Chapter 24, Adrenergic Blocking Drugs

1. A client with hypertension is prescribed clonidine. The nurse should question this order if which disorder is noted in the client's history?
   A) Active hepatic disease
   B) Active peptic ulcer
   C) Ulcerative colitis
   D) Mental depression

   Answer: A

   Rationale: The use of a centrally acting antiadrenergic drug is contraindicated in clients with active hepatic disease. The use of a centrally acting antiadrenergic drug is not contraindicated in clients with active peptic ulcer or ulcerative colitis. In clients with active peptic ulcer, ulcerative colitis, or mental depression, the use of peripherally acting antiadrenergic drug is contraindicated. It is also contraindicated if the client is using MAOIs.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 2
   Cognitive Level: Understand
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 297, Centrally and Peripherally Acting Antiadrenergic Drugs

2. A client with a cardiac problem is treated with beta-adrenergic blocking drugs. Which reaction should the nurse point out as a generalized reaction that impacts the body when a beta-adrenergic blocking drug is given to the client?
   A) Vomiting
   B) Hyperglycemia
   C) Nausea
   D) Vertigo

   Answer: D

   Rationale: The nurse should identify vertigo as the generalized reaction that impacts the body when a beta-adrenergic blocking drug is given to the client. Vomiting, nausea, and hyperglycemia are not generalized reactions; they are gastrointestinal reactions that are observed when the client is administered beta-adrenergic blocking drugs.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 2
   Cognitive Level: Understand
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 295, Beta-Adrenergic Blocking Drugs

3. A client who is receiving a beta blocker tells the nurse about also taking ibuprofen for arthritis pain. The nurse would be alert for which reaction?
   A) Decreased effect of the beta blocker
   B) Increased risk of bradycardia
   C) Increased risk of paradoxical hypertensive effect
   D) Increase risk of hypotension

   Answer: A

   Rationale: The nurse should monitor for the decreased effect of the beta blocker in the client who is receiving a beta blocker along with NSAIDs. The nurse does not need to monitor for increased risk of bradycardia and paradoxical hypertensive effect or decreased risk of hypotension. There is an increase in the risk of paradoxical hypertensive effect when a beta-adrenergic blocking drug is administered with clonidine. There is an increase in the risk of bradycardia when a beta-adrenergic blocking drug is administered with antidepressants. There is an increased risk of hypotension when a beta-adrenergic blocking drug is administered with loop diuretics.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 295, Beta-Adrenergic Blocking Drugs

4. A nurse is caring for a client who has been prescribed propranolol for angina. After administering the drug, which action would the nurse do?
   A) Ask about relief of symptoms and record responses on the chart.
   B) Determine signs of infection in the client.
   C) Monitor for sudden decrease in urine output.
   D) Monitor for sudden increase in intraocular pressure.

   Answer: A

   Rationale: The nurse should ask about the relief of symptoms and record the responses on the client's chart. Determining the signs of infection in the client is part of the nurse's preadministration assessment, not the ongoing assessment. The nurse does not need to monitor the client for a sudden decrease in urine output and a sudden increase in intraocular pressure for a client receiving propranolol therapy for angina.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 3
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Reduction of Risk Potential
   Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 299, Ongoing Assessment

5. A nurse is preparing to administer propranolol to a client for the treatment of cardiac arrhythmias. The nurse checks the client's apical pulse rate and blood pressure before administration and notes that the pulse rate is 58 bpm. Which action would the nurse prioritize?
   A) Provide proper ventilation to the client.
   B) Delay drug administration for some time.
   C) Withhold the drug and contact health care provider.
   D) Immediately give oxygen via face mask.

   Answer: C

   Rationale: The nurse should withhold the drug and contact the primary health care provider if the pulse rate of the client is below 60 bpm. Providing proper ventilation to the client, delaying drug administration for some time, or providing oxygen support to the client would be inappropriate for this client.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 5
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Reduction of Risk Potential
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 300, Ineffective Tissue Perfusion: Peripheral

6. A client with Parkinson disease has been using levodopa. The client is now prescribed labetalol for hypertension. Which finding should the nurse prioritize if noted on assessment?
   A) Decreased effect of levodopa
   B) Increased effect of adrenergic blocker
   C) Increased risk of levodopa toxicity
   D) Decreased risk of psychotic behavior

   Answer: A

   Rationale: When levodopa and adrenergic blockers are administered together, the effect of the levodopa is decreased. Therefore, the client's Parkinson disease may not be controlled as effectively as before. The effect of the adrenergic blocker is not increased, nor is the risk for levodopa toxicity. The client is not experiencing psychotic behavior.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 297, Centrally and Peripherally Acting Antiadrenergic Drugs

7. A nurse is caring for a client with an arrhythmia. Which assessment would the nurse prioritize for a client with a life-threatening arrhythmia who is receiving an adrenergic blocking drug intravenously?
   A) Perform continuous cardiac monitoring.
   B) Obtain pulse rate readings every 2 to 3 hours.
   C) Assess respiratory rate every hour.
   D) Obtain blood pressure readings every 15 minutes.

