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Advanced Cardiovascular Life Support

Exam C

May 23, 2023

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Advanced Cardiovascular Life Support Exam C

(50 questions)

Please do not mark on this exam. Record the best answer on the separate answer sheet.

1. A responder is caring for a patient with a history of congestive heart failure. The patient is experiencing shortness of breath, a blood pressure of 68/50 mm Hg, and a heart rate of 190/min. The patient's lead II ECG is displayed here. Which best characterizes this patient's rhythm?

   A. Sinus tachycardia
   B. Perfusing ventricular tachycardia
   C. Unstable supraventricular tachycardia
   D. Stable supraventricular tachycardia

2. EMS providers are treating a patient with suspected stroke. According to the Adult Suspected Stroke Algorithm, which critical action performed by the EMS team will expedite this patient's care on arrival and reduce the time to treatment?

   A. Establish IV access
   B. Review the patient's history
   C. Provide prehospital notification
   D. Treat hypertension

3. For STEMI patients, which best describes the recommended maximum goal time for first medical contact–to–balloon inflation time for percutaneous coronary intervention?

   A. 150 minutes
   B. 90 minutes
   C. 180 minutes
   D. 120 minutes

4. Which best describes the length of time it should take to perform a pulse check during the BLS Assessment?

   A. 16 to 20 seconds
   B. 1 to 4 seconds
   C. 11 to 15 seconds
   D. 5 to 10 seconds

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5. You instruct a team member to give 1 mg atropine IV. Which response is an example of closed-loop communication?

   A. "I'll draw up 1 mg of atropine."
   B. "I'll give it in a few minutes."
   C. "Are you sure that is what you want given?"
   D. "OK."

6. What should be the primary focus of the CPR Coach on a resuscitation team?

   A. To ensure high-quality CPR
   B. To convey positive feedback
   C. To document CPR outcomes
   D. To resolve team arguments

7. Which is the recommended oral dose of aspirin for a patient with a suspected acute coronary syndrome?

   A. 350 to 650 mg
   B. 162 to 325 mg
   C. 81 mg
   D. 40 mg

8. A patient in stable narrow-complex tachycardia with a peripheral IV in place is refractory to the first dose of adenosine. Which dose would you administer next?

   A. 40 mg
   B. 20 mg
   C. 12 mg
   D. 3 mg

9. In addition to clinical assessment, which is the most reliable method to confirm and monitor correct placement of an endotracheal tube?

   A. Continuous waveform capnography
   B. Arterial blood gases
   C. Hemoglobin levels
   D. Chest radiography

10. How can you increase chest compression fraction during a code?

    A. Initiate intravenous or intraosseous access during the 2-minute cycle
    B. Charge the defibrillator 15 seconds before conducting a rhythm check
    C. Interchange the Ventilator and Compressor during a rhythm check
    D. Administer epinephrine during the 2-minute cycle

11. Your rescue team arrives to find a 59-year-old man lying on the kitchen floor. You determine that he is unresponsive. Which is the next step in your assessment and management of this patient?

    A. Check for a medical alert bracelet
    B. Apply the AED
    C. Check the patient's breathing and pulse
    D. Open the patient's airway

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12. Which of the following signs is a likely indicator of cardiac arrest in an unresponsive patient?

    A. Irregular, weak pulse rate
    B. Agonal gasps
    C. Slow, weak pulse rate
    D. Cyanosis

13. Which best describes this rhythm?

    A. Ventricular fibrillation
    B. Monomorphic ventricular tachycardia
    C. Polymorphic ventricular tachycardia
    D. Supraventricular tachycardia

Use this scenario to answer the next 6 questions:

A 45-year-old man had coronary artery stents placed 2 days ago. Today, he is in severe distress and is reporting "crushing" chest discomfort. He is pale, diaphoretic, and cool to the touch. His radial pulse is very weak, blood pressure is 64/40 mm Hg, respiratory rate is 28 breaths per minute, and oxygen saturation is 89% on room air. When applied, the cardiac monitor initially showed ventricular tachycardia, which then quickly changed to ventricular fibrillation.

