Northwest Community EMS System
March 2025 CE: Cardiac Dysrhythmias
Credit Questions

Name (Print):		EMS Agency:		
EMS Educator:				
Date submitted	Score:	☐ Acceptable ☐ Not acceptable	☐ Incomplete ☐ Incorrect answers	Date returned w/ feedback
Resubmission received:	Score:	☐ Acceptable ☐ Not acceptable	☐ Incomplete ☐ Incorrect answers	Date returned w/ feedback:
# CE Hours awarded:		Date		

This packet should take 2 hours to complete – which earns the equivalent of the 2-hour live CE class.

Sources of information/answers

March CE PowerPoint PDF, NWCEMSS SOPs, NWC EMSS Procedure Manual

1. List 5 of the most frequently missed procedures or skills documented during a cardiac arrest?

_____

_____

2. Which of the following is NOT a resuscitation practice associated with favorable neurological survival of OHCA?
   A. Use simulation to assess CPR competency
   B. Team arrest simulation for ongoing training
   C. Practice simulations at least every 6 months
   D. Achieve advanced airway in the first 3 minutes
   E. Utilize CPR feedback devices

3. For a patient that is bradycardic and hypotensive, if an IV is established, what is the indicated treatment?
   A. Atropine 1mg rapid IVP, repeat q3-5 min, max 3 mg
   B. Adenosine 6mg rapid IVP, followed by 12mg rapid IVP if rhythm persists
   C. Amiodarone 150mg mixed with 7ml normal saline, IVP over 10 minutes
   D. Synchronized cardioversion, starting at 50J

4. According to the NWCEMS SOPs what classification of medication is Atropine?
   A. Anticholinergic
   B. Antidysrhythmic
   C. Antihistamine
   D. Calcium channel blocker

5. Which of the following is NOT a contraindication for Atropine?
   A. 2° type II AV block
   B. 3° block
   C. 1° block
   D. Transplanted heart

6. True or False: Atropine MUST be initiated first in all emergent/critical bradycardic patients?

7. What is the difference between electrical capture and mechanical capture during the pacing procedure?

_____

_____

8. If the bradycardic patient is on beta blockers and is not responsive to medications or pacing, what is indicated?

_____

9. A patient presents in a narrow complex tachycardia, but is asymptomatic. List 5 potential underlying causes for a patient experiencing this dysrhythmia:

_____

_____

10. The patient in case study #2 is in SVT, and presents with the following vitals and symptoms:

Vitals: BP = 168/120, HR = 220, RR = 24, GCS = 15
Symptoms: chest tightness and difficulty breathing

What acuity level is this patient:

A. Low acuity (no cardiorespiratory compromise)
B. Low acuity to emergent (mild to moderate cardiorespiratory or perfusion compromise)
C. Critical (severe cardiorespiratory/perfusion compromise)

11. In a narrow complex tachycardia, what is the first thing to try while and IV is being established, before medication is administered?

_____

12. According to the procedure manual, for the vagal maneuver to be most effective, while the patient is blowing in the end of the syringe (for appx. 15 seconds), what else needs to take place?

A. Push Adenosine rapidly, followed by a flush
B. Have the patient “bear down” at the same time
C. Lower the head of the cot to a supine position and lift the legs to a 45°-90° to the torso

13. If the vagal maneuver is ineffective for SVT, what medication and dose is indicated next?

a. Adenosine 12mg rapid IVP followed by 20mL flush
b. Verapamil 5mg slow IVP over 2 min
c. Adenosine 6mg rapid IVP followed by 10mL flush
d. Atropine 1mg rapid IVP

14. What classification of medication is Adenosine? _____

15. Describe the mechanism of action of Adenosine (how it works) for SVT.

_____

_____

16. The patient in case study #2 undergoes 2 rounds of Adenosine and then becomes hypotensive (BP = 60/40). What treatment is indicated at this point?

