



قائمة الاسئلة 2025-05-19 06:53

علم الادوية التطبيقية 2-الثالث-التخدير - كلية الطب والعلوم الصحية-درجة الامتحان (70)

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- 1) Which ion is essential for the release of acetylcholine (ACh) from the presynaptic terminal?
  - 1) - Sodium ( $\text{Na}^+$ )
  - 2) - Potassium ( $\text{K}^+$ )
  - 3) + Calcium ( $\text{Ca}^{2+}$ )
  - 4) - Chloride ( $\text{Cl}^-$ )
- 2) Why is succinylcholine contraindicated in burn patients?
  - 1) - Risk of malignant hyperthermia
  - 2) + Hyperkalemia due to upregulation of extrajunctional ACh receptors
  - 3) - Increased risk of bradycardia
  - 4) - Reduced efficacy
- 3) What is the effect of botulinum toxin at the neuromuscular junction?
  - 1) - Inhibits AChE
  - 2) + Blocks ACh release
  - 3) - Blocks ACh receptors
  - 4) - Causes sustained depolarization
- 4) Which receptor type is found at the motor endplate?
  - 1) - Muscarinic M2
  - 2) + Nicotinic N2
  - 3) - Nicotinic N1
  - 4) - Adrenergic  $\beta_2$
- 5) What is the primary mechanism of action of neostigmine?
  - 1) - Blocks ACh receptors
  - 2) - Inhibits ACh release
  - 3) + Inhibits acetylcholinesterase
  - 4) - Activates nicotinic receptors
- 6) The primary elimination pathway for rocuronium is through:
  - 1) + Hepatic metabolism
  - 2) - Renal excretion
  - 3) - Pseudocholinesterase
  - 4) - Hofmann elimination
- 7) Which of the following is a significant risk when using succinylcholine?
  - 1) - Hypokalemia
  - 2) + Hyperkalemia
  - 3) - Bradycardia
  - 4) - Histamine release
- 8) Which of the following neuromuscular blocking agents cause fasciculations?
  - 1) + Succinylcholine
  - 2) - Rocuronium
  - 3) - Vecuronium
  - 4) - Both B and C
- 9) Succinylcholine should be avoided in patients with which of the following conditions?
  - 1) - Hypokalemia
  - 2) - Tachycardia
  - 3) - Asthma
  - 4) + Burns



- 10) Which of the following is a characteristic side effect of rocuronium?
- 1) - Histamine release
  - 2) - Bradycardia
  - 3) - Increased intracranial pressure
  - 4) ☒ Tachycardia
- 11) Which of the following non-depolarizing neuromuscular blockers undergoes Hoffman elimination and ester hydrolysis?
- 1) ☒ Atracurium
  - 2) - Rocuronium
  - 3) - Vecuronium
  - 4) - Pancuronium
- 12) What is the recommended treatment for bradycardia induced by succinylcholine?
- 1) - Sodium bicarbonate
  - 2) ☒ Atropine
  - 3) - Magnesium sulfate
  - 4) - Insulin and glucose
- 13) Succinylcholine causes fasciculations before muscle paralysis. What is the underlying cause of these fasciculations?
- 1) - Hypercalcemia
  - 2) ☒ Depolarization of the neuromuscular junction
  - 3) - Inhibition of acetylcholinesterase
  - 4) - Hyperkalemia
- 14) What is the most appropriate intervention for a patient experiencing malignant hyperthermia after receiving succinylcholine?
- 1) - Administration of sodium bicarbonate
  - 2) ☒ Rapid cooling and administration of dantrolene
  - 3) - Intravenous fluids and vasopressors
  - 4) - Increased oxygen administration and deep sedation
- 15) What effect does succinylcholine have on heart rate?
- 1) - It causes a sustained increase in heart rate
  - 2) ☒ It causes bradycardia
  - 3) - It has no effect on heart rate
  - 4) - It causes a variable heart rate response
- 16) Which of the following factors may prolong the effects of atracurium?
- 1) - Hyperkalemia
  - 2) - Alkalosis
  - 3) ☒ Hypothermia
  - 4) - Hyperthyroidism
- 17) Which of the following side effects is most commonly associated with atracurium administration?
- 1) - Tachycardia
  - 2) ☒ Bronchospasm
  - 3) - Hypertension
  - 4) - Hypoglycemia
- 18) Which of the following conditions may reduce the metabolism of atracurium?
- 1) - Hypercapnia
  - 2) - Renal failure
  - 3) - Hypotension
  - 4) ☒ Liver failure
- 19) Which of the following is a major metabolite of atracurium?



