Nursing Management of Patients with Dysrhythmias and Conduction Problems: NCLEX review Questions

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Answers and rationale to NCLEX style questions.

1. The nurse is serving as a preceptor for a new nurse on the unit. The preceptor is assessing the new nurse’s understanding of antidysrhythmic drugs. Which statements made by the new nurse about the use of antidysrhythmic drugs best demonstrates correct understanding?
   a. "It is best to use as low a dose as possible of the drugs to reduce the risk of dysrhythmias."
   b. "To be effective, these drugs must be used in high doses."
   c. "Many patients may have a hypersensitivity to these drugs."
   d. "These drugs can actually worsen existing dysrhythmias or cause new dysrhythmias."

Rationale: (D): Antiarrhythmic drugs are capable of causing new arrhythmias, as well as an exacerbation of existing arrhythmias. The nurse must report any new arrhythmia or exacerbation of an existing arrhythmia to the primary health care provider immediately.

2. A client’s ECG is consistent with complete heart block. Which of the following is the most appropriate nursing interventions for this client?
   a. Prepare to administer emergency cardiac medications.
   b. If the client is asymptomatic, no treatment is indicated.
   c. Talk with the client about placing a permanent pacemaker.
   d. Prepare to administer electrolyte replacements.
**Rationale: (A)** Complete heart block requires emergency interventions. It is associated with an acute myocardial infarction. Treatment is the same as for type II second-degree heart block. Medications such as atropine, dopamine, epinephrine, and isoproterenol are used. External pacing and transvenous pacing may be used. However the physician or cardiologist will discuss this with the client.

3. A cardiac nurse educator is reviewing the use of the fixed rate mode pacemaker with a group of newly hired nurses. Which of the following statements by a newly hired nurse indicates understanding of the review?

   a. “This means the pacemaker fires in an asynchronous pattern.”
   b. “This means the pacemaker fires only when the heart rate is below a certain rate.”
   c. “The pacemaker can automatically adjust to a client’s increased activity level.”
   d. “The pacemaker activity is triggered by heart muscle activity”

**Rationale: (A)** Fixed rate mode is asynchronous, meaning the pacemaker fires without regard for electrical activity in the heart. Demand mode detects an electrical impulse, and the pacemaker will then fire only if this impulse remains below a certain level. Fixed rate pacemaker mode means the rate does not change in relation to the client’s activity level. Fixed rate mode means the pacemaker fires without regard for electrical activity in the heart.

4. The nurse is assessing a patient admitted with a heart block. When placed on a monitor, the patient’s electrical rhythm displays as progressively longer PR durations until there is a nonconducted P wave. Which type of heart block does the nurse expect that this patient has?

   a. First degree
b. Second degree, type I  
c. Second degree, type II  
d. Third degree  

**Rationale: (B)**: In first-degree heart block, the PR is constant but greater than 0.20 seconds. Second-degree AV block, type II has a constant PR interval and the presence of more P waves than QRS complexes. Third-degree AV block presents with irregular PR intervals.  

5. Which of these instructions should the nurse include when educating a patient being discharged home after automatic Implantable Cardioverter Defibrillator (ICD)?  
   a. Continue to go through metal-detection devices at the airport  
   b. Call for assistance when blood pressure increases  
   c. Document events that trigger a shock sensation  
   d. Be compliant with all of the above-listed interventions  

**Rationale: (C)** The patient with an automatic ICD must document events that trigger a shock sensation. The patient must avoid magnetic fields such as metal-detection devices at the airport and should call for emergency assistance when feeling dizzy.  

6. The nurse is preparing a male patient to have a 12-lead ECG performed. When prepping the skin the nurse notices that the patient has abundant chest hair. What is the most appropriate nursing intervention to improve adhesion of the ECG leads?  
   a. Use alcohol swabs to cleanse the skin before applying the leads.  
   b. Clip the chest hair with the patient’s permission before applying the leads.  
   c. Apply the leads to the arms and legs only.  
   d. Reschedule the Electrocardiogram.
**Rationale:** *(B)* Alcohol should not be used to prep the skin because it increases the skin’s electrical impedance, thereby hindering the detection of the cardiac electrical signal. Clipping the hair would provide access to the skin to assist with adhesion. The ECG would not be performed correctly if the leads were only placed on the extremities, and there is no need to reschedule the ECG at this time.

7. The nurse is caring for a client who suddenly reported palpitations and dizziness the B/P is 100/48 mm/Hg. The rhythm displayed on strip below is displayed on the client’s monitor. What will be the most appropriate action by the nurse?

