Northwest Community EMS System
October 2024 CE: Stroke
Credit Questions

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

October CE PowerPoint PDF, NWCEMSS SOPs, NWC EMSS Continuing Education October 2024 Case Studies

1. Why do EMS systems and stroke-related organizations collect stroke performance data? (PPT slide #19)

_____

2. List four of the standards ("on-scene EMS tasks") on which EMS stroke care is evaluated. (PPT slide #21)

_____

_____

_____

_____

3. Why is it important to determine whether a patient with stroke symptoms is taking anticoagulants? Select all that apply. (PPT slide #22)

   ☐ Alerts EMS to a patient who may be at risk for stroke

   ☐ Major determinant in whether EMS follows stroke protocol

   ☐ May be a contraindication to tPA as method to treat ischemic stroke

4. Last known normal/well (LKN/LKW) time refers to which of the following? Select all that apply. (PPT slide #26)

   ☐ The time the patient went to bed

   ☐ Occurs before symptom onset/discovery

   ☐ Occurs after symptoms onset/discovery

   ☐ One minute before the time symptoms were noticed

   ☐ The time the patient was last known to be without symptoms as they present now

5. "Onset time" refers to which of the following? Select all that apply. (PPT slide # 26; SOP p 39)

   ☐ The time stroke symptoms were discovered

   ☐ One minute before the patient's stroke symptoms were noticed

   ☐ Earliest time the patient was known to have the new stroke symptoms

6. What impact does the size of IV catheter have on the quality of infused CT imaging? (PPT slide #28)

_____

7. What impact does the location (peripheral vs more distal venous access) have on rapidity of delivery of the contrast material to the target location? (PPT slide # 28)

_____

8. Which of the following must be corrected before determining that the stroke exam is valid and that symptoms are likely caused by stroke until proven otherwise? (PPT slides #29, 30)

   ☐ Hypoxia
   ☐ Head injury
   ☐ Dehydration
   ☐ Hypoglycemia

9. If a patient presents with symptoms suggestive of stroke, and no other causes have been identified, which of the following actions are appropriate? (PPT slides #30, 31, 32)

   ☐ Call a stroke alert
   ☐ Limit on-scene time to 10 minutes or less
   ☐ Document Primary Impression as “Stroke”
   ☐ Determine LKN and onset times if possible
   ☐ Obtain venous access w/ 18g in the forearm
   ☐ Attempt to obtain PMH and determine baseline status
   ☐ Document and report stroke assessment screening findings

10. EMS attempts to place an 18g catheter in a patient’s Rt antecubital site, but is unsuccessful. How and where should this be documented? (PPT slide #32)

    ☐ “IV attempt unsuccessful” in the narrative
    ☐ “IV attempt unsuccessful” In the “If no IV for a suspected stroke – Explain reason here” field of the Stroke Information Worksheet
    ☐ IV/IO vascular access power tool: Procedure – IV peripheral, Needle size-18ga, Site attempted – Rt antecubital, Procedure Successful? - No

11. EMS suspects a patient’s symptoms are likely due to a stroke. The patient is uncooperative and several attempts at venous access are unsuccessful as patient will not hold still. How and where should this be documented? List the appropriate option from question #10 above. (PPT slide # 32 & 33)

_____

12. Which of the following is/are true with regards to ischemic stroke? Select all that apply. (PPT slide #37)

    ☐ Symptoms may fluctuate / come and go
    ☐ Onset is often gradual, over as long as 12-24 hours
    ☐ Turbulent blood flow in large vessels may actually decrease flow
    ☐ Plaques or clots may travel from other areas of the body and obstruct flow in cerebral vessels

13. Which two characteristics are noted in hemorrhagic strokes but generally not in ischemic strokes, that may help providers to distinguish between possible hemorrhagic from ischemic stroke? (SOP p 38)

    (1) _____

    (2) _____

14. Where should a patient with symptoms suggestive of hemorrhagic stroke be transported, provided the destination can be reached in 30 min or less? (SOP p 39)

_____

15. Choose 2 areas of the brain supplied by the posterior circulation, and list the corresponding findings that may signal posterior circulation stroke. (PPT slides # 44 and 45)

Area: _____ S&S: _____

Area: _____ S&S: _____

16. Which of the following is/are reasons that make posterior circulation strokes difficult to diagnose? Select all that apply. (PPT slide 47)

☐ Symptoms are highly variable and inconsistent

☐ There is no assessment tool that has been found to accurately identify S&S for posterior stroke

☐ Because the posterior circulation serves so many different regions, the potential array of symptoms is diverse

