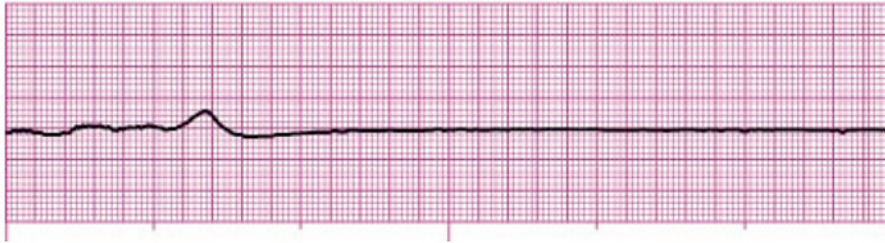


Instructions: Identify the choice that best completes the statement or answers the question.

Questions 1 and 2 pertain to the following scenario:

A 54-year-old man has experienced a cardiac arrest.

1. High-quality CPR is in progress. The cardiac monitor reveals the following rhythm.



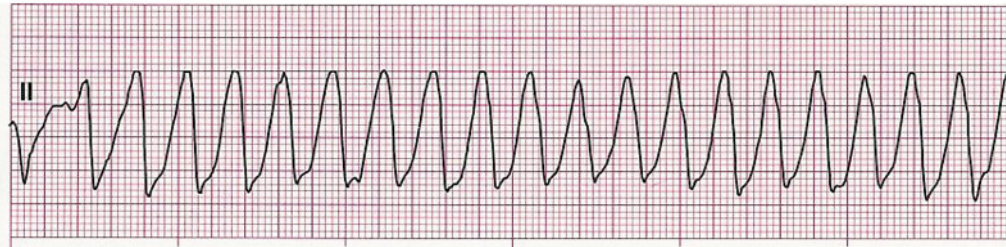
This rhythm is:

- Asystole.
 - Ventricular fibrillation.
 - Ventricular tachycardia.
 - Pulseless electrical activity.
2. Which of the following statements is true regarding management of this patient?
- Defibrillation should be performed as soon as a defibrillator is available.
 - 1 mg of atropine should be given every 3 to 5 minutes to a maximum of 3 mg.
 - Epinephrine or vasopressin should be administered as soon as vascular access is established.
 - Antiarrhythmics, such as amiodarone and lidocaine, should be administered before delivery of the first shock with 120 to 200 joules.
3. Which of the following statements is true about adult cardiac arrest?
- The Chain of Survival provides a strategy for achieving successful resuscitation.
 - Asystole and pulseless electrical activity are shockable cardiac arrest rhythms.
 - According to current resuscitation guidelines, you should begin CPR by assessing level of responsiveness, opening the airway, and then giving ventilations.
 - In witnessed adult cardiac arrest due to ventricular fibrillation, the patient's survival rate decreases about 50% per minute until defibrillation if no CPR is provided.

Questions 4 through 6 pertain to the following scenario.

An 81-year-old woman is complaining of a sudden onset of palpitations. She denies chest pain or shortness of breath. Her blood pressure is 134/78 and ventilations are 16. The patient's oxygen saturation level is 90% on room air.

4. The cardiac monitor reveals the following rhythm.



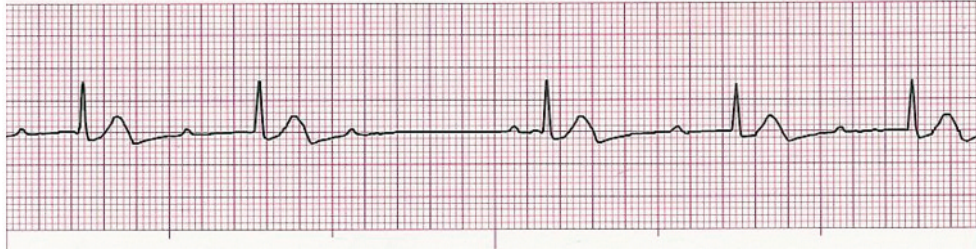
This rhythm is:

- a. Sinus tachycardia.
 - b. Supraventricular tachycardia.
 - c. Polymorphic ventricular tachycardia.
 - d. Monomorphic ventricular tachycardia.
5. Supplemental oxygen is being administered at 4 L/min by nasal cannula. An IV line is in place. This patient should be categorized as:
- a. Asymptomatic.
 - b. Symptomatic but stable.
 - c. Symptomatic and unstable.
 - d. Pulseless.
6. Based on the information provided, your best course of action will be to:
- a. Give 150 mg of amiodarone IV over 10 minutes.
 - b. Administer sedation and defibrillate immediately.
 - c. Begin CPR and prepare for transcutaneous pacing.
 - d. Give 2.5 to 5 mg of verapamil IV bolus over 2 minutes.