- 1) - Suxamethonium
  - 2) ☒ Laudanosine
  - 3) - Norepinephrine
  - 4) - Acetylcholine
- 20) What is the mechanism of reversal for atracurium-induced neuromuscular blockade?
- 1) ☒ The effects reverse spontaneously once the drug is eliminated
  - 2) - The drug can be reversed with a specific antidote
  - 3) - Reversal requires the use of neostigmine alone
  - 4) - Reversal requires the combination of atropine and neostigmine
- 21) Which of the following can enhance the effects of atracurium?
- 1) ☒ Calcium channel blockers
  - 2) - Acetylcholinesterase inhibitors
  - 3) - Proton pump inhibitors
  - 4) - Alpha-adrenergic blockers
- 22) Which part of a local anesthetic molecule determines its classification as an ester or an amide?
- 1) - Lipophilic group
  - 2) - Hydrophilic group
  - 3) ☒ Intermediate chain
  - 4) - Protein binding site
- 23) What is the main factor influencing the onset of action of local anesthetics?
- 1) - Lipid solubility
  - 2) ☒ pKa of the drug
  - 3) - Protein binding
  - 4) - Dose administered
- 24) What is the primary mechanism of action of local anesthetics?
- 1) - Blockade of potassium channels
  - 2) - Inhibition of calcium influx
  - 3) ☒ Blockade of sodium channels
  - 4) - Enhancement of GABA receptors
- 25) What is the advantage of adding epinephrine to a local anesthetic?
- 1) - Increases lipid solubility
  - 2) ☒ Reduces systemic absorption
  - 3) - Shortens onset time
  - 4) - Prevents allergic reactions
- 26) What is the primary disadvantage of bupivacaine over ropivacaine?
- 1) - Duration of action
  - 2) ☒ Cardiotoxicity
  - 3) - Faster onset
  - 4) - Increased potency
- 27) What is the treatment for bupivacaine-induced cardiotoxicity?
- 1) - Diazepam
  - 2) - Sodium bicarbonate
  - 3) ☒ Intravenous lipid emulsion
  - 4) - Atropine
- 28) What is a serious potential side effect of metoclopramide with prolonged use?
- 1) - Hepatotoxicity.
  - 2) ☒ Tardive dyskinesia.
  - 3) - Severe diarrhea.
  - 4) - Bradycardia.



- 29) Why are PPIs superior to H2 antagonists for the treatment of GERD?
- 1) - They are less expensive.
  - 2) - They provide immediate symptom relief.
  - 3) ☒ They suppress acid production more effectively and for a longer duration.
  - 4) - They increase gastric motility.
- 30) Which of the following is a common side effect of chronic PPI use?
- 1) - Hypercalcemia.
  - 2) ☒ Osteoporosis.
  - 3) - Hepatic failure.
  - 4) - Hyperkalemia.
- 31) Which combination of drugs is most effective in preventing aspiration pneumonitis during anesthesia induction?
- 1) - Famotidine and diphenhydramine.
  - 2) - Omeprazole and sodium bicarbonate.
  - 3) ☒ Ranitidine and metoclopramide.
  - 4) - Antacids and H1 antagonists.
- 32) What is the most common side effect of ondansetron?
- 1) - Diarrhea
  - 2) ☒ QT interval prolongation
  - 3) - Hepatotoxicity
  - 4) - Nephrotoxicity
- 33) What is a common side effect of perioperative dexamethasone?
- 1) - Hypoglycemia
  - 2) ☒ Hyperglycemia
  - 3) - QT prolongation
  - 4) - Renal toxicity
- 34) Which of the following drugs would most likely be used to treat postoperative sedation following the administration of benzodiazepines?
- 1) - Naltrexone
  - 2) ☒ Flumazenil
  - 3) - Naloxone
  - 4) - Doxapram
- 35) Which of the following agents is most likely to cause respiratory depression when used in high doses?
- 1) - Doxapram
  - 2) - Naloxone
  - 3) ☒ Ketorolac
  - 4) - Clonidine