14. On the basis of this patient's initial presentation, which condition do you suspect led to the cardiac arrest?

    A. Acute heart failure
    B. Acute coronary syndrome
    C. Supraventricular tachycardia with ischemic chest pain
    D. Acute ischemic stroke

15. In addition to defibrillation, which intervention should be performed immediately?

    A. Chest compressions
    B. Advanced airway insertion
    C. Vascular access
    D. Vasoactive medication administration

16. Despite 2 defibrillation attempts, the patient remains in ventricular fibrillation. Which drug and dose should you administer first to this patient?

    A. Lidocaine 1 mg/kg
    B. Atropine 1 mg
    C. Epinephrine 1 mg
    D. Amiodarone 300 mg

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17. Despite the drug provided above and continued CPR, the patient remains in ventricular fibrillation. Which other drug should be administered next?

    A. Atropine 1 mg
    B. Lidocaine 1 to 1.5 mg/kg
    C. Epinephrine 1 mg
    D. Magnesium sulfate 1 g

18. The patient has return of spontaneous circulation and is not able to follow commands. Which post–cardiac arrest care intervention do you choose for this patient?

    A. Extubate
    B. Administer epinephrine
    C. Initiate targeted temperature management
    D. Check the glucose level
    E.

19. Which would you have done first if the patient had not gone into ventricular fibrillation?

    A. Given atropine 1 mg
    B. Performed synchronized cardioversion
    C. Established IV access
    D. Obtained a 12-lead ECG

20. What is the recommended range from which a temperature should be selected and maintained constantly to achieve targeted temperature management after cardiac arrest?

    A. 32°C to 36°C
    B. 26°C to 28°C
    C. 35°C to 37°C
    D. 29°C to 31°C

21. To properly ventilate a patient with a perfusing rhythm, how often do you squeeze the bag?

    A. Once every 12 seconds
    B. Once every 10 seconds
    C. Once every 3 seconds
    D. Once every 6 seconds

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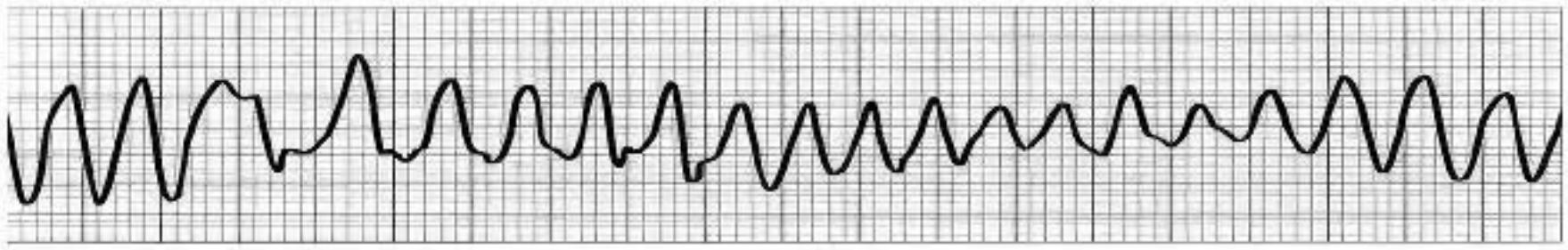
22. A patient has a witnessed loss of consciousness. The lead II ECG reveals this rhythm. Which is the appropriate treatment?