Questions 7 through 9 pertain to the following scenario.

A 72-year-old man is complaining of dizziness. His ventilations are unlabored at 14/min, breath sounds are clear, and his tidal volume is adequate.

7. The cardiac monitor reveals the following rhythm (lead II).



This rhythm is:

- a. Sinus arrhythmia.
 - b. Complete AV block.
 - c. Second-degree AV block type I.
 - d. Second-degree AV block type II.
8. The patient's blood pressure with this rhythm is 54/30. This patient should be categorized as:
- a. Asymptomatic.
 - b. Symptomatic but stable.
 - c. Symptomatic and unstable.
 - d. Pulseless.
9. Management of this patient should include:
- a. Administration of 0.5 mg of atropine IV push.
 - b. Administration of 1 mg of epinephrine IV push.
 - c. Immediate synchronized cardioversion with 50 J.
 - d. Continued monitoring and observation is all that is necessary at this time.

Questions 10 through 12 pertain to the following scenario.

A 49-year-old man with a history of “an irregular heartbeat” presents with an acutely altered mental status. The patient’s SpO₂ on room air is 98%. IV access has been established and the patient has been placed on a cardiac monitor.

10. The patient’s initial ECG revealed a sinus rhythm at 65 beats/min with a prolonged QT interval. Suddenly, the monitor alarm sounds and reveals the following rhythm.



This rhythm is:

- Polymorphic ventricular tachycardia.
 - Monomorphic ventricular tachycardia.
 - Atrioventricular reentrant tachycardia.
 - Atrioventricular nodal reentrant tachycardia.
11. Assessment of the patient reveals that a weak carotid pulse is present. He is unresponsive to voice commands but does respond to a painful stimulus. His blood pressure is 64/40. This patient should be categorized as:
- Asymptomatic.
 - Symptomatic but stable.
 - Symptomatic and unstable.
 - Pulseless.
12. Management of this patient should include which of the following?
- Fibrinolytic therapy, epinephrine, and amiodarone.
 - Defibrillation and possible administration of magnesium sulfate.
 - Synchronized cardioversion and administration of adenosine, beta-blockers or calcium channel blockers.
 - Transcutaneous pacing and administration of amiodarone or procainamide.
13. What is the most common cause of a stroke?
- A thrombus.
 - Cerebral vasospasm.
 - Cerebral hemorrhage.
 - Dissecting cerebral aneurysm.
14. If a patient presents with symptoms of a stroke, the time of onset of symptoms is defined as the time:
- Of awakening.
 - The patient retired for sleep.
 - The patient was last known to be symptom-free.
 - The patient was last seen by his health care provider.

15. The National Institute of Neurological Disorders and Stroke (NINDS) has established recommended target times for hospitals receiving acute stroke patients. A brain computed tomography (CT) scan should be obtained within _____ of the patient's arrival.
- 10 minutes
 - 25 minutes
 - 45 minutes
 - 60 minutes

Questions 16 through 19 pertain to the following scenario.

A 78-year-old woman is unresponsive and apneic. A strong pulse is present at a rate of about 70 beats/min.

