Week 2 Concepts: Pain

Analgesic Drugs

Prepare: Analgesic Drugs

Analgesic drugs are medications that relieve pain, but do not cause loss of consciousness.

Pain

Match the terms with the appropriate description.

Sudden onset that subsides with treatment.	Acute pain
Skeletal muscle, ligament and joint pain.	Somatic pain
Level of stimulus needed to produce a sensation of pain.	Pain threshold
Organ and smooth muscle pain.	Visceral pain
Amount of pain a person can endure without impeding on normal daily function.	Pain tolerance
Persistent and/or recurring lasting over 3 months.	Chronic pain

Opioids can be classified as mild agonists and strong agonists. Mild agonists include codeine and hydrocodone and strong agonists include fentanyl, hydromorphone, meperidine, methadone, morphine and oxycodone.

Self Check: Therapeutic Use and Pharmacologic Action

Treating Pain

Opioid drugs are used to treat moderate to severe pain. Nonopioid drugs are normally prescribed for mild to moderate pain

Classifications

The three classifications of opioid drugs are agonist, agonist-antagonists and antagonists.

Nonopioid Medications

The most widely used nonopioid medication is acetaminophen. This medication also works as an antipyretic by acting on th hypothalamus, the section of the brain that regulates temperature.

Self Check: Adverse Effects of Acetaminophen

Which of the following is the most serious adverse effect of acetaminophen?

- Hepatotoxicity
- Nausea
- Vomiting
- Constipation

Self Check: Nonopioid Analgesics

Do not use nonopioid analgesics with which of the following conditions? Select all that apply.

- Pregnancy
- Asthma
- Allergy to the medication
- Severe liver disease
- Glucose-6-phosphate dehydrogenase (G6PD) deficiency

Reflect: Analgesic Drugs

Pharmacological Action

What is the pharmacological action of opioid antagonists?

- Bind to pain receptors and cause a weaker pain response than does a full agonist
- Bind to a pain receptor but do not reduce pain signals
- Bind to opioid pain receptors in the brain to reduce the sensation of pain

Creates a weak bond to the mu opioid receptors which alters the perception of pain

Adverse Effects
Which of the following are adverse effects of nonopioid analgesic drugs? Select all that apply.

- Dysphoria
- Anemia
- Constipation
- Hepatotoxicity
- Nephrotoxicity
- Respiratory depression

Contraindications of Opioids
Which of the following is a contraindication for opioid analgesic use? Select all that apply.

- Constipation
- Vomiting
- Nausea
- Allergy to the medication
- Severe asthma

Mild Opioid Agonists
Which of the following are considered mild opioid agonists? Select all that apply.

- Oxycodone
- Hydrocodone
- Meperidine
- Fentanyl
- Codeine
- Hydromorphone

Strong Opioid Agonists
Which of the following are considered strong opioid agonists? Select all that apply.

- Methadone
- Meperidine
- Morphine
- Codeine
- Hydromorphone
- Oxycodone
- Hydrocodone
- Fentanyl

Pharmacological Action
What is the pharmacological action of opioid agonist-antagonists?

- Bind to a pain receptor but do not reduce pain signals
- Creates a weak bond to the mu opioid receptors which alters the perception of pain
- Bind to opioid pain receptors in the brain to reduce the sensation of pain
- Bind to pain receptors and cause a weaker pain response than does a full agonist

Adverse Effects
Which of the following are adverse effects of opioid analgesic drugs? Select all that apply.

- Dysphoria
- Urinary retention
- Tachypnea
- Constipation
- Bradycardia
- Diarrhea
- Respiratory depression
- Tachycardia

Pharmacological Action
What is the pharmacological action of opioid agonists?

- Bind to a pain receptor but do not reduce pain signals
- Creates a weak bond to the mu opioid receptors which alters the perception of pain
- Bind to opioid pain receptors in the brain to reduce the sensation of pain
- Bind to pain receptors and cause a weaker pain response than does a full agonist