A. Synchronized cardioversion
B. Defibrillation
C. Administration of adenosine 6 mg IV push
D. Administration of epinephrine 1 mg IV push

23. What is an effect of excessive ventilation?

A. Increased venous return
B. Decreased intrathoracic pressure
C. Decreased cardiac output
D. Increased perfusion pressures

Use this scenario to answer the next 4 questions:

A 68-year-old woman presents with light-headedness, nausea, and chest discomfort. Your assessment finds her awake and responsive but appearing ill, pale, and grossly diaphoretic. Her radial pulse is weak, thready, and fast. You are unable to obtain a blood pressure. She has no obvious dependent edema, and her neck veins are flat. Her lung sounds are equal, with moderate rales present bilaterally. The cardiac monitor shows the rhythm seen here.

24. On the basis of this patient's initial assessment, which ACLS algorithm should you follow?

A. Adult Tachycardia With a Pulse
B. Adult Cardiac Arrest
C. Acute Coronary Syndromes
D. Adult Suspected Stroke

25. The patient's pulse oximeter shows a reading of 84% on room air. Which initial action do you take?

A. Check the pulse oximeter probe
B. Give oxygen
C. Perform bag-mask ventilation
D. Intubate the patient

26. After your initial assessment of this patient, which intervention should be performed next?

    A. Endotracheal intubation
    B. Immediate defibrillation
    C. Synchronized cardioversion
    D. Administration of amiodarone 150 mg IM

27. If the patient became apneic and pulseless but the rhythm remained the same, which would take the highest priority?

    A. Administer atropine 0.5 mg
    B. Perform defibrillation
    C. Administer amiodarone 300 mg
    D. Insert an advanced airway

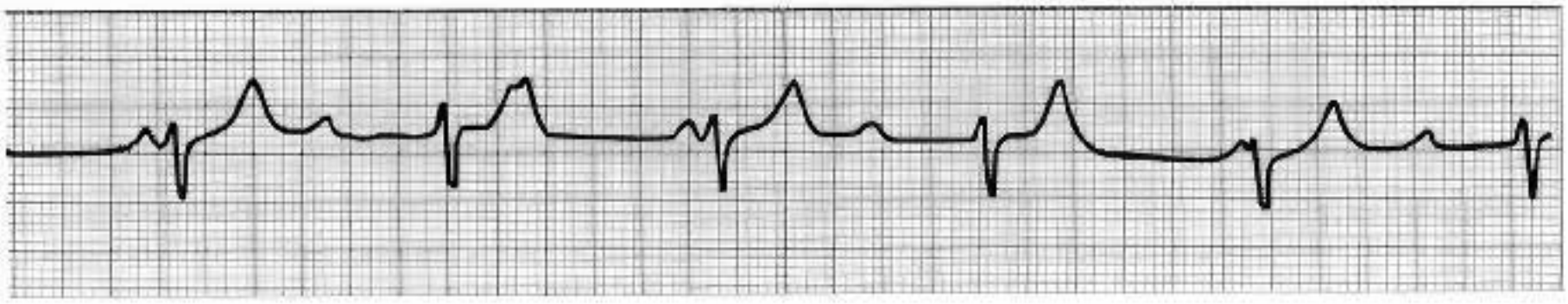
28. What is the minimum systolic blood pressure one should attempt to achieve with fluid administration or vasoactive agents in a hypotensive post–cardiac arrest patient who achieves return of spontaneous circulation?

    A. 90 mm Hg
    B. 85 mm Hg
    C. 80 mm Hg
    D. 75 mm Hg

29. Which is the primary purpose of a medical emergency team or rapid response team?

    A. Improving patient outcomes by identifying and treating early clinical deterioration
    B. Providing diagnostic consultation to emergency department patients
    C. Providing online consultation to EMS personnel in the field
    D. Improving care for patients admitted to critical care units

30. Which best describes this rhythm?



    A. Second-degree atrioventricular block type I
    B. First-degree atrioventricular block
    C. Third-degree atrioventricular block
    D. Second-degree atrioventricular block type II

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31. A team member is unable to perform an assigned task because it is beyond the team member's scope of practice. Which action should the team member take?

    A. Seek expert advice
    B. Ask for a new task or role
    C. Assign it to another team member
    D. Do it anyway

32. During post–cardiac arrest care, which is the recommended duration of targeted temperature management after reaching the correct temperature range?