17. What are the two criteria for a stroke-like event to be determined a “TIA”? (PPT slide #48)

_____

_____

18. Patients presenting with stroke symptoms that have subsided (suspicion for TIA) are evaluated in the same way as patients with acute symptoms. That includes sending the patient to CT scan as quickly as possible. What action should EMS consider prior to arrival that would help to expedite the rapid completion of the CT scan? (PPT slide #48)

_____

19. What anatomic area of the brain is directly served by the “Large vessels” (internal carotids, basilar, and vertebral arteries)? (PPT slide #52)

_____

20. LVO stroke involves loss of perfusion to large areas of the brain that are responsible for many “essential” functions. List three of those functions. (PPT slide #53)

_____ _____ _____

21-26. In the NWCEMS System, the BEFAST stroke screen is utilized to assess any patient experiencing a potential stroke. Please list the assessments/tests measured in each component of BEFAST: (SOP p 39)

B _____

E _____

F _____

A _____

S _____

27. What are the 5 D's of posterior/brainstem strokes? (SOP p 38)

_____

_____

_____

_____

_____

28. List 4 signs and symptoms of a hemorrhagic stroke: (PPT slide #41)

_____ _____

_____ _____

29. Complete the sentence: For every 15-minute reduction from stroke onset to EVT treatment, there is a: (PPT slide #55)

_____

_____

30. What are the 4 signs and symptoms of a large vessel occlusion that are highlighted in our system? (PPT slide #57)

_____ _____

_____ _____

31. Match the description with the type of aphasia: (A) Expressive or (B) Receptive (PPT slide #61)

_____ Can understand speech but difficulty speaking

_____ Cannot follow commands or understand written words

_____ Leaves out certain words

_____ Can speak but takes great effort

_____ Cannot understand words or recognize symbols

_____ Can speak fluently but will not make sense or lack meaning

32. What is the definition of agnosia? (PPT slide #64)

_____

33. What is the definition of neglect? (PPT slide #64)

_____

34. Which of these is NOT a finding for an LVO stroke: (SOP p 39; PPT slide #61)

A. Fixed gaze deviation

B. Inability to repeat the phrase "you can't teach an old dog new tricks"

C. Patient unable to recognize their own arm

D. Slurred speech

35. Circle the statements that must be true to warrant transport of a patient with stroke symptoms to a Comprehensive Stroke Center: (SOP p 39; PPT slide #71)
    a. Patient is presenting with S/S of an LVO or Hemorrhagic stroke
    b. Patient exhibits one-sided arm drift and slurred speech as their only findings
    c. Patient is expressing feeling unusually dizzy today and is slightly ataxic
    d. LKN time is less than 24 hours
    e. Patient is on a blood thinner
    f. Transport time to comprehensive stroke center is less than 30 min

36. There are many advantages a comprehensive stroke center offers compared to a primary stroke center. The definitive treatment they provide for an LVO stroke that is not available at a primary is: (PPT slide #72)

    _____

37. In the case study with the 67/M who fell: what symptom did he present with that was indicative of an LVO stroke? (PPT slide #73)

    _____

For questions 38-40, use the following scenario: EMS is dispatched at 10:15am to an office building for a 53/F, possibly having a stroke. Once on scene, co-workers state the patient was found semi-conscious in her office. They state she came in this morning alert, acting normal, but complaining of a horrible headache. They found her an hour later, hunched over her desk, moaning, so they called 911. As EMS obtains further info from co-workers, they note cigarettes nearby and medication bottles on her desk, labeled: Metoprolol and Coumadin. Vitals are obtained:

Vitals:	Stroke Screen:
BP = 168/104	B = not testable
HR = 90	E = not testable
RR = 20	F = obvious facial droop on one side
Sp02 = 96% RA	A = not testable
Glucose = 114	S = incomprehensible sounds
GCS = 8	T = LKN was 0900 this morning

38. Based on her symptoms, what kind of stroke is this patient having? (SOP p 38-39))
    a. Hemorrhagic b. Ischemic

39. What would be included in your care/treatment? Circle all that apply. (SOP p 38-39)
    a. Obtain blood glucose b. Call OLMC and notify of stroke alert
    c. Provide oxygen d. Start an 18g IV AC
    e. Administer bolus of 200cc normal saline f. Minimize scene time to 15 min
    g. Get a callback number of someone who knows the patient

40. The nearest Comprehensive stroke center is 15 min away. The nearest Primary stroke center is 5 min away. Which facility should this patient be transported to? (SOP p 39)
    a. Comprehensive b. Primary