   Answer: A

   Rationale: The client with a life-threatening arrhythmia may receive an adrenergic blocking drug, such as propranolol, by the intravenous (IV) route. When these drugs are administered IV, cardiac monitoring is necessary. Clients not in a monitored unit are usually transferred to one as soon as possible. When these drugs are administered for a life-threatening arrhythmia, it is important to monitor the client continually with cardiac, blood pressure, and respiratory rate monitoring frequently.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 5
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Reduction of Risk Potential
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 300, Ineffective Tissue Perfusion: Peripheral

8. A nurse is preparing to administer a transdermal adrenergic blocker. Which medication would the nurse be preparing to administer?
   A) Methyldopa
   B) Clonidine
   C) Guanabenz
   D) Guanfacine

   Answer: B

   Rationale: Clonidine is available in a transdermal formulation. Methyldopa may be administered IV or orally. Guanabenz and guanfacine are administered orally.
   Question Format: Multiple Choice
   Chapter: 24
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 304, Summary Drug Table

9. A client with hypertension has been receiving nadolol and is now reporting dizziness on standing. The nurse notes a significant drop in blood pressure when checking it lying, sitting, and standing. Which nursing diagnoses should the nurse conclude is most appropriate for this client's plan of care?
   A) Injury Risk

B) Ineffective Tissue Perfusion
C) Impaired Comfort
D) Decreased Cardiac Output

Answer: A

Rationale: The client is experiencing orthostatic hypotension, placing the client at risk for falls and injury, thus Injury Risk would be most appropriate. Ineffective Tissue Perfusion would be appropriate if the client was experiencing more rapid changes in blood pressure and/or changes in pulse and heart rate. Impaired Comfort would apply if the client was reporting other adverse reactions such as dry mouth or constipation. There is no information provided that would suggest decreased cardiac output.
Question Format: Multiple Choice
Chapter: 24
Learning Objective: 4
Cognitive Level: Analyze
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 300, Injury Risk

10. A client is asking how alpha adrenergic blocking medications work. Which is the nurse's best response?
A) "They relax the smooth muscle of blood vessels by vasodilatation."
B) "They cause vasoconstriction of the smooth muscle of blood vessels."
C) "They cause an increase in the heart rate."
D) "They decrease cardiac workload and oxygen consumption."

Answer: A

Rationale: Stimulation of alpha-adrenergic nerves results in vasoconstriction. If stimulation of alpha adrenergic nerves is interrupted or blocked, the result is vasodilatation. Alpha adrenergic blocking medications cause vasodilation by relaxing the smooth muscle of the blood vessels. Alpha adrenergic blocking medications do not increase the heart rate or decrease cardiac workload and oxygen consumption.
Question Format: Multiple Choice
Chapter: 24
Learning Objective: 1
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 295, Alpha-Adrenergic Blocking Drugs

11. Prior to administration of adrenergic blocking drug for hypertension, which should the nurse assess first?
A) Temperature
B) Blood pressure
C) Laboratory values

D) Pain assessment

Answer: B

Rationale: Establish an accurate database before any adrenergic blocking medication is administered for the first time. The client has a hypertensive disease and blood pressure and pulse should be taken on both arms in sitting, standing, and supine positions. Temperature, laboratory value and pain assessment are not warrant prior to the administration of an adrenergic blocking medication.
Question Format: Multiple Choice
Chapter: 24
Learning Objective: 3
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 299, Preadministration Assessment

12. After teaching a group of nursing students about sympatholytic drugs, the instructor determines that the teaching was successful when the students correctly choose which groups as an example? Select all that apply.
A) Angiotensin-converting enzyme inhibitors
B) Alpha-adrenergic blockers
C) Beta-adrenergic blockers
D) Angiotensin receptor blockers
E) Loop diuretics

Answer: B, C

Rationale: Alpha- and beta-adrenergic blockers are classified as sympatholytic drugs. Angiotensin-converting enzyme inhibitors suppress the renin-angiotensin-aldosterone system. Angiotensin receptor blockers block vasoconstriction effect of renin-angiotensin system and release of aldosterone. Loop diuretics inhibit reabsorption of sodium and chloride in the kidney. Loop diuretics should be used cautiously with beta-adrenergic blockers as there is an increased risk of hypotension with the combination.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 1
Cognitive Level: Analyze
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 293, Autonomic Terminology

