



قائمة الاسئلة

علم الادوية التطبيقية 1 - () - المستوى الرابع - قسم التخدير - التخدير - كلية الطب والعلوم الصحية - الفترة الأولى - درجة الامتحان (70)

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- 1) Which inhalation anesthetic is most likely to cause respiratory depression and requires careful ventilation management?
 - 1) - Nitrous oxide
 - 2) - Isoflurane
 - 3) - Sevoflurane
 - 4) + Halothane
- 2) Which of the following factors does NOT affect the MAC of an inhalation anesthetic?
 - 1) - Age
 - 2) + Duration of anesthesia
 - 3) - Body temperature
 - 4) - Pregnancy
- 3) The Minimum Alveolar Concentration (MAC) is an essential parameter in inhalation anesthetics. Which of the following factors is known to decrease MAC ?
 - 1) - Hyperthermia
 - 2) + Hypoxia
 - 3) - Chronic alcohol use
 - 4) - Red hair
- 4) What is the main reason Sevoflurane is preferred for pediatric anesthesia?
 - 1) - Lower cost
 - 2) - Less respiratory irritation
 - 3) + Rapid induction and emergence
 - 4) - No side effects
- 5) Which of the following is a serious adverse effect of Enflurane?
 - 1) - Hepatic toxicity
 - 2) - Respiratory depression
 - 3) + Seizures
 - 4) - Hyperkalemia
- 6) Which of the following is a known side effect of Sevoflurane?
 - 1) - Hypertension
 - 2) + Nephrotoxicity
 - 3) - Seizures
 - 4) - Hypothermia
- 7) Why should Isoflurane be used with caution in obstetric procedures?
 - 1) - It increases uterine tone
 - 2) - It affects fetal heart rate
 - 3) - It prolongs labor
 - 4) + It can affect uterine tone
- 8) Which of the following is a common side effect of Isoflurane?
 - 1) - Hypoglycemia
 - 2) + Postoperative nausea and vomiting (PONV)
 - 3) - Seizures
 - 4) - Hypertension
- 9) Which of the following properties of Halothane contributes to its slow induction and recovery times?
 - 1) - Low blood/gas partition coefficient
 - 2) - High oil/gas partition coefficient





- 3) - Low oil/gas partition coefficient
4) High blood/gas partition coefficient
- 10) Which of the Following Inhalation Anesthetics Has the Lowest Blood/Gas Partition Coefficient?
1) - Halothane
2) - Isoflurane
3) - Sevoflurane
4) Desflurane
- 11) Which of the following is true regarding the pharmacodynamics of opioids in anesthesia?
1) - They act as GABA receptor agonists.
2) - They reduce the cerebral metabolic rate of oxygen.
3) They primarily bind to mu-opioid receptors for analgesic effects.
4) - They inhibit NMDA receptors to provide sedation.
- 12) The use of which drug class can decrease the MAC requirement of volatile anesthetics?
1) - Stimulants
2) - Antihypertensives
3) Opioids
4) - Diuretics
- 13) Which property of remifentanil differentiates it from other opioids in anesthetic practice?
1) - Low protein binding
2) Metabolism by nonspecific plasma esterases
3) - Long duration of action
4) - High bioavailability in oral form
- 14) In the context of anesthesia, what is the primary therapeutic benefit of using opioids like remifentanil?
1) - Long duration of action
2) - Reduced respiratory depression
3) Precise control due to rapid elimination
4) - Prevention of emergence delirium
- 15) Which is an adverse respiratory effect of ketamine?
1) - Bronchospasm
2) Airway obstruction from excessive salivation
3) - Laryngospasm
4) - Respiratory depression
- 16) In benzodiazepine withdrawal, what symptoms may appear?
1) Tachycardia, tremors, seizures
2) - Hypertension, muscle rigidity
3) - Excessive sedation, respiratory depression
4) - None of the above
- 17) What is the primary reason thiopental is rarely used for maintenance of anesthesia?
1) - It has a short duration of action.
2) - It causes excessive respiratory depression.
3) It accumulates in tissues, prolonging recovery time.
4) - It is metabolized rapidly by the kidneys.
- 18) Which opioid is most suitable for rapid onset and short duration in intraoperative pain management?
1) Fentanyl
2) - Morphine
3) - Buprenorphine
4) - Methadone
- 19) Which of the following benzodiazepines is preferred for short procedures due to its rapid onset and short duration?





