain

- PQRST, OLDCAARTS, etc.
- Scales
  - Visual Analog Scale
  - Faces Scale
- Ask why
- Ask goals

Wong-Baker FACES Pain Rating Scale



0	2	4	6	8	10
NO HURT	HURTS LITTLE BIT	HURTS LITTLE MORE	HURTS EVEN MORE	HURTS WHOLE LOT	HURTS WORST

From Wong D.L., Hockenberry-Eaton M., Wilson D., Winkelstein M.L., Schwartz P.: Wong's Essentials of Pediatric Nursing, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.


0
1
2
3
4
5
6
7
8
9
10
11
TOO SERIOUS
FOR NUMBERS

Pain Assessment: Analgesic History

- Current meds – Effective?
  - Time to onset
  - Duration
- Past meds
  - Effects
  - Toxicities
- Phobias to meds
  - Addiction, toxicity

Pain Assessment: Nonpharmaclogic

- Heat, Cold
- OMM, Reiki, Touch
- Relaxation techniques
- Supplements
- Acupuncture
- Procedures

Impact and Meaning of Pain

- Mood, sleep, mobility, diet, economics, relationships
- Punishment?
- Opportunity for growth?
- Fear?

Types of Pain

Types of Pain: Nociceptive

- Cause by direct stimulation of nociceptors
- Transmits along normal nerves
- Sharp, aching, throbbing
  - Somatic – easy to describe, localize
  - Visceral – difficult to describe, localize
- Tissue injury appropriate, apparent
- Management
  - Opiates
  - Adjuvants, Co-analgesics

Types of Pain: Neuropathic

- Disordered peripheral or central nerves
- Compression, transection, infiltration, ischemia, metabolic causes
- Various types: peripheral, deafferentation, complex regional syndromes
- Pain may exceed visible injury
- Burning, tingling, shooting, stabbing, electric
- Management
  - Opiates
  - Adjuvants, Co-analgesics often required

Opiate Dosing

- Individualized
- Gradual escalation until adequate analgesia OR intolerable/unacceptable side effects
  - No therapeutic ceiling
- Around the clock dosing
- As needed (prn) dosing
- Frequency is based on drug half life
  - Generally $T_{1/2}$ is 3-4 hours
  - Exception: fentanyl 60-90 minutes

Opiate Equivalence Table

Opioid	Dose (mg) Parenteral	Dose (mg) Oral	Duration (hours)
Morphine	10	30	2-4
Hydromorphone	1.5	7.5	2-4
Oxycodone	---	30	2-4
Hydrocodone	---	30	2-4
Fentanyl	0.1	---	0.5-2
Meperidine	100	300	2-3

Starting Doses

- Opiate naïve
  - Start with an opiate at the equivalent of 4-6mg morphine IV/SQ every hour prn
  - Preferably done inpatient, monitored
- Switching opiates
  - If good pain control, reduce equianalgesic dose by 1/3
  - If poor pain control, with minimal AE, reduce equianalgesic dose by 25% or less
  - Exception: methadone

Breakthrough Pain

- Occasional pain exacerbations of severe pain over a baseline of mild-moderate pain
- Reported by as many as 2/3 of cancer patients with a stable baseline
- Common causes
  - Incidental
  - End of dose failure

PRN Dosing

- Dose should be approximately 10-20% of the 24 hour daily scheduled opiate dose
- Frequency:
  - Oral: q 1-2 hours
  - Parenteral: q 10 minutes

Dose Adjustments

- No ceiling dose
- Escalation rate
  - Severe pain: 100%
  - Moderate to severe: 50 – 100%
  - Mild to moderate: 25 – 50%
- Increase rescue dose as baseline dose increased

Definitions

Tolerance

- A change in the dose-response relationship induced by exposure to the drug and manifested as a need for a higher dose to maintain the same effect
- Develops at different rates
  - Respiratory depression > somnolence, nausea (~4-7 days) > analgesia
  - No tolerance to constipation
- Analgesic tolerance is rarely a problem
  - Opioid doses relatively stable in the absence of worsening pathology
  - Increased opioid requirements after a stable period often signifies disease progression

