

AFYA UNLIMITED MCQs

CARDIOVASCULAR SYSTEM PHARMACOLOGY MCQS

1. A nurse realizes that patient X who is on amlodipine has ankle swelling. What should the nurse do?

- A. Stop drug immediately
- B. Advise leg elevation and notify provider
- C. Restrict salt severely
- D. Give potassium supplement

2. A nursing is teaching a patient captopril. The patient reports dizziness when rising or changing position. What is the nurse's PRIORITY teaching instruction?

- A. Increase water intake
- B. Rise slowly from sitting or lying
- C. Take with food
- D. Skip the evening dose

3. A nurse is about to administer metoprolol. However, on checking the patient's vitals, the nurse notes the heart is at 48 bpm. What is the best action?

- A. Administer and monitor
- B. Encourage fluids
- C. Hold dose and notify provider
- D. Give half-dose

4. A patient on digoxin calls the nurse and reports having yellow vision. What should the nurse do?

- A. Administer the next dose
- B. Assess digoxin level immediately
- C. Encourage oral fluids
- D. Administer analgesics

5. A patient on furosemide comes to the outpatient clinic and reports having muscle cramps. What lab should the nurse check FIRST?

- A. Sodium
- B. Glucose
- C. Potassium
- D. Calcium

6. A nurse is aware that a patient starting heparin requires monitoring of which labs?

- A. INR
- B. Platelets only
- C. aPTT
- D. Digoxin level

7. A client is on digoxin and the nurse on shift realizes that he has a potassium level of 2.9 mmol/L. What should be the priority nursing intervention?

- A. Give digoxin
- B. Hold digoxin
- C. Restrict potassium
- D. Give extra digoxin

8. A nurse reviews labs of Mr. Charles before administering lisinopril. Which value should alert the nurse?

- A. Creatinine 2.1 mg/dL
- B. BP 156/90
- C. HR 72
- D. K+ 4.1

9. After administration of nitroglycerin, a patient develops headache after. What's the best nursing response?

- A. Stop therapy
- B. Offer mild analgesic

- C. Reduce fluid intake
- D. Hold dose permanently

10. Patient M is on verapamil. He comes to the clinic complaining of constipation. What's the best nursing intervention?

- A. Lower dose independently
- B. Increase fiber and fluids
- C. Restrict fluids
- D. Encourage bed rest

11. A patient comes to the hospital and states, "I want to stop clonidine today." What's the nurse's best response?

- A. "That's safe to do."
- B. "Stopping suddenly can cause severe rebound hypertension."
- C. "Skip some doses first."
- D. "Switch to oral hydralazine immediately."

12. A physician wants to prescribe metoprolol. The nurse is aware that this medication is contraindicated in the following condition?

- A. Hypertension
- B. Asthma
- C. Palpitations
- D. Migraine

13. During a shift, the nurse notes that a patient on nitroprusside says that she has a headache. A few minutes later, the patient becomes confused and disoriented. What the main cause of this?

- A. Digoxin toxicity
- B. Cyanide toxicity
- C. Fluid overload
- D. Hyponatremia

14. When should the nurse indicate that metoprolol is effective?

- A. Increased HR
- B. Lower BP and controlled HR
- C. Increased chest pain and BP
- D. Bounding pulses

15. A patient develops persistent cough on Enalapril. What should the nurse expect?

- A. Increase potassium
- B. Switch to ARB
- C. Stop all antihypertensives
- D. Reduce dose only

16. The nurse knows that hydralazine causes reflex tachycardia. What drug may be added to counter these effects?

- A. Nitrate
- B. Beta-blocker
- C. Calcium supplement
- D. Potassium

17. A heart-failure patient on atorvastatin reports to the nurse that she has muscle pain. What action should the nurse do?

- A. Nurse should Ignore
- B. Check creatinine kinase level
- C. Encourage exercise
- D. Increase fluid restriction

18. Mr. Kinyanjui is on heparin and reports having abdominal pain. The nurse also notes that his labs show low platelets. This is likely to be?