- 1) - Diazepam
 - 2) - Lorazepam
 - 3) Midazolam
 - 4) - Alprazolam
- 20) Which drug should be avoided in patients with a history of severe egg or soy allergy due to its formulation?
- 1) - Ketamine
 - 2) - Thiopental
 - 3) Propofol
 - 4) - Etomidate
- 21) Which adverse effect is commonly associated with Propofol administration?
- 1) - Hypertension
 - 2) Pain on injection
 - 3) - Hyperthermia
 - 4) - Increased respiratory rate
- 22) What is the preferred dose adjustment of Propofol in elderly patients?
- 1) - Increase the dose
 - 2) - No adjustment needed
 - 3) Reduce the dose
 - 4) - Increase frequency
- 23) Ketamine is contraindicated in patients with:
- 1) - Chronic pain
 - 2) - Depression
 - 3) Raised intracranial pressure
 - 4) - Cardiac arrhythmia
- 24) What is the typical dose for IV induction with ketamine?
- 1) - 0.5 mg/kg
 - 2) 1-2 mg/kg
 - 3) - 3-4 mg/kg
 - 4) - 5-6 mg/kg
- 25) Which adverse effect is common with ketamine upon emergence?
- 1) - Sedation
 - 2) Hallucinations
 - 3) - Respiratory arrest
 - 4) - Cardiac arrest
- 26) What is the function of flumazenil in benzodiazepine pharmacology?
- 1) - Increases benzodiazepine effectiveness
 - 2) Antagonist that reverses benzodiazepine effects
 - 3) - Prevents benzodiazepine absorption
 - 4) - Increases GABA production
- 27) What property of benzodiazepines makes them effective for acute seizure management?
- 1) - Sedative effects
 - 2) High lipid solubility
 - 3) - Short half-life
 - 4) - Long half-life
- 28) Which benzodiazepine has active metabolites that prolong its action?
- 1) - Lorazepam
 - 2) - Midazolam
 - 3) Diazepam
 - 4) - Alprazolam





- 29) What is the significance of Halothane's high oil/gas partition coefficient?
- 1) - Faster induction
 - 2) Greater potency
 - 3) - Reduced environmental impact
 - 4) - Enhanced respiratory safety
- 30) During a surgical procedure, the anesthesiologist notices a rapid increase in the patient's body temperature and muscle rigidity. Which condition might the patient be experiencing, and which inhalation anesthetic is associated with this risk?
- 1) - Diffusion hypoxia; Nitrous oxide
 - 2) - Hepatotoxicity; Halothane
 - 3) Malignant hyperthermia; Halothane
 - 4) - Respiratory alkalosis; Desflurane
- 31) Which adverse effect is commonly associated with repeated or prolonged use of halothane in anesthesia?
- 1) - Renal toxicity
 - 2) - Diffusion hypoxia
 - 3) Hepatotoxicity
 - 4) - Hypertension
- 32) Which of the following inhalation anesthetics has the highest MAC value, indicating lower potency?
- 1) - Halothane
 - 2) - Sevoflurane
 - 3) Nitrous oxide
 - 4) - Methoxyflurane
- 33) Sevoflurane is often chosen for pediatric patients for induction of anesthesia because:
- 1) - It has a high oil/gas partition coefficient, allowing for slower onset.
 - 2) - It causes significant airway irritation.
 - 3) It has a low blood/gas partition coefficient, allowing rapid induction.
 - 4) - It poses a high risk of hepatotoxicity.
- 34) The Minimum Alveolar Concentration (MAC) is an essential parameter in inhalation anesthetics. Which of the following factors is known to decrease MAC?
- 1) - Hyperthermia
 - 2) Hypoxia
 - 3) - Chronic alcohol use
 - 4) - Red hair
- 35) Which of the following best describes the mechanism of action for inhalation anesthetics on the central nervous system (CNS)?
- 1) - They enhance excitatory neurotransmission and reduce inhibitory neurotransmission.
 - 2) - They primarily affect serotonin receptors, reducing CNS activity.
 - 3) They enhance inhibitory neurotransmission and reduce excitatory neurotransmission.
 - 4) - They bind exclusively to opioid receptors, leading to unconsciousness.