16. Your best course of action at this time will be to:
- Begin chest compressions.
 - Insert a Combitube or King airway.
 - Begin ventilating with a bag-mask device.
 - Insert a tracheal tube or laryngeal mask airway.
17. When an adult requires rescue breathing (assisted ventilation) before placement of an advanced airway, the correct rate of ventilations is 1 breath every:
- 3 to 5 seconds (12 to 20 ventilations/minute).
 - 5 to 6 seconds (10 to 12 ventilations/minute).
 - 6 to 8 seconds (7 to 10 ventilations/minute).
 - 10 to 15 seconds (4 to 6 ventilations/minute).
18. A tracheal tube has been placed. You note that you are encountering no resistance but there is an absence of chest wall movement when ventilating with a bag-valve device. You are unable to auscultate breath sounds on either side of the chest. What is the most likely cause of this situation?
- Esophageal intubation.
 - A mucus plug in the tracheal tube.
 - Left primary bronchus intubation.
 - Right primary bronchus intubation.
19. Which of the following is preferred for confirmation and monitoring of tracheal tube placement?
- Pulse oximetry.
 - Waveform capnography.
 - Presence of water vapor in the tube.
 - Gastric insufflation sounds over the stomach.
20. An oral airway:
- Can only be used in spontaneously breathing patients.
 - May result in an airway obstruction if improperly inserted.
 - Is usually well tolerated in responsive or semi-responsive patients.
 - Should be lubricated with a petroleum-based lubricant before insertion.

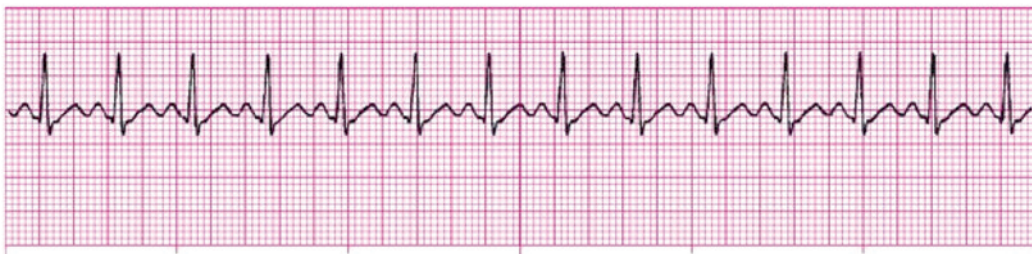
21. Your patient reportedly overdosed on a tricyclic antidepressant. Assessment reveals the patient is responsive only to painful stimuli. She is breathing shallowly at a rate of 4 to 6 times per minute. Oxygen should be administered to this patient using a:
- Nasal cannula at 2 to 4 L/min.
 - Simple face mask at 4 to 6 L/min.
 - Nonrebreather mask at 10 to 15 L/min.
 - Bag-mask device with a reservoir at 10 to 15 L/min.

Questions 22 through 28 pertain to the following scenario.

A 64-year-old man is complaining of chest discomfort that has been present for 45 minutes. He rates his discomfort 10/10.

22. Which of the following statements is true?
- Oxygen should be administered by nonrebreather mask to all patients experiencing an acute coronary syndrome (ACS).
 - ST-segments should be monitored in all patients experiencing an ACS.
 - An initial 12-lead ECG should be obtained within 60 minutes of patient contact (prehospital) or 60 minutes of patient arrival in the emergency department.
 - Patients most likely to benefit from reperfusion therapy are those who show ST-segment depression or nonspecific ST- or T-wave changes on their ECG.
23. In an acute coronary syndrome, the zone of injury produces _____ in the ECG leads facing the affected area.
- ST segment elevation
 - ST segment depression
 - prolonged QT intervals
 - inverted (negative) P waves
24. Atypical symptoms or unusual presentations of acute coronary syndromes (ACSs) are more common in:
- Older adults, women, and diabetic individuals.
 - Men, older adults, and individuals who have liver disease.
 - Women, diabetic individuals, and individuals who have liver disease.
 - Men, patients who have a history of coronary artery disease, and patients who have a history of hypertension.
25. A 12-lead ECG has been obtained. ST elevation is observed in leads II, III, aVF, V₅ and V₆. These findings suggest an _____ myocardial infarction.
- Anterolateral
 - Anteroseptal
 - Inferolateral
 - Inferoseptal

