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## POSTTEST QUESTIONS

### Learning Objectives

After reading this monograph, the participant should be able to:

1. Describe the current status of pain management in the United States, barriers to appropriate assessment and management of pain, and consequences of undertreatment of pain.
2. Explain the pathophysiologic mechanisms involved in pain perception.
3. Name elements of the pain assessment process, a tool used for pain assessment, and strategies for overcoming barriers to pain assessment.
4. List the types of pharmacotherapies used to manage pain and compare the mechanisms of action, uses, dosage forms, routes of administration, dosages, and side effects of the various options.
5. Discuss the role of nonpharmacologic interventions in treating pain and name a clinical use for a nonpharmacologic treatment.

#### 1. Which of the following statements best characterizes the current status of pain management in the United States?

- a. Knowledge of pain management strategies is sufficient to manage acute and cancer pain in most patients, but resources are lacking.
- b. Resources are sufficient to manage acute and cancer pain in most patients, but knowledge of pain management strategies is lacking.
- c. Knowledge and resources are sufficient to manage acute and cancer pain in most patients with acute or cancer pain.
- d. Knowledge and resources are sufficient to manage acute and cancer pain in only about half of patients.
- e. Currently available analgesics are inadequate for managing acute and cancer pain, and new agents are needed.

#### 2. The conversion of energy from a noxious thermal, mechanical, or chemical stimulus into electrical energy by nociceptors is known as:

- a. Transduction.
- b. Transmission.
- c. Perception.
- d. Modulation.
- e. Nociception.

#### 3. Which of the following is a physiologic consequence of undertreatment of pain?

- a. Impaired immune function.
- b. Increased rate of gastric emptying.
- c. Decreased heart rate.
- d. Impaired renal function.
- e. Decreased respiratory rate.

#### 4. Barriers to the appropriate assessment and management of pain include:

- a. Financial constraints at health care systems.
- b. Clinicians' lack of concern about pain.
- c. Fear of iatrogenic addiction.
- d. Restrictive laws about patient privacy.
- e. Patients' inability to accurately assess their pain.

#### 5. Addiction is best described as:

- a. A state of adaptation that manifests as a withdrawal syndrome associated with abrupt drug cessation or rapid dose reduction.
- b. A state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug's effects over time.
- c. A state of adaptation in which exposure to a drug induces changes that result in an increase in one or more of the drug's effects over time.
- d. A primary, chronic neurobiological disease characterized by tolerance.
- e. A primary, chronic neurobiological disease characterized by impaired control over drug use, compulsive use, continued use despite harm, or craving.

#### 6. The single most reliable indicator of pain is:

- a. A healthcare professional's subjective assessment of pain.
- b. The patient's subjective self-report of pain.
- c. An objective measure of pain, such as abnormal vital signs.
- d. The lack of response to placebo.
- e. The presence of an obvious physical cause.

- 7. Which of the following pairs of systems often receive special attention during a physical examination of a patient with pain?**
- Cardiovascular and respiratory.
  - Cardiovascular and renal.
  - Gastrointestinal and endocrine.
  - Musculoskeletal and endocrine.
  - Musculoskeletal and neurological.
- 8. Which of the following is a unidimensional tool for pain assessment?**
- Brief Pain Inventory.
  - Initial Pain Assessment Tool.
  - McGill Pain Questionnaire.
  - Neuropathic Pain Scale.
  - Visual Analog Scale.
- 9. Which of the following pain assessment tools is multidimensional?**
- Brief pain inventory.
  - Faces pain scale.
  - Numeric rating scale.
  - Visual analog scale.
  - Wong-Baker faces Rating Scale.
- 10. Which of the following frequencies for pain reassessment was recommended in the 1992 Agency for Health Care Policy and Research CPG?**
- Within 5 minutes after parenteral drug administration.
  - Within 30 minutes after parenteral drug administration.
  - Within 60 minutes after parenteral drug administration.
  - Within 5 minutes after oral drug administration.
  - Within 30 minutes after oral drug administration.
- 11. Which of the following factors increases the risk for renal adverse effects from NSAIDs?**
- Advanced age.
  - Concomitant use of medications that affect CNS function.
  - Concomitant use of anticoagulants.
  - History of alcoholism.
  - History of sensitivity to aspirin.
- 12. Which of the following adverse effects from nonselective NSAIDs may be minimized by using a selective COX-2 inhibitor?**
- Bleeding from an antiplatelet effect.
  - CNS dysfunction.
  - Hypersensitivity reactions.
  - Renal insufficiency.
  - Liver dysfunction.
- 13. Which of the following medications is a selective COX-2 inhibitor?**
- Diclofenac.
  - Diflunisal.
  - Indomethacin.
  - Ketorolac.
  - Celecoxib.
- 14. Which of the following class side effects of NSAIDs are the main reason for removing the selective COX-2 inhibitors rofecoxib and valdecoxib from the market?**
- Renal insufficiency and GI bleeding.
  - Heart failure and renal failure.
  - Myocardial infarction and stroke.
  - Hypersensitivity and stroke.
  - Renal failure and hypersensitivity.
- 15. The dosage ceiling for a nonopioid is:**
- The highest dosage beyond which no increase in side effects but an increase in pain relief occurs.
  - The highest dosage beyond which no increase in pain relief or side effects occurs.
  - The highest dosage beyond which an increase in side effects but no increase in pain relief occurs.
  - The lowest dosage beyond which a decrease in side effects without a decrease in pain relief occurs.
  - The lowest dosage beyond which a decrease in pain relief but no decrease in side effects occurs.
- 16. Which of the following is a disadvantage of acetaminophen?**
- The risk of gastrointestinal ulcers.
  - The risk of bleeding from an antiplatelet effect.
  - The negligible anti-inflammatory activity.
  - The delay of at least 1-2 weeks before an anti-inflammatory effect is seen.
  - The risk of hypersensitivity reactions.