13. A nurse would administer phentolamine cautiously to a client with which condition? Select all that apply.
A) Recent MI
B) Type 1 diabetes
C) Renal failure

D) Hepatic failure
E) Peripheral artery disease

Answer: A, C
Rationale: Phentolamine is an alpha-adrenergic blocker that should be used cautiously in clients who are pregnant or lactating, had a recent MI, or have renal failure or Raynaud disease. Beta-blockers and alpha/beta-adrenergic blockers are used cautiously in clients with diabetes. Clients with hepatic failure should be administered alpha/beta adrenergic blocking agents and centrally acting antiadrenergic agents cautiously. Elderly individuals with peripheral artery disease should receive beta-adrenergic blocking agents cautiously.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 295, Alpha-Adrenergic Blocking Drugs

14. A client with hypertension is to begin treatment with a beta-adrenergic blocker. The nurse predicts the client will potentially begin with which medication? Select all that apply.
A) Carvedilol
B) Propranolol
C) Metoprolol
D) Atenolol
E) Labetalol

Answer: B, C, D

Rationale: Propranolol, metoprolol, and atenolol are beta-adrenergic blockers, but carvedilol and labetalol are alpha/beta-adrenergic blockers.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 303, Summary Drug Table

15. A nurse prepares to administer atenolol to a client who has recently suffered an acute MI. The nurse anticipates the client will experience which changes related to this medication? Select all that apply.
A) Increase the heart's excitability
B) Decrease the heart's workload
C) Increase the heart's oxygen consumption
D) Decrease heart rate
E) Constrict blood vessels

Answer: B, D

Rationale: Atenolol is a beta-adrenergic blocking drug. Blockade of beta-adrenergic receptors results in decreased heart rate, dilation of blood vessels, a decrease in the heart's excitability, and a decrease in cardiac workload and oxygen consumption and provides membrane-stabilizing effects.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 295, Beta-Adrenergic Blocking Drugs

16. A nurse is preparing to administer propranolol to several clients. The nurse determines clients with which disorder necessitate close monitoring? Select all that apply.
    A) Asthma
    B) Hyperlipidemia
    C) Diabetes
    D) Peptic ulcer disease
    E) Migraine headaches

Answer: A, C, D

Rationale: A nurse should carefully observe clients with asthma (bronchospasm can result with the use of nonselective beta-blockers) and diabetes (beta blockers can mask the symptoms of hypoglycemia) during the use of propranolol, a nonselective beta blocker. The drug also should be used cautiously in clients with peptic ulcer disease. Beta blockers are used to treat migraine headaches. Hyperlipidemia is an adverse effect with various drugs; however, adrenergic-blockers are not one.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 295, Beta-Adrenergic Blocking Drugs

17. An elderly client is prescribed metoprolol. Which assessment finding should the nurse prioritize? Select all that apply.
    A) Hyperglycemia
    B) Heart failure
    C) Peripheral vascular insufficiency
    D) Confusion
    E) Worsening angina

Answer: B, C, D, E

Rationale: The nurse should observe elderly clients taking metoprolol for confusion, heart failure, worsening angina, shortness of breath, and peripheral vascular insufficiency. Hyperglycemia is a general adverse reaction which can occur at any age and not just the elderly.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 295, Beta-Adrenergic Blocking Drugs

18. The nurse is preparing a teaching plan for a client who is prescribed labetalol. Which potential reactions should the nurse point out? Select all that apply.
    A) Hypoglycemia
    B) Insomnia
    C) Drowsiness
    D) Tachycardia
    E) Fatigue

Answer: B, C, E

Rationale: Adverse effects from the use of alpha/beta-adrenergic blockers like labetalol include fatigue, dizziness, hypotension, drowsiness, insomnia, weakness, diarrhea, dyspnea, chest pain, bradycardia (not tachycardia), and skin rash. Labetalol should be used cautiously in clients with diabetes to avoid hypoglycemia.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 295, Alpha/Beta-Adrenergic Blocking Drugs

19. A nurse is caring for a client with benign prostatic hypertrophy (BPH). Which drug would the nurse expect to be prescribed as treatment? Select all that apply.
    A) Doxazosin
    B) Alfuzosin
    C) Tamsulosin
    D) Prazosin
    E) Carvedilol

Answer: A, B, C

Rationale: Doxazosin, alfuzosin, and tamsulosin are peripherally acting adrenergic blocking drugs used in the treatment of BPH. Prazosin is also a peripherally acting adrenergic blocking drug which is used in the treatment of hypertension. Carvedilol is an alpha/beta adrenergic blocking drug which is used to treat hypertension, heart failure, and left ventricular dysfunction.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 304, Summary Drug Table