26. Based on the 12-lead findings in the preceding question, which of the following statements is true?
- Your immediate priority should be to administer nitrates to address the patient's chest discomfort.
 - Use right chest leads to quickly rule out right ventricular infarction before giving medications for pain relief.
 - The patient has described his symptom as chest "discomfort" - not pain; therefore administration of medications for pain relief are unnecessary.
 - Tachycardias should be anticipated because increased sympathetic nervous system activity is common with this type of infarction.
27. Which of the following statements is true regarding the initial management of the patient with an acute coronary syndrome?
- Aspirin is effective for patients with STEMI but is ineffective for patients with NSTEMI.
 - Regardless of the infarct location, nitroglycerin can be safely administered for relief of associated chest discomfort.
 - Aspirin should be administered in suppository form (300 mg) for patients with a known or suspected acute coronary syndrome.
 - Assuming that vital signs are within normal limits, morphine is the preferred analgesic for patients with STEMI who experience persistent chest discomfort unresponsive to nitrates.
28. Which of the following statements is true regarding reperfusion therapy in the patient with an acute coronary syndrome?
- Currently, most U.S. hospital have percutaneous coronary intervention (PCI) capability.
 - When primary PCI is the chosen reperfusion strategy, the recommended time target is to perform the procedure with 3 hours of patient arrival.
 - When fibrinolysis is the chosen reperfusion strategy, the recommended time target is to give the fibrinolytic agent within 30 minutes of patient contact.
 - For patients with STEMI, fibrinolytic therapy is preferred if the patient presents between 12 and 24 hours after symptom onset.
29. A patient has experienced a cardiopulmonary arrest. The cardiac monitor displays the following rhythm (lead II).



High-quality CPR is in progress. Appropriate treatment for this patient should include:

- Vascular access, epinephrine, and atropine.
- Defibrillation, vascular access, epinephrine, and atropine.
- Transcutaneous pacing, and a search for the cause of the arrest.
- Vascular access, epinephrine, and a search for the cause of the arrest.

30. A 55-year-old woman is complaining of severe chest discomfort that has persisted after three doses of sublingual nitroglycerin. Moments after administration of morphine IV, her blood pressure dropped from 114/66 to 76/42 and her heart rate increased from 88 to 110 beats/min. The patient's breath sounds are clear. Her ECG shows a sinus tachycardia. Your next action should be to:
- Give another dose of sublingual nitroglycerin.
 - Perform immediate synchronized cardioversion with 50 J.
 - Perform vagal maneuvers and give adenosine 6 mg rapid IV push.
 - Give a fluid challenge of 250 to 500 mL of normal saline and reassess.

Questions 31 through 33 pertain to the following scenario.

A 57-year-old man is complaining of chest discomfort and difficulty breathing. He is disoriented and extremely anxious. Examination reveals bibasilar crackles, a weak carotid pulse, and a blood pressure of 60/30. His SpO₂ on room air is 86%.

31. Based on the information provided, this patient should be categorized as:

- Asymptomatic
- Symptomatic but stable
- Symptomatic and unstable
- Pulseless

32. The patient has been placed on oxygen and an IV has been established. The cardiac monitor displays the rhythm below.



This rhythm is:

- Sinus tachycardia.
 - Narrow-QRS tachycardia.
 - Polymorphic ventricular tachycardia.
 - Monomorphic ventricular tachycardia.
33. The patient's level of responsiveness is rapidly decreasing. Management of this patient should include:
- Giving sublingual nitroglycerin for pain relief.
 - Performing synchronized cardioversion starting with 50 J.
 - Giving 2.5 mg of verapamil slow IV bolus and reassessing the patient.
 - Performing CPR for 2 minutes and then performing synchronized cardioversion with 120 J.

34. Identify the correct initial energy settings for the management of an unstable patient in monomorphic ventricular tachycardia with a pulse.

- a. Defibrillate using 360 J (monophasic energy)
- b. Defibrillate using 120 to 200 J (biphasic energy)
- c. Perform synchronized cardioversion using 50 J initially (biphasic)
- d. Perform synchronized cardioversion using 100 J initially (biphasic)

35. A patient has experienced a cardiac arrest. Which of the following statements is correct?

- a. Begin single-rescuer bag-mask ventilation as soon as possible.
- b. The ratio of chest compressions to ventilations that should be delivered is 15:2.
- c. If an advanced airway is inserted, the patient should be ventilated at a rate of 8 to 10 breaths/minute.
- d. After insertion of an advanced airway, briefly pause chest compressions (about 3 to 4 seconds) to deliver 2 ventilations after every 30 chest compressions.