- 17. Which of the following statements about opioids is correct?**
- They have fallen out of favor because other more effective analgesics are available.
  - They have fallen out of favor because of concerns about the risk of abuse.
  - They play a major role in treating acute, breakthrough, cancer, and some types of chronic noncancer pain.
  - They play a limited role in treating acute and cancer pain that does not respond to other analgesics.
  - They play a limited role in treating cancer pain when concerns about the risk of abuse are moot.
- 18. Which of the following approaches to dosing is recommended when opioids are used for continuous pain?**
- Use by a parenteral route of administration whenever possible.
  - Administration only as needed for pain.
  - Administration around the clock.
  - Use of large initial doses to provide prompt relief followed by gradual dosage decreases based on response.
  - Use of a short-acting drug.
- 19. Which of the following side effects from opioids tends to persist despite continued use of the drugs?**
- Sedation.
  - Nausea and vomiting.
  - Constipation.
  - Urinary retention.
  - Pruritus.
- 20. Which of the following medications should be used to manage nausea from slowed gastric motility during opioid therapy?**
- Hydroxyzine.
  - Metoclopramide.
  - Naloxone.
  - Ondansetron.
  - Prochlorperazine.
- 21. Which of the following approaches is recommended for managing side effects from opioids?**
- Discontinue the opioid if side effects develop.
  - Treat the side effects if they develop.
  - Switch to another opioid if side effects develop.
  - Switch to another route of administration if side effects develop.
  - Use the opioid in combination with an opioid-sparing drug (i.e., a nonopioid) to prevent side effects.
- 22. For which of the following types of pain are antiepileptic drugs most commonly used?**
- Acute pain.
  - Cancer pain.
  - Chronic pain syndrome.
  - Neuropathic pain.
  - Nociceptive pain.
- 23. Which of the following antiepileptic drugs is approved by FDA for preventing migraine headache?**
- Carbamazepine.
  - Divalproex sodium.
  - Gabapentin.
  - Phenobarbital.
  - Phenytoin.
- 24. Which of the following statements about the use of antidepressants for pain management is correct?**
- They relieve pain primarily in patients with depression.
  - They relieve pain at higher doses than those used for an antidepressant effect.
  - They may relieve pain by reducing membrane excitability and suppressing abnormal discharges in pathologically altered neurons.
  - They may relieve pain by blocking receptors for serotonin and norepinephrine in the CNS.
  - They may relieve pain by blocking the reuptake of serotonin and norepinephrine in the CNS.
- 25. Which of the following side effects is most likely to occur and pose a problem for an elderly patient receiving tricyclic antidepressants?**
- Anticholinergic effects.
  - Ataxia.
  - Nystagmus.
  - Pruritus.
  - Thrombocytopenia.
- 26. Which of the following local anesthetics is appropriate to use for relieving acute pain associated with needle insertion or intravenous cannulation?**
- Epidural bupivacaine.
  - Local infiltration of lidocaine.
  - Lidocaine by IV infusion.
  - Topical EMLA.
  - EMLA by IV infusion.

27. Which of the following drugs is most useful for treating cancer pain (in combination with other analgesics)?
- Beta blockers.
  - Capsaicin.
  - Corticosteroids.
  - GABA<sub>B</sub> receptor agonists.
  - Selective 5-HT<sub>1B/1D</sub> receptor agonists.
28. Which of the following is a disadvantage of the intramuscular route of administration for analgesics?
- Short duration of action.
  - Inconsistent blood concentrations.
  - Numbness at the injection site.
  - Risk of abuse.
  - Risk of infection.
29. Which of the following therapies is potentially the most critical for patients with chronic noncancer pain?
- Occupational therapy.
  - Patient education.
  - Physical therapy.
  - Psychological approaches (e.g., relaxation, biofeedback).
  - Treatment of coexisting psychological disorders.
30. Which of the following is considered multimodal therapy?
- Use of an injectable opioid and an oral opioid.
  - Use of a long-acting oral opioid and a short-acting oral opioid.
  - Use of an injectable opioid and regional anesthesia.
  - Use of a nonselective NSAID and a selective COX-2 inhibitor.
  - Use of physical therapy and occupational therapy.
31. Which of the following medications are recommended as adjuvant agents for the management of pain in patients with sickle cell anemia?
- Antiepileptic drugs.
  - Local anesthetics.
  - Muscle relaxants.
  - Sedatives.
  - Tricyclic antidepressants.
32. Which of the following treatments is recommended for a patient with chronic arthritis pain?
- Acetaminophen.
  - Selective 5-HT<sub>1B/1D</sub> receptor agonists.
  - Tricyclic antidepressants.
  - Antiepileptic drugs.
  - Local anesthetics.
33. For which of the following painful conditions might acupuncture be used?
- Cancer pain.
  - Low back pain.
  - Migraine headache.
  - Peripheral neuropathy.
  - Tension headache.
34. Which of the following is among the nonpharmacologic interventions recommended for patients with acute pain from trauma?
- Acupuncture.
  - Application of cold.
  - Biofeedback.
  - Counterirritation.
  - Massage.
35. Which of the following groups recently introduced standards for pain management that have attracted the most attention?
- AHCPR.
  - APS.
  - ASA.
  - JCAHO.
  - NCQA.

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