    A. At least 36 hours
    B. At least 8 hours
    C. At least 24 hours
    D. At least 48 hours

33. Which is the recommended next step after a defibrillation attempt?

    A. Open the patient's airway
    B. Resume CPR, starting with chest compressions
    C. Check the ECG for evidence of a rhythm
    D. Determine if a carotid pulse is present

34. Which of these tests should be performed for a patient with suspected stroke as soon as possible but no more than 20 minutes after hospital arrival?

    A. Noncontrast CT scan of the head
    B. 12-Lead ECG
    C. Cardiac enzymes
    D. Coagulation studies

35. Which is an acceptable method of selecting an appropriately sized oropharyngeal airway?

    A. Estimate by using the formula weight (kg)/8 + 2
    B. Measure from the corner of the mouth to the angle of the mandible
    C. Estimate by using the size of the patient's finger
    D. Measure from the thyroid cartilage to the bottom of the earlobe

36. You are evaluating a 58-year-old man with chest discomfort. His blood pressure is 92/50 mm Hg, his heart rate is 92/min, his nonlabored respiratory rate is 14 breaths per minute, and his pulse oximetry reading is 97%. Which assessment step is most important now?

    A. Requesting laboratory testing
    B. Obtaining a 12-lead ECG
    C. Evaluating the P_{ETCO_2} reading
    D. Requesting a chest x-ray

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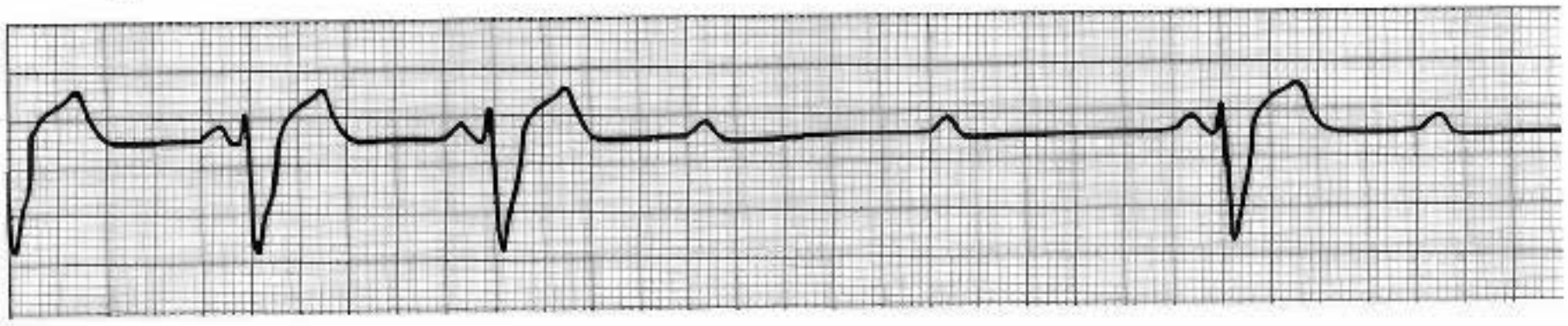
37. Three minutes into a cardiac arrest resuscitation attempt, one member of your team inserts an endotracheal tube while another performs chest compressions. Capnography shows a persistent waveform and a P_{ETCO_2} of 8 mm Hg. What is the significance of this finding?

