Treating Pain: Analgesics 101

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Objectives

- Define pain and common etiologies.
- Identify analgesic classes appropriate in the treatment of physical pain.
- Review tips for using analgesic classes safely and effectively in serious illness.
Pain

- Unpleasant sensory and emotional experience
  - Actual or potential tissue damage
- Chronic pain is a common reason for seeking medical attention
- Multifactorial symptom
- Pathophysiology
- Types
- Pain near end-of-life
Pain Assessment

- Onset
- Location
- Duration
- Character
- Alleviating/Aggravating
- Radiation
- Temporal Pattern
- Symptoms Associated
Medication Appropriateness
Acetaminophen

Class Example

- Acetaminophen

Class Notes

- OTC, inexpensive, antipyretic properties
- Mechanism of action
- Hepatotoxicity precaution

Class Dosing Example

- 650mg PO/PR/IV Q6H PRN
Nonsteroidal Anti-Inflammatory Drugs

**Class Examples**
- Ibuprofen, Meloxicam, Naproxen

**Class Notes**
- OTC availability*, antipyretic and anti-inflammatory properties
- Mechanism of action
- GI toxicity, Increased cardiovascular risks, nephrotoxicity

**Class Dosing Example**
- Ibuprofen 400mg PO Q6H PRN
Glucocorticoids

Class Examples

• Dexamethasone, Methylprednisolone

Class Notes

• Mechanism of action
• Toxicities (glucose intolerance, sodium retention, behavioral changes)

Class Dosing Example

• Dexamethasone 4mg PO QDay to BID
Lidocaine

Class Example

- Lidocaine topical creams, ointments and patches

Class Notes

- Neuropathic, localized pain
- Mechanism of action
- Patches may be cut to size, formulation indications

Class Dosing Example

- Lidocaine 5% patch- Apply 1 patch topically for up to 12 hours per day

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Antidepressants

Class Examples

- TCAs, SNRIs, SSRIs

Class Notes*

- Increase in synaptic norepinephrine
- Sedating, anticholinergic potential, nausea, QT prolongation
- Black box warnings

Class Dosing Examples

- TCA: Amitriptyline 25mg PO QHS
- SNRI: Duloxetine 30mg PO QHS
Antiepileptics

Class Examples
- Carbamazepine, Oxcarbazepine, Lamotrigine, Mexiletine

Class Notes
- Sodium and calcium channel blockade
- Wide range of adverse effects
- Significant drug-drug interactions

Class Dosing Example
- Carbamazepine 100mg PO Q12H
Gabapentinoids

**Class Example**
- Gabapentin

**Class Notes**
- Mechanism
- Dose tapers
- Renal impairment precaution and adverse effects

**Class Dosing Example**
- Gabapentin 300mg PO QDay-TID
Opioids

- Buprenorphine
- Fentanyl
- Hydrocodone
- Hydromorphone
- Methadone*
- Morphine
- Oxycodone
- Oxymorphone
- Tramadol

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Combination Therapy

- Multifactorial approach
  - Non-drug therapy
  - Targeted pharmacologic therapy
- Type of pain
  - Etiology
  - Duration
- Patient status and illness trajectory
Pharmacokinetic Changes

- **Absorption**
  - Decreased rate through GI tract

- **Distribution**
  - Decreased lean body mass

- **Metabolism**
  - Decreased liver blood flow

- **Elimination**
  - Decreased GFR (kidneys)
Medication Appropriateness
Thank you

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References