a. Synchronized cardioversion
b. Defibrillation
c. Pacing
d. Verapamil

17. During synchronized cardioversion, the goal is to sync with what portion of the EKG signal?

    a. R wave
    b. T wave
    c. P-R interval
    d. ST segment

18. Why is it beneficial to deliver the energy (cardiovert) at the above-mentioned point?

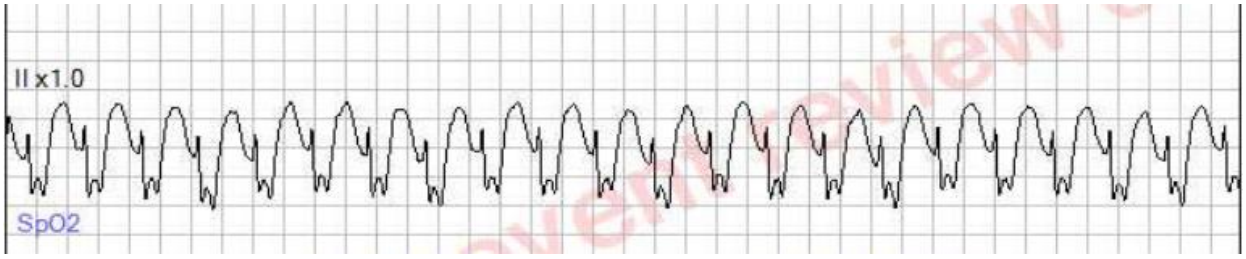
    _____

    _____

19. If the patient in case study #2 remained in SVT after 2 rounds of Adenosine and sustained a stable blood pressure (SBP > 90), what would be the indicated treatment at this point?

    a. Adenosine 12mg rapid IVP followed by a 10ml flush
    b. Verapamil 5mg slow IVP over 2 min (3 min if elderly)
    c. Magnesium 2g, mixed with 16ml NS, slow IVP over 10 min
    d. Atropine 1mg rapid IVP

20. The patient is case study #3 presents in the following rhythm. What rhythm is this?



    a. Sinus tach with elevated ST segment
    b. Polymorphic V-tach
    c. SVT
    d. Monomorphic V-tach

21. The patient in question 20 has the following vital signs: BP = 130/99, HR = 166, RR = 18, SpO2 = 98%. What treatment is indicated for the patient as this time?

    a. Amiodarone 150mg mixed with 7ml NS, slow IVP over 10 min
    b. Magnesium 2g mixed with 16ml NS, slow IVP over 10 min
    c. Norepinephrine 8 mcg/min
    d. Synchronized cardioversion

22. According to the NWCEMS SOPs, what classification of medication is Amiodarone?

    a. Anticholinergic
    b. Antidysrythmic
    c. Antihistamine
    d. Calcium channel blocker

23. What is the mechanism of action for Amiodarone (in V-tach with a pulse)?

    _____

    _____

24. What is the rationale for administering Amiodarone over 10 min. in the wide complex tachycardia SOP?

    a. Administration too rapidly can lead to significant hypotension. This rate allows the drug to sustain its therapeutic effect while minimizing side effects.
    b. Administering it over 10 min is easier than a rapid IV push.
    c. Administration too quickly can lead to blurred vision and headache.

25. What EKG rhythm is below?

    a. Monomorphic V-tach
    b. Sinus rhythm with a bundle branch block
    c. SVT
    d. Polymorphic V-tach (Torsade de Pointes)

26. What is the indicated treatment for a patient presenting in the above rhythm, with a pulse and SBP > 90?

    a. Amiodarone 150mg mixed with 7ml NS, IVP over 10 min.
    b. Adenosine 12mg rapid IVP, with a 10ml flush
    c. Magnesium 2g mixed with 16ml NS, IVP over 10 min
    d. Atropine 1mg rapid IVP

27. According to NWCEMS SOPs, why is placing and ice pack over the IV site indicated while administering Magnesium?

    a. It causes a rash in the extremity it's being administered into
    b. Administration can cause pain at the injection site
    c. To cool the magnesium as it enters the bloodstream
    d. To minimize swelling at the IV site

28. The patient in monomorphic V-tach presents as unstable (SBP < 90), what treatment is indicated first?

    a. Synchronized cardioversion
    b. Defibrillation
    c. Verapamil
    d. Magnesium

29. The patient in polymorphic V-tach presents as unstable (SBP < 90), what treatment is indicated first?

    a. Amiodarone x 2
    b. Synchronized cardioversion
    c. Magnesium
    d. Defibrillation

30 – 40 Match the medication with its description. Medications may be used more than once.

A. Atropine
B. Adenosine
C. Verapamil
D. Amiodarone
E. Magnesium

30. Calcium channel blocker _____

31. Used to treat symptomatic bradycardia _____

32. This medication is given for stable, monomorphic V-tach with a pulse _____

33. This medication works by temporarily blocking/slowing conduction through the AV node _____

34. Slows conduction through AV node to control vent. rate assoc. with rapid atrial rhythms _____

35. This medication can treat hypomagnasemia and acts as a membrane stabilizer _____

36. This medication is an antidysrhythmic, it delays repolarization prolonging action potential and slows ventricular conduction _____

37. The half life of this medication is about 5 seconds, making a flush after administration essential _____

38. This medication blocks parasympathetic, indirectly increasing HR and AV conduction _____

39. A cold pack is used at the site of injection due to pain/burning during administration _____

40. If after 2 doses of Adenosine (6mg and 12mg), the patient does not convert but remains stable (SBP >90), this medication is indicated next? _____