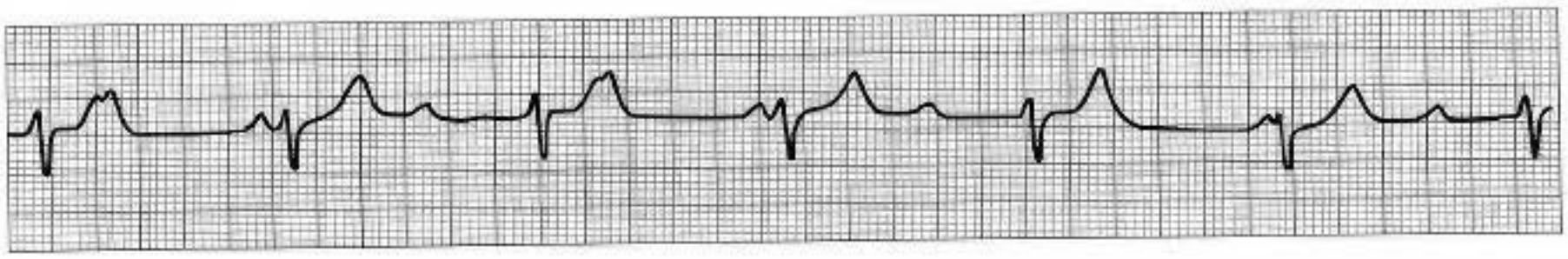
A. The patient meets the criteria for termination of efforts
B. The endotracheal tube is in the esophagus
C. The team is ventilating the patient too often (hyperventilation)
D. Chest compressions may not be effective

38. Which type of atrioventricular block best describes this rhythm?



A. Second-degree type II
B. Third-degree
C. First-degree
D. Second-degree type I

39. You have completed 2 minutes of CPR. The ECG monitor displays the lead II rhythm shown here, and the patient has no pulse. Another member of your team resumes chest compressions, and an IV is in place. Which do you do next?



A. Give epinephrine 1 mg IV
B. Start a dopamine infusion
C. Insert an advanced airway
D. Give atropine 0.5 mg

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40. Which best describes an action taken by the Team Leader to avoid inefficiencies during a resuscitation attempt?

    A. Clearly delegate tasks
    B. Assign most tasks to the more experienced team members
    C. Assign the same tasks to more than one team member
    D. Perform the most complicated tasks

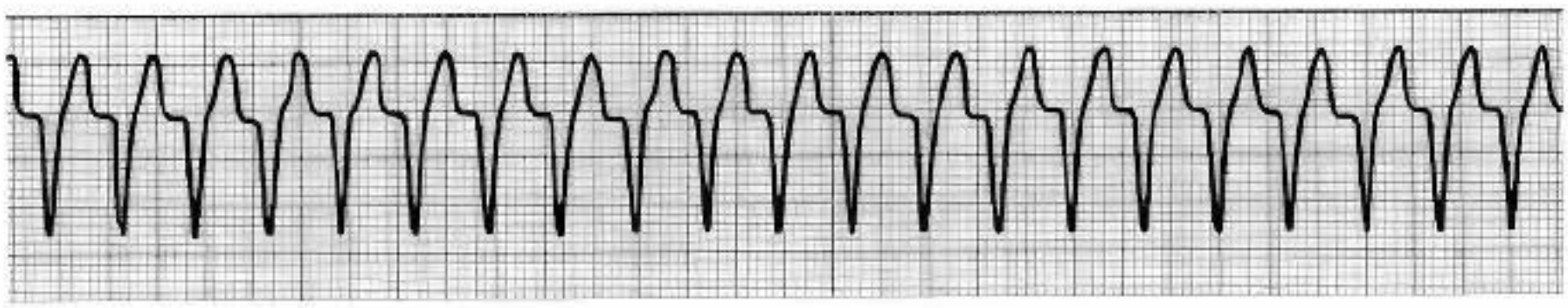
41. Which is the recommended first intravenous dose of amiodarone for a patient with refractory ventricular fibrillation?

    A. 300 mg
    B. 250 mg
    C. 150 mg
    D. 100 mg

42. Which is the maximum interval you should allow for an interruption in chest compressions?

    A. 15 seconds
    B. 25 seconds
    C. 20 seconds
    D. 10 seconds

43. A patient in respiratory distress and with a blood pressure of 70/50 mm Hg presents with the lead II ECG rhythm shown here. Which is the appropriate treatment?