- A. DVT
- B. Iron deficiency
- C. Heparin-induced thrombocytopenia
- D. Hypovolemia

19. Which patient statement about nitroglycerin is incorrect?

- A. "Store in dark bottle."
- B. "Take 3 doses 5 minutes apart."
- C. "Swallow tablets whole."
- D. "It may tingle under tongue."

20. A nurse is interpreting labs. Mr. X's labs show that he has a potassium level of 3.1 mmol/L How does the nurse interpret?

- A. It's concerning
- B. It's normal
- C. It's expected and harmless
- D. Requires fluid restriction

21. Before administering digoxin, the nurse notes the heart rate to 52 bpm. What's the best action?

- A. Go ahead and give dose
- B. Hold dose
- C. Give half-dose
- D. Document and give with food

22. A patient is on beta blockers. During ward rounds, the nurse notes that the patient has cold hands/feet. This is as a result of?

- A. Vasodilation
- B. Reduced cardiac output
- C. Tachycardia
- D. Fluid retention

23. Before administering hydrochlorothiazide, the nurse is aware which lab is essential?

- A. White Blood Cell count
- B. Sodium levels
- C. Amylase
- D. Bilirubin levels

24. Nurse Sham is giving teachings to a patient on clonidine. The nurse states that stopping clonidine abruptly will lead to?

- A. Bradycardia
- B. Rebound hypertension
- C. Hyperkalemia
- D. Sedation only

25. When applying a nitro ointment, the nurse should?

- A. Massage into the skin
- B. Apply on hairy areas
- C. Wear gloves
- D. Leave old patches on

26. The nurse is aware that this drug reduces blood pressure by acting centrally. Which drug is it?

- A. Labetalol
- B. Clonidine
- C. Enalapril
- D. Nifedipine

27. All of the following statements regarding angiotensin II are true EXCEPT?

- A. peptide hormone
- B. Angiotensin I is almost as potent as angiotensin II
- C. potent vasoconstrictor
- D. stimulates the secretion of aldosterone

28. The nurse is aware that following drug may produce tachycardia as a side effect. Which drug is it?

- A. Propranolol

- B. Losartan
- C. Enalapril
- D. Nifedipine

29. A teacher is explaining the role of diuretics in hypertension. What do you think is its role?

- A. They inhibit the adrenergic transmission
- B. They reduce blood volume and amount of Na⁺ ions in the vessel's endothelium
- C. They inhibit the rennin-angiotensin-aldosterone system
- D. None

30. A nursing is teaching nursing students about beta blockers. He asks the students, "the following agents are cardio-selective beta1-adrenoceptor-blocking drugs labelled for use in angina, EXCEPT?"

- A. Metoprolol
- B. Talinolol
- C. Atenolol
- D. Propranolol

31. The nurse is aware that these drugs are useful in the treatment of heart failure and hypertension. However, they can produce hyperkalemia and reduce salt and water retention are. Which drugs are these?

- A. Angiotensin converting enzyme inhibitors
- B. Vasodilators
- C. Angiotensin receptor blockers
- D. Digitalis

32. The action of an ACE inhibitor interrupts the RAAS mechanism, thereby producing which of the following?

- A. Reduced renal blood flow.
- B. Reduced sodium and water excretion.
- C. Increased peripheral vascular resistance.
- D. Increased sodium excretion and potassium reabsorption.

33. A nurse teaches students that a patient on carvedilol has blood glucose 2.8 mmol/L without tachycardia. What's the reason?

- A. Insulin resistance
- B. Beta-blocker masks hypoglycemia signs
- C. High cortisol
- D. Poor absorption

34. The nurse is aware that a patient on digoxin cannot be prescribed furosemide. This is because they are at high risk of?

- A. Hypertension
- B. Digoxin toxicity
- C. Hyperkalemia
- D. Edema

35. A patient is on warfarin. During the discharge teachings, the nurse asks the client to avoid garlic supplements. Why?

- A. It increases excretion of warfarin
- B. It increases bleeding
- C. It increases blood sugar
- D. It reduces absorption of warfarin

36. A med-surg nurse is expected to know the effect of nitrates. Which one is it?

- A. Increased afterload
- B. Decreased preload

- C. Increased contractility
- D. Hypertension

37. During a shift, a patient with heart-failure patient on digoxin reports to the nurse that he feels nausea and vomiting. What's the nurse's first action?