![ECG waveform](image)

- a. Prepare client for synchronized direct-current (DC) cardioversion.
- b. Administer adenosine and metoprolol (Lopressor) as ordered.
- c. Prepare and administer intravenous diltiazem (Cardizem) as ordered.
- d. Continue to monitor the client for hemodynamic instability.

**Rationale:** *(A)* The client is in Afib with wide QRS complex which may indicate Wolff-Parkinson-White (WPW) syndrome. Do not give digoxin or nondihydropyridine calcium channel blockers (eg, verapamil, diltiazem) to patients with atrial fibrillation and WPW because these drugs may trigger dangerous arrhythmia such as ventricular fibrillation.

8. A client displaying the dysrhythmia shown in strip below is diaphoretic and report feeling dizzy, B/P is 92/46mm/hg. The client may be managed using which of the following methods. **Select all that apply.**
a. Carotid sinus massage  
b. Oral Adenosine  
c. Cardioversion  
d. Intravenous Cardizem  
e. Vagal maneuver.

**Rationale: (A, C, D, E).** When episodes of supraventricular tachycardia (SVT) start suddenly and cause symptoms, vagal maneuvers such as (gagging, holding your breath and bearing down (Valsalva maneuver), or coughing) may be used. If carotis sinus message, and vagal maneuver does not work patient may be given beta-blockers, calcium channel blockers, other antiarrhythmic medicines, or digoxin. Cardioversion and ablation may be used treat persistent symptomatic SVT. Intravenous adenosine may be given.

9. The new graduate nurse on orientation to the medical unit calls you to the room of a client who is displaying the rhythm in below on the monitor. What is the most appropriate initial nursing action by the nurse?

a. Call for help and start chest compressions.  
b. Assess the client for respiration and pulse.  
c. Prepare to defibrillate the client.  
d. Prepare and administer prescribed antidysrhythmia drug.
**Rationale:** (B) The client is in Ventricular fibrillation. The nurse immediate check for pulse and respiration, if absent, call for help, start CPR and prepare to defibrillate as soon as defibrillator is available.

10. A client who reported to the emergency department with recurring syncopal episodes was placed on the monitor. The rhythm shown on strip below is displayed on the monitor. What is the correct interpretation of this rhythm and the most appropriate lasting treatment?

![EKG strip](image_url)

a. Supraventricular junctional rhythm with pacemaker as treatment.
b. 2nd Degree AV Block Type 2 (Mobitz) with pacemaker as treatment.
c. Third 3rd Degree AV Block with defibrillator treatment.
d. Sinus bradycardia with 1st Degree AV Block with atropine treatment.

**Rationale:** (B). 2nd degree AV block Type II (Mobitz) is a rhythm where the SA node releases regular stimuli that are conducted through the AV node without a delay (so it is regular), but occasionally an impulse from the SA node is not conducted, so there is no QRS complex to follow the P wave. (a non-conducted P wave). In 2nd Degree AV Block Type 2 (Mobitz) with pacemaker as treatment is the most appropriate response.

11. A client on the monitor is displaying the dysrhythmia shown in strip below. What is the correct interpretation of this rhythm?

![EKG strip](image_url)
a. Supraventricular junctional rhythm
b. 2nd Degree AV Block Type 2 (Mobitz)
c. Third Degree Heart Block
d. Sinus bradycardia with 1st Degree AV Block

**Rationale:** (C), in Third Degree Heart Block the SA node and AV node are working independently of each other, the P waves can fall anywhere.

12. A client is receiving a cardiac glycoside (digoxin) concurrently with verapamil. The nurse must report which of these symptoms to the physician? (Select all that apply.)
   a. Altered mental status.
   b. Blurred vision
   c. Increased respiratory rate
   d. Anorexia
   e. Constipation.

**Correct Answer:** A+B+D. Verapamil may cause an additive hypotensive effect when administered with other antihypertensives, alcohol, or the nitrates. Verapamil increases plasma digoxin levels and may cause bradycardia or CHF. Patients receiving a cardiac glycoside (eg, digoxin) concurrently with verapamil must be monitored for an increased risk of digitalis toxicity.

13. The nurse is providing patient education about digoxin (Lanoxin) to a 50-year-old woman. Which statement by the patient demonstrates a need for further teaching?
   a. "I should monitor my heart rate prior to taking this medication."
   b. "This medication prolongs life in women."
   c. "I will not see full benefits for 1 to 3 months."
   d. "This medication can cause electrolyte imbalance."