Dependence

- The development of a withdrawal syndrome following dose reduction or administration of antagonist
- Physiologic and Universal
- Often develops after only a few days
- Not problematic with proper tapering
  - 25% dose reduction/week to taper to off over 4 weeks

Barriers

- Patient
  - Hold doses for “really bad” pain
  - Fear of addiction
  - Stigma of drug class
  - Side effects
  - Unable/reluctant to report pain
    - Especially in caregiver setting; admission of weakness
- Practitioner
  - Knowledge deficits
  - Fear of addiction
  - Regulatory oversight
  - Analgesia less priority versus cure
  - Medical culture

Addiction

- Psychological
- Behavioral manifestations
  - Compulsive use, risky behaviors
  - Loss of Control
  - Continued use despite harm to self, others
- Risk of iatrogenic addiction in patients with pain and no history of substance abuse is <1%
- Need to recognize aberrant behaviors

Pseudoaddiction

- Behaviors reminiscent of addiction but driven by pain and disappear with adequate analgesia
- Iatrogenic condition due to improperly treated pain
- Call button syndrome
- Diagnose by
  - Proper pain assessment history
  - Increasing dose and/or frequency

Opiate Adverse Effects

Constipation

- Most common
- No tolerance
- Multifactorial
- Prophylactic laxatives indicated
- PREVENTION

Management

- Softeners – mandatory
  - Docusate
- Cathartics – mandatory
  - Senna or bisacodyl
- Osmotic Laxatives
  - Magnesium or aluminum salts
  - Lactulose
  - Sorbitol
- Enemas
- Fiber – usually contraindicated especially in frail or end of life patients

Nausea, Vomiting

- Common
- Tolerance develops usually 4-7 days
- Prophylactic antiemetics not required but can be helpful
- May need to choose different opiate
- Treat the right receptor

Nausea, vomiting receptors

- Medullary chemoreceptor trigger zone stimulation
  - Via dopamine and serotonin receptors
  - Treat with receptor antagonism – metoclopramide, neuroleptics, ondansetron
- Enhanced vestibular sensitivity – vertigo, motion-induced (histamine)
  - Scopolamine, meclizine
- Increased gastric antral tone
  - Early satiety, bloating, postprandial vomiting
  - Metoclopramide
- Promethazine, compazine are weak antidopaminergics, mainly anticholinergics and usually little help

Sedation and Cognitive Impairment

- Common with initiation or dose increase
- Tolerance develops in usually 3-4 days
- Management
  - D/C non-essential centrally acting meds
  - Evaluate and treat other potential causes
  - If analgesia satisfactory, decrease dose by 25%
  - If analgesia inadequate or symptoms persist in spite of dose reduction
    - Trial psychostimulant (sedation) or neuroleptic (delirium)
    - Switch opiate
    - Trial other analgesic approach to decrease systemic opiate requirements

Respiratory Suppression

- Opioid effects differ for patients in pain
  - Pain stimulates breathing
  - Loss of consciousness PRECEDES respiratory depression
  - Development of pharmacologic tolerance is rapid (hours)

Opioids and Respiratory Failure

- Light's Study: COPD patients
  - FEV1 = 0.99, PO2 = 60, PCO2 = 50 given morphine 0.8 mg/kg PO before exercise
  - Mild increase in CO2, decrease O2
  - NO change in BP or HR
  - No life threatening respiratory suppression
  - Improved exercise tolerance and dyspnea scores

Light W et al, Am Review of Respiratory Disease 1989, 139: 126-133.

Helpful Adjuvants

- Bone pain
  - Radiation therapy, steroids, NSAIDs, calcitonin, bisphosphonates
- Neuropathic pain
  - Anticonvulsants, antidepressants, antiarrhythmics
- Non-invasive therapy
  - OMM
  - Reiki, massage
- Procedural therapy
  - Nerve blocks, TENS, surgery

Summary

- Pharmacology should match pain etiology
- Dosing interval based on half-life (3-4 hours) or peak effects (IV: 10min, PO: 60min)
- Breakthrough dosing should be 10-20% of 24h dose
- Stimulant bowel regime is mandatory
- Dose escalation
- Anticipate and treat side effects aggressively
- Assess frequently
- Ask for help