- A. Administer antiemetic
- B. Check the digoxin levels
- C. Give extra dose
- D. Increase fluids

38. A nurse teaches a patient on losartan that they should avoid which of the following food?

- A. Oranges
- B. Potassium supplements
- C. Bread
- D. Milk

39. A nurse is aware that the following drug is contraindicated in pregnancy?

- A. Methyldopa
- B. Labetalol
- C. ACE inhibitors
- D. Hydralazine

40. Ann is on warfarin. However, due to a road accident, she needs emergency surgery. Which of the following treatment reverses warfarin fastest?

- A. Vitamin K only
- B. Fresh frozen plasma
- C. Protamine sulfate
- D. Desmopressin

41. In what instance is hydralazine contraindicated?

- A. Tachycardia
- B. Bradycardia
- C. Edema
- D. Obesity

42. The following is a known adverse effect of statins?

- A. Constipation
- B. Muscle breakdown
- C. Hyperkalemia
- D. Tachycardia

43. This drug is known to cause angioedema?

- A. Labetalol
- B. Losartan
- C. Lisinopril
- D. Verapamil

44. A nurse is aware that the most appropriate action for the nurse to take before administering digoxin is?

- A. Monitor potassium level
- B. Assess blood pressure
- C. Evaluate urinary output
- D. Avoid giving with thiazide diuretic

45. When we say the action of a drug is positive inotropic, what does that mean?

- A. Decreased afterload
- B. Increases heart rate
- C. Increases the force of contraction
- D. Is used to treat CHF

46. Nurse Sarah just administered an ACE inhibitor to her client. Before ambulating the client for the first time after administration, the doctor should monitor for?

- A. Hypokalemia
- B. Irregular heartbeat
- C. Edema
- D. Hypotension

47. A nurse is reviewing on the potential side effects of Lasix with student nurses. Which of the following is a potential side effect of IV furosemide (Lasix)?

- A. Drowsiness
- B. Diarrhea
- C. Cystitis
- D. Hearing loss

48. A 50-year-old client is prescribed to take nitrate each day for his condition. you know the result of nitrate administration is?

- A. Decreased myocardial oxygen demand
- B. Increased myocardial oxygen demand
- C. Increased left ventricular end-diastolic volume
- D. Increased atrial pressure

49. Nurse Njeri notes that a patient on nitroglycerin infusion is becoming hypotensive. The nurse's FIRST action is to?

- A. Stop the infusion
- B. Increase IV fluids
- C. Place patient in Trendelenburg
- D. Notify the provider

50. A patient starting enalapril reports swelling of lips and difficulty breathing. What's the priority nursing action?

- A. Administer diphenhydramine
- B. Hold the drug and call RRT
- C. Provide oxygen at 2 L/min
- D. Give epinephrine IM

51. The nurse holds metoprolol when she finds which of the following?

- A. BP 118/80
- B. HR 54
- C. RR 12
- D. NA^+ 149

52. Digoxin is safest to administer when which electrolyte is within normal levels?

- A. Magnesium
- B. Potassium
- C. Sodium
- D. Phosphate

53. A patient is receiving dopamine at 15 mcg/kg/min. He suddenly develops chest pain. What's the priority action for the nurse?

- A. Stop infusion
- B. Reduce dose to 5
- C. Notify provider
- D. Give nitroglycerin

54. A patient has been on hydralazine for a long time. He comes to the outpatient department complaining of severe joint pain and fever. The nurse suspects?

- A. Drug-induced lupus
- B. Rhabdomyolysis
- C. Gout
- D. Viral illness

55. A nurse is teaching a patient taking atorvastatin. The nurse tells the client that if he sees dark urine and muscle pain, this could indicate?

- A. Expected effect
- B. Kidney stone
- C. Rhabdomyolysis
- D. Dehydration

56. A physician prescribes metoprolol to a patient. The nurse questions this prescription if the patient has?

- A. Migraine
- B. Heart block
- C. Essential tremor
- D. Tachycardia

57. The nurse is aware that if a patient on captopril develops a persistent dry cough, the best alternative drug would be?