    A. Performing defibrillation
    B. Performing vagal maneuvers
    C. Administering adenosine 6 mg IV push
    D. Performing synchronized cardioversion

44. You are caring for a patient with a suspected stroke whose symptoms started 2 hours ago. The CT scan was normal, with no signs of hemorrhage. The patient does not have any contraindications to fibrinolytic therapy. Which treatment approach is best for this patient?

    A. Wait for the results of the MRI
    B. Hold fibrinolytic therapy for 24 hours
    C. Give fibrinolytic therapy as soon as possible and consider endovascular therapy
    D. Order an echocardiogram before fibrinolytic administration

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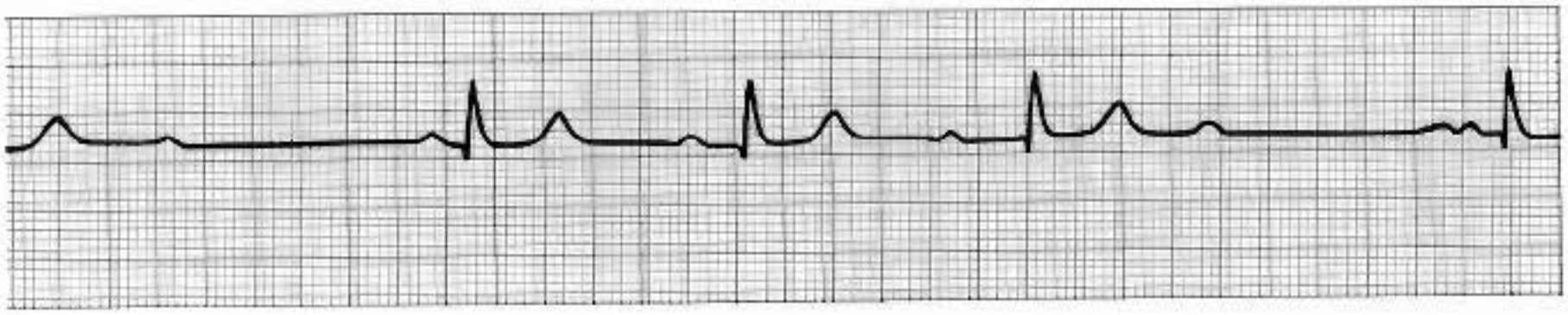
45. Which type of atrioventricular block best describes this rhythm?



A. First-degree atrioventricular block
B. Third-degree atrioventricular block
C. Second-degree atrioventricular block type II
D. Second-degree atrioventricular block type I

46. Your patient is in cardiac arrest and has been intubated. To assess CPR quality, which should you do?

A. Check the patient's pulse
B. Obtain a 12-lead ECG
C. Obtain a chest x-ray
D. Monitor the patient's P_{ETCO_2}

47. If a team member is about to make a mistake during a resuscitation attempt, which best describes the action that the Team Leader or other team members should take?

A. Reassign the team tasks
B. Conduct a debriefing after the resuscitation attempt
C. Remove the team member from the area
D. Address the team member immediately

48. A patient is being resuscitated in a very noisy environment. A team member thinks he heard an order for 500 mg of amiodarone IV. Which is the best response from the team member?

A. "I have an order to give 500 mg of amiodarone IV. Is this correct?"
B. "OK."
C. "Amiodarone 500 mg IV has been given."
D. "Are you sure?"

49. You are performing chest compressions during an adult resuscitation attempt. Which rate should you use to perform the compressions?

A. 80 to 90/min
B. Less than 80/min
C. More than 120/min
D. 100 to 120/min

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50. Which facility is the most appropriate EMS destination for a patient with sudden cardiac arrest who achieved return of spontaneous circulation in the field?

A. Acute rehabilitation care unit
B. Acute long-term care unit
C. Coronary reperfusion–capable medical center
D. Comprehensive stroke care unit