20. A nurse is conducting discharge teaching with a client being discharged on clonidine. The nurse would instruct the client about which reaction as a possible adverse reaction? Select all that apply.
    A) Dry mouth
    B) Bradycardia
    C) Sedation
    D) Anorexia
    E) Diarrhea

    Answer: A, C, D

    Rationale: Adverse reactions associated with the use of centrally acting antiadrenergic drugs like clonidine include dry mouth, drowsiness, sedation, anorexia, rash, malaise, and weakness. Bradycardia is a noted adverse reaction of alpha/beta adrenergic blocking drugs, centrally and peripherally acting antiadrenergic drugs, and beta-adrenergic blocking drugs. Diarrhea can be noted as an adverse reaction to beta-adrenergic blocking drugs, alpha/beta adrenergic blocking drugs and peripherally acting antiadrenergic drugs.
    Question Format: Multiple Select
    Chapter: 24
    Learning Objective: 5
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Reduction of Risk Potential
    Integrated Process: Teaching/Learning
    Reference: p. 295, Beta-Adrenergic Blocking Drugs

21. A client with hypertension is prescribed acebutolol. The nurse should question this order if the client is also currently prescribed which drug? Select all that apply.
    A) Sertraline
    B) Phenelzine
    C) Naproxen
    D) Oxaprozin
    E) Fluoxetine

    Answer: C, D

Rationale: NSAIDs (naproxen and oxaprozin) can result in decreased effects of beta blockers such as acebutolol. MAOIs (phenelzine) and SSRIs (sertraline and fluoxetine) antidepressants can increase the effects of the beta-blocker as well as cause bradycardia.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 295, Beta-Adrenergic Blocking Drugs

22. The nurse is caring for a client who recently suffered an MI. When preparing to administer propranolol, the nurse would hold the dose and contact the health care provider if which assessment finding were noted? Select all that apply.
A) Pulse less than 60 bpm
B) Blood glucose less than 100 mg/dL
C) Irregular pulse
D) Systolic pressure less than 90 mm Hg
E) Diastolic pressure greater than 90 mm Hg

Answer: A, C, D

Rationale: The nurse should hold the dose of propranolol for clients experiencing any of the following: pulse less than 60 bpm, any irregularity in the client's heart rate or rhythm, or systolic pressure less than 90 mm Hg. The blood glucose level is not affected by propranolol. The diastolic pressure is not as concerning as is the systolic and would not a factor.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 4
Cognitive Level: Apply
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 300, Ineffective Tissue Perfusion: Peripheral

23. A group of nursing students are analyzing information about adrenergic blockers in preparation for an examination. The instructor determines the teaching is successful when the students correctly choose which drugs as alpha/beta adrenergic blocking drugs? Select all that apply.
A) Phentolamine
B) Bisoprolol
C) Nadolol
D) Carvedilol
E) Labetalol

Answer: D, E

Rationale: Carvedilol and labetalol are alpha/beta-adrenergic blockers. Phentolamine is an alpha-adrenergic blocker. Bisoprolol and nadolol are beta-adrenergic blockers.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 1
Cognitive Level: Remember
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 304, Summary Drug Table

24. A nurse is caring for a client with glaucoma. Which beta-adrenergic blocking drugs are used to treat glaucoma? Select all that apply.
    A) Timolol
    B) Labetalol
    C) Betaoxolol
    D) Carvedilol
    E) Propranolol

    Answer: A, B

    Rationale: Glaucoma is a condition of the eye in which narrowing or blockage of the drainage channels or canals of Schlemm between the anterior and posterior chambers happen. Beta-adrenergic blocking medications such as betaxolol and timolol are used to treat glaucoma. Labetalol, propranolol, and carvedilol are also beta-adrenergic blockers but are not used in the treatment of glaucoma.
    Question Format: Multiple Select
    Chapter: 24
    Learning Objective: 2
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Reference: p. 295, Beta-Adrenergic Blocking Drugs

25. A client taking prazosin is experiencing lightheadedness and dizziness when standing up. What are important to include in teaching the client about the medication? Select all that apply.
    A) Call the prescriber.
    B) Avoid long hot showers.
    C) Change positions slowly.
    D) Stop taking the medication.
    E) Take your blood pressure while sitting and then by standing.

    Answer: B, C

Rationale: Injury Risk is the nursing diagnosis with a client taking prazosin. The client is experiencing postural hypotension and should be taught how to rise slowly from sitting or lying position. Teaching the client to avoid long hot showers to minimize the vasodilation from the shower. The prescriber does not need to be called. The client should be instructed to continue to take the medication as prescribed. A nurse would assess orthostatics by taking the client's blood pressure while sitting and then by standing. The client should not be instructed to perform this measurement.
Question Format: Multiple Select
Chapter: 24
Learning Objective: 5
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 300, Ineffective Tissue Perfusion: Peripheral