- A. Metoprolol
- B. Losartan
- C. Nifedipine
- D. Hydralazine

58. Which drug is known to reduce preload MOST effectively?

- A. Nitroglycerin
- B. Dopamine
- C. Lisinopril
- D. Furosemide

59. A patient develops flushing and complains of dizziness shortly after the nurse administers IV adenosine. What's the best nursing action?

- A. Stop infusion immediately
- B. Reassure patient it is temporary

- C. Give atropine
- D. Place on high-flow oxygen

60. A nurse knows that heparin is preferred over warfarin in acute DVT. This is because?

- A. It is cheaper
- B. It has immediate anticoagulation
- C. It is oral
- D. It reverses faster

61. Which assessment must the nurse assess before administering verapamil?

- A. Lung auscultation
- B. Serum glucose
- C. Blood pressure
- D. Pain scale

62. The clonidine patch contains which instructions?

- A. Remove patch before bathing
- B. Apply over hair
- C. Do not stop abruptly
- D. Apply daily

63. The nurse knows that this drug is the most effective in managing Prinzmetal (vasospastic) angina?

- A. Propranolol
- B. Atenolol
- C. Diltiazem
- D. Digoxin

64. Among the following options, which drug is known to worsen peripheral edema?

- A. Diltiazem
- B. Ramipril

- C. Amlodipine
- D. Lisinopril

65. A 60-year-old woman with stable angina uses sublingual nitroglycerin at home for chest pain. She calls the clinic saying after three doses 15 minutes apart her chest pain persists and she feels lightheaded. Which of the following would be the best immediate nursing advice?

- A. Take another nitroglycerin dose and lie flat.
- B. Call emergency services immediately
- C. Drink a caffeinated beverage to raise blood pressure.
- D. Wait and rest

66. Patient M. is started on an ACE inhibitor. He develops a persistent nonproductive cough within 3 weeks and the doctor changes therapy to an angiotensin receptor blocker (ARB). What is the physiologic basis for the cough with ACE inhibitors and why is an ARB appropriate?

- A. ACE inhibitors increase bradykinin levels in the lung causing cough; ARBs do not increase bradykinin and therefore are less likely to cause cough.
- B. ACE inhibitors increase histamine release; ARBs block histamine.
- C. ACE inhibitors cause bronchospasm by blocking β -receptors; ARBs stimulate β -receptors.
- D. ACE inhibitors decrease lung compliance; ARBs restore compliance.

67. A patient who is receiving high-dose IV beta-blocker for perioperative hypertension suddenly becomes obtunded with a heart rate of 30b/min and hypotension that is unresponsive to fluids. The doctor prescribes IV glucagon. What is the pharmacologic rationale for glucagon in a beta-blocker overdose?

- A. Glucagon is a beta-adrenergic agonist that increases HR.
- B. Glucagon increases intracellular cAMP via a non- β -adrenergic receptor mechanism, thereby improving heart rate and contractility independent of β -receptors.
- C. Glucagon binds to beta-receptors and displaces the blocker.
- D. Glucagon increases insulin release to stabilize myocardium.

68. The nurse is aware that all of the following are recommended at the initial stages of treating heart failure EXCEPT?

- A. Reduced salt intake
- B. Verapamil
- C. ACE inhibitors
- D. Diuretics

69. Which is the most appropriate diuretic for treating acute pulmonary oedema?

- A. Thiazide diuretics
- B. Loop diuretics
- C. Potassium sparing diuretics
- D. Osmotic diuretic

70. A patient on chronic warfarin therapy is started on trimethoprim-sulfamethoxazole (TMP-SMX), for a UTI. Four days later the patient's INR is markedly elevated. What is the most likely interaction?

- A. TMP-SMX potentiates warfarin effect by inhibiting vitamin K production in gut
- B. TMP-SMX activates warfarin leading to decreased INR
- C. TMP-SMX has no interaction
- D. TMP-SMX increases warfarin clearance through the liver