Northwest Community EMS System

April 2018 CE: ACS, 12 Leads and Dysrhythmia Management
Credit Questions

Name:	Date submitted:
EMS Agency/hospital:	Credit awarded (date):
EMSC/Educator reviewer:	Returned for revisions:
	Revisions received:

This packet should take 2 hours to complete – which earns you the equivalent of the 2 hour live CE class.
Sources: April CE handout; April CE slide deck (website); SOPs: ACS, Bradycardia, Narrow QRS Tachycardia, Wide Complex Tachycardia; Slide Deck on NWC EMSS Website

1. Which of the following patients with chest discomfort should receive ASA?

   A. 72/F pale & clammy, following a syncopal episode in church; sinus bradycardia on monitor
   B. 61/M driver involved in a high speed frontal impact, in which you note a bent steering wheel
   C. 69/F who took 4 chewable baby aspirin 1 hour ago when she started feeling poorly
   D. 22/F w/ pounding in her chest following an argument with her boyfriend

2. You are treating a 68 year old patient with chest pressure 8/10, nausea, and stable VS. The 12 Lead ECG done with the first set of vitals showed no acute abnormalities. Symptoms have not improved or changed since administration of ASA and 2 doses of sublingual NTG. Your ETA to the receiving hospital now is 11 min. What *two actions* should be taken?

   1. _____
   2. _____

3. To which of the following patients would it be acceptable to administer NTG sublingually?

   A. 52/M who took Viagra 4 hrs ago
   B. 68/M STE in Leads II, III and aVF, no STE in V4R, BP 124/78, HR 68
   C. 65/F with VS: BP 86/60, HR 88, RR 22, SpO2 92%, ETCO2 32, square
   D. 55/M with VS: BP 134/90, HR 110, RR 16, SpO2 95%,ETCO2 37, square

4. Why should the prehospital 12 Lead be carefully examined for acute changes by EMS, in addition to noting and reporting the computer (monitor) interpretation?

   _____

5. Describe steps to "proper skin prep' prior to acquiring a 12 Lead ECG

   _____

6. How should electrodes be stored, to ensure that gel is fresh and pliable?

   _____

7. What action should be taken after applying electrodes, to ensure that the gel penetrates the skin?

   _____

8. You note a great deal of artifact on your 12 Lead. Your elderly patient is complaining of being cold and is shivering. What intervention might result in less artifact?

   _____

9 In what position should the patient be placed to acquire a high quality 12 Lead, whenever possible?

   _____

10. Your elderly patient is very thin, cannot lie completely flat or fully straighten her arms or legs. What intervention should be attempted to reduce artifact related to her unintentional movements?

_____

11. Describe the placement of the V4 lead when preparing to acquire a V4R 12 Lead.

_____

12. List 5 possible indications for acquiring a V4R 12 Lead in patients with IWMI.

1. _____
2. _____
3. _____
4. _____
5. _____

13. Documenting the V4R 12 Lead: What documentation is necessary on the 12 Lead itself?

_____

. Which Monitor Power Tool keys should you use to document a V4R 12 Lead on the ePCR?

_____

14. List 3 ECG findings that are indicative of ischemia:

1. _____
2. _____
3. _____

Which of the above is an early & transient finding, possibly seen on the prehospital 12 Lead?

_____

15. Which component of the ECG is used as “baseline” for determining ST elevation/depression?

_____

16. Relative to the J-point, at what point is determination of STE / STD is measured?

_____

17. Complete the following with regards to normal (physiologic) and abnormal (pathologic) Q waves.

Q Wave Characteristics		
	Physiologic	**Pathologic**
Measurement: width		
Vertical Size Compared to QRS		
Corresponding computer interpretation on 12 Lead		

18. Complete the following with respect to inferior wall MI.

Leads: _____

Reciprocal leads: _____

Complications: _____

Commonly occurs with which if any other acute MI: _____

19. Complete the following with respect to anterior wall MI:

Leads: _____

Reciprocal leads: _____

Complications: _____

Commonly occurs with which if any other acute MI:_____

20. Complete the following with respect to lateral wall MI:

Leads: _____

Reciprocal leads: _____

Complications: _____

Commonly occurs with which if any other acute MI: _____

21. Complete the following with respect to posterior wall MI:

Leads: _____

Reciprocal leads: _____

Complications: _____

Commonly occurs with which if any acute other MI: _____

22. Complete the following with respect to septal MI:

Leads: _____

Reciprocal leads: _____

Complications: _____

Commonly occurs with which if any other AMI: _____

23. Regarding ST elevation, to be considered “diagnostic” for AMI, what 2 criteria must be met?

(1) _____

(2) _____

24. Answer the following with respect to 12 Lead #4 in the CE handout:

What do you notice about the direction of the QRS complexes in the lateral leads of this ECG?