**Correct Answer:** (B).
14. A nurse prepares to administer a scheduled dose of verapamil (Calan) to a patient with atrial flutter. The nurse records a heart rate of 92/minute and a blood pressure of 110/76 mm Hg. In light of these findings, the nurse should
   A. recheck the vital signs in 30 minutes and then administer the dose.
   B. withhold the drug and notify the prescriber.
   C. administer the dose as prescribed.
   D. administer IV calcium gluconate.

Correct Answer: C.

15. After ICD placement a client complained of sudden onset of chest pain and shortness of breath. O2 saturation dropped from 98% on 2 liters of oxygen to 90%. Which of these is the most appropriate initial action by the nurse?
   a. Assess the breath sounds and chest movement.
   b. Notify the physician to obtain a chest x-ray.
   c. Assess incision site for redness, pain, drainage, or swelling
   d. Check the client’s ECG and blood pressure.

Correct Answer: (A). Rationale: The client is exhibiting signs of pneumothorax. The nurse should immediately assess the client’s breath sounds and chest movement, Monitor oxygen saturation. Part of the post procedure care includes obtaining a chest x-ray following the procedure to assess for lead placement, and rule out pneumothorax.

16. Which of these objective data is likely to be present in a client diagnosed with symptomatic bradycardia being prepared for pacemaker placement.
   A. Hypotension and Diaphoresis
   B. Anxiety and Diaphoresis
   C. Fatigue and Anxiety
D. Chest pain and dizziness

**Correct Answer:** A

17. After permanent pacemaker placement the nurse should instruct the client to do which of these? (Select all that apply).

   a. Carry a pacemaker identification card at all times.
   b. Avoid contact sports or heavy lifting for about 2 months.
   c. Avoid using the microwave to warm up foods.
   d. Expect dizziness, fainting, and weakness for a few days after the procedure.
   e. Take pulse daily at the same time.

**Correct Answer:** A+B+E

18. A client who has atrial fibrillation of unknown duration is scheduled for elective cardioversion. Which of these statements by the client will require follow-up by the nurse?

   a. “The doctor will give me medicine to help me relax before the procedure.”
   b. “I may need to continue on blood thinner after the procedure.”
   c. “I have been taking my Coumadin for the past 3 weeks.
   d. “I took my digoxin 0.5 mg this morning.”

**Correct Answer:** (D) Rationale: Digoxin is held for 48 hrs prior to elective cardioversion.

19. A client admitted with atrial fibrillation would most likely be started on which of the following medications to reduce the risk of embolization?

   * A. Pradaxa (dabigatran)
   B. Flomax (tamsulosin)
   C. DDAVP (desmopressin)
   D. Effexor (venlafaxine)

**Correct Answer:** (A) Rationale: Dabigatran Indications—to reduce the risk of stroke/systemic embolization associated with non-valvular atrial fibrillation. DDAVP is used in the treatment of
diabetes insipidus. Venlafexine is an antidepressant and tamsulosin is an anti-adrenergic agent used for prostatic hyperplasia.

20. The nurse is providing care for a 64-year-old client on the telemetry unit whose heart rate suddenly jumps to 144 bpm. Telemetry shows supraventricular tachycardia and the client reports feeling a bit lightheaded and dizzy. The nurse attempts vagal stimulation without success and prepares to administer Adenocard (adenosine) 6 mg IV push. The nurse would expect which of the following to occur?

   a. A gradual slowing of the heart rate over the next 30 min with an end result of normal sinus rhythm and improved symptoms.
   b. Slowing of the tachycardia with an end rate between 100-120 bpm and improved dizziness within 5 min.
   c. Loss of consciousness for the client in preparation for electric shock/cardioversion.
   d. A short period of heart block or asystole immediately after injection followed by conversion to normal sinus rhythm.

Correct Answer: (D) Rationale: Adenosine Nursing Implications: Monitor heart rate frequently (every 15–30 sec) and ECG continuously during therapy. Short transient periods of 1st, 2nd, or 3rd degree heart block or asystole may occur following injection; usually resolves quickly due to short duration of adenosine. Once conversion to normal sinus rhythm is achieved, transient arrhythmias may occur but generally last a few seconds.

21. The nurse is preparing to provide Norvasc (amlodipine) to a 69-year-old patient with a history of multifocal premature ventricular contractions (PVCs). His cardiac monitor has shown normal sinus rhythm with rare PVCs for the past 24 hr. Which of the following assessment findings would cause the nurse to withhold the medication? Select all that apply.

   a. Blood pressure = 86/50
   b. Blood pressure = 112/68
   c. Pulse = 88 bpm
   d. Pulse = 48 bpm
22. The client is exhibiting asystole on the telemetry strip. Which intervention should the nurse implement? (Select all that apply).

a. Administer the atropine.
b. Assess the client’s apical heart rate.
c. Administer IV magnesium sulfate
d. Administer epinephrine
e. Initiate cardiopulmonary resuscitation.
f. Administer intravenous lidocaine.

Correct Answer: (A, B, D and E).

23. A client is going to undergo cardioversion. Which of the following should be included in the care of this client?

a. Provide oxygen therapy.
b. Prepare for discharge after the procedure.
c. Provide a sedative prior to the procedure.
d. Remove intravenous access device before the procedure.

Rationale: (C). The nurse assists with cardioversion by obtaining an ECG strip prior to, during, and after the procedure. Informed consent is obtained and IV access is confirmed before the procedure. Provide a sedative to the client prior to the procedure to minimize discomfort. Report any electrolyte imbalances to the physician. Remove all jewelry, oxygen, or other metallic objects from the client. Place conductive pads on the client. Assess after the procedure for emboli, respiratory depression, skin burns, or dysrhythmias.

24. The nurse is preparing to instruct a client about the implantable cardioverter/defibrillator. Which of the following should be included in this instruction?
a. Instruct on how the defibrillator stops heart attacks.
b. Instruct to obtain a medic alert bracelet.
c. Instruct that the device replaces the need for cardiac medications.
d. Instruct to phone the physician every 3 months.

**Rationale:** (B). Instruct to keep a copy of their ECG, device model number, and obtain a medic alert bracelet. Client education is extensive and is to include the difference between a heart attack and cardiac arrest. Also, the client should keep a log and be advised of when to contact the physician. Clients with this device need to avoid high magnetic fields because this might activate the device. Cell phones can interfere with the operation of all defibrillators if held closer than 6 inches from the pulse generator. Instruct to keep a copy of their ECG, device model number, and obtain a medic alert bracelet.

25. While caring for a client who is experiencing a postoperative hemorrhage, the healthcare provider notes the rhythm observed on the electrocardiogram (EKG) does not produce a pulse. Which actions should the healthcare provider initiate to resolve this client’s problem? (Select all that apply).

a. Defibrillation
b. Administration of IV crystalloid
c. Administration of epinephrine
d. Cardiopulmonary resuscitation (CPR)
e. Administration of vasoconstrictors
f. Synchronized cardioversion

**Rationale:** (B, C, D & E). The client is experiencing pulseless electrical activity (PEA). PEA is not a shockable rhythm. High-quality CPR should be started immediately. An important treatment for PEA is to address the underlying cause. The underlying cause of PEA in this client is hypovolemia, which can be treated with IV fluids and vasoconstrictors, along with CPR and epinephrine.

26. A client is being discharged after the insertion of a permanent pacemaker. Which statement made by the client indicates an understanding regarding appropriate self-care?

a. “Every morning I will perform arm and shoulder stretches.”
b. “Each day I’ll take my pulse and record it in a log.”
c. “I’ll have to get rid of my microwave oven.”
d. “I won’t be able to use my electric blanket anymore.

**Rationale:** (B) Initially, clients should limit arm and shoulder activity on the operative side to prevent dislodgment of the pacing leads. Microwave ovens and electric blankets will not adversely affect the pacemaker. Tracking one’s pulse can help the client know if the pacemaker is working properly.

27. The healthcare provider is caring for a client with a diagnosis of first-degree atrioventricular (AV) block. Which of these waveform patterns identified on the cardiac monitor is consistent with this arrhythmia?

   a. No association between the P waves and QRS complexes
   b. QRS complexes are dropped randomly
   c. Significant shortening of the PR interval
   d. Slowed conduction through the AV node

**Rationale:** (D). The three types of AV block involve a problem with impulse transmission between the atria and the ventricles. In first degree AV block, there is a delay in impulse conduction through the AV node. The PR interval represents the time it takes for the impulse to travel through the atria to the AV node, to the His-Purkinje system, and through the ventricles. If the impulse is delayed at the AV node, as with first-degree heart block, the PR interval will be prolonged.

28. The nurse is providing discharge instructions for a client going home on warfarin (Coumadin). Which of the following statements made by the client indicates a need for further teaching regarding warfarin?

   a. "I will avoid participating in heavy contact sports."
   b. "I will take aspirin if I get a headache."
   c. "I will use my electric razor when shaving."
   d. "I will contact my physician if I develop excessive bruising."
Answers and rationale to NCLEX style questions.

Dysrhythmias and Conduction Problems, Dysrhythmias, arrhythmias, nursing care of patient with Dysrhythmias, management of Dysrhythmia, NCLEX review questions, arrhythmia NCLEX questions,