_____

Based on their depth and width, what are these waves called? _____

What do these types of waves signify? _____

25. Answer the following with respect to 12 Lead #5 in the CE handout:

In what leads do you see ST elevation? _____

In what leads do you see ST depression? _____

What is your interpretation of this 12 Lead? _____

26. Answer the following with respect to 12 Lead #9 in the CE handout:

In what leads do you see ST elevation? _____

In what leads do you see ST depression? _____

What is your interpretation of this 12 Lead? _____

27. Answer the following with respect to 12 Lead # 10 in the CE handout:

In what leads do you see ST elevation? _____

In what leads do you see ST depression? _____

What is your interpretation of this 12 Lead? _____

28. Answer the following with respect to 12 Lead # 13 in the CE handout:

In what leads do you see ST elevation? _____

In what leads do you see ST depression? _____

What is your interpretation of this 12 Lead? _____

29. Which of the previous 12 Leads warrants a V4R 12 Lead?

_____

Read Scenario #1 in the CE handout and answer the following:

30. What is this patient's ECG rhythm? _____

What acute changes do you see on the initial 12 Lead?

31. Check all of the interventions that are indicated for this patient now. IV access has been completed.

- ☐ Valsalva maneuver
- ☐ Apply pacing pads
- ☐ Repeat 12L w/ V4R
- ☐ Administer 324 mg ASA
- ☐ Administer 1L NS rapidly
- ☐ Administer NTG 0.4 mg SL
- ☐ Administer Atropine 0.5 mg rapid IV
- ☐ Begin external cardiac pacing at 60 BPM

32. If the above patient were hypotensive, which should be corrected first? Circle one.

Blood pressure Heart rate

33. After the interventions selected above, the patient becomes unresponsive, skin is cool and clammy, and her rhythm and rate do not change. Which of the following is indicated first?

A. Transcutaneous pacing
B. Synchronized cardioversion
C. Norepinephrine drip 2 mL/min
D. Repeat IV Atropine to a total of 3 mg

Read Scenario #2 in the CE handout and answer the following:

34. What is your interpretation of his rhythm? _____

Do you see any acute changes on this patient's 12 Lead? _____

35. What intervention is indicated first, to slow his rhythm? Describe the procedure.

_____

_____

36. The patient does not improve, and he becomes responsive only to pain. What intervention is indicated now?

_____

Read Scenario #3 in the CE handout and answer the following:

37. What is your interpretation of his rhythm? _____

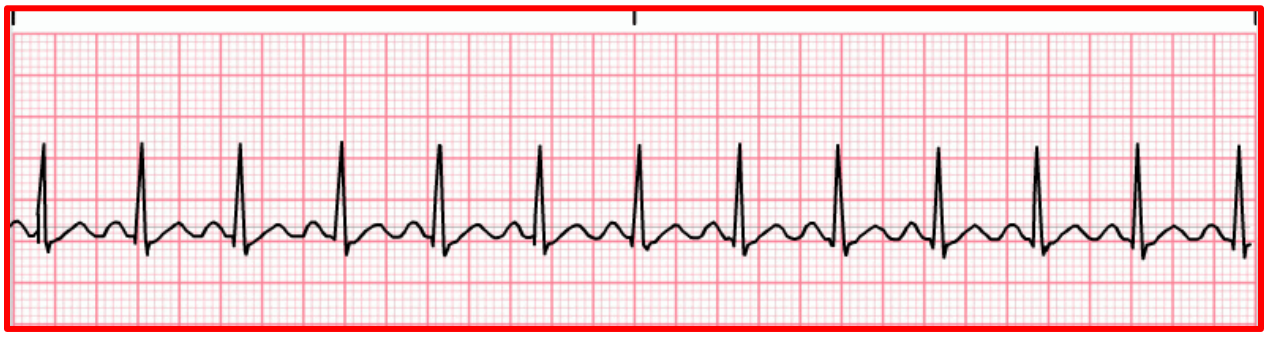
38. What intervention would you attempt, considering that this pt is still awake and talking to you?

_____

39. What preparations should you make in case the patient deteriorates during or after the above intervention?

_____

40. The patient becomes unresponsive. He is cardioverted into the following rhythm. He has a pulse and opens his eyes. VS are now stable and the patient no longer has symptoms.



What procedure must be done prior to beginning transport of this patient?

_____