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TO: ALL LUCAS COUNTY PARAMEDICS

FROM: Brent Parquette, NREMT-P
Lucas County EMS Continuing Education Administrator

RE: Continuing Education January 2012 – Geriatric Emergencies

“The graying of America”.Based upon population measurements, it is evident, that as a whole, the population of the United States is getting older. With an increase in age comes an increase in medical problems. EMS systems have begun to recognize a need for training to aid in providing quality medical care for older individuals. The emergency health-care provider must have insight into the changes that occur with the aging process and the special problems experienced by older adults. The geriatric patient can pose an assessment and treatment challenge to even the most seasoned EMS professional. It is important for us to provide quality assessment, treatment and transport for our geriatric patients. The month of January will be dedicated to a review of geriatric emergencies.

Attached please find a pre-test for you to complete before class attendance. Answers have been provided for your review.

I look forward to seeing all of you. If you have any questions or comments please feel free to contact me at 419-213-6508.

Review Questions

Geriatric Emergencies

1. Which of the following best describes changes in the respiratory system of the elderly patient?
 - a. Lung elasticity decreases
 - b. Vital capacity decreases
 - c. Respiratory muscle strength decreases
 - d. All of the above

2. Which of the following best describes changes in the cardiovascular system of elderly patients?
 - a. Left ventricular hypertrophy
 - b. Conduction system degeneration
 - c. Decreasing cardiac output
 - d. All of the above

3. Which of the following tend to complicate the assessment of the elderly?
 - a. The elderly often suffer more than one disease at a time
 - b. The primary problem often is different from the chief complaint
 - c. The patient's perception of pain may be diminished or absent
 - d. All of the above

4. Assessing an elderly female patient who presents with poor peripheral pulses, rales, and dependent edema may be difficult because:
 - a. Her presentation is consistent with congestive heart failure
 - b. Her signs and symptoms may be caused by the aging process
 - c. It is often difficult to distinguish acute from chronic problems
 - d. All of the above

5. Your patient who complains that the room is spinning, and is nauseated, pale, and sweating, may be suffering from:
 - a. Dementia
 - b. Delirium
 - c. Alzheimer's
 - d. Vertigo

6. Which of the following renders the elderly susceptible to making medication errors?
 - a. Forgetfulness
 - b. Limited income
 - c. Vision impairment
 - d. All of the above

Scenario for Question 7

Your patient is an 82-year-old woman who presents with some vague complaints about feeling weak and fatigued. She denies any chest pain. She has a long history of cardiac, respiratory, and diabetic problems. She takes a host of medications for each but cannot remember what she took today. In your exam you notice her swollen ankles, weak peripheral pulses, and auscultate some fine basilar rales. You suspect she is having a cardiac episode and begin appropriate pre-hospital management.

7. Which of the following is true regarding this elderly patient?
 - a. Absence of chest pain does not rule out myocardial infarction
 - b. Her peripheral edema and rales may be normal findings
 - c. The first two hours after onset of symptoms are critical
 - d. All of the above

8. An 83-year-old female presents with loss of energy, fatigue, irritability, feelings of hopelessness, and extreme isolation. You suspect this patient may be experiencing:
 - a. Stroke
 - b. Organic brain syndrome
 - c. Depression
 - d. Cerebral aneurysm

9. In patients over the age of 80, 50% of injury-related deaths occur from:
 - a. Motor vehicle crashes
 - b. Falls
 - c. Head injuries
 - d. Burns

10. Hyperthermia in the geriatric patient may be brought on by certain medications that inhibit heat dissipation such as:
 - a. Beta blockers
 - b. Aspirin
 - c. Furosemide
 - d. Prednisone

11. Decreases in renal function, combined with other physiological changes, make the older person more susceptible than young adults to:
 - a. Sodium loss
 - b. Electrolyte abnormalities
 - c. Oliguria
 - d. Polyuria

12. A physiological change in the aging process that is associated with cerebral atrophy produces extra space within the cranial vault, allowing the veins to stretch and tear more easily. This results in:
 - a. Severe hypotension
 - b. Severe hypertension
 - c. Linear skull fractures

- d. Subdural hematomas
13. Venous stasis, heart failure, and immobilization in the older adult contribute significantly to the development of:
- a. Pulmonary dysphagia
 - b. Pulmonary toilet
 - c. Pulmonary embolism
 - d. Pulmonary aspiration
14. A 72-year-old patient presents with a history of smoking three packs per day for 30 years, diabetes, slurred speech, and numbness in his left arm. You suspect that the patient may be experiencing:
- a. Left lateral acute myocardial infarction (AMI)
 - b. Chronic obstructive pulmonary disease (COPD)
 - c. Pulmonary embolus
 - d. Stroke
15. Changes also occur in the heart's electrical conduction pathways as functional cells are lost in the SA and AV nodes and in the rest of the conduction system. These physiological changes often lead to:
- a. Osteoporosis
 - b. Increased cardiac output
 - c. Huntington's disease
 - d. Bradycardia and heart blocks
16. Older patients develop ischemia and dysrhythmia from significant trauma even if the heart has not been directly affected due to:
- a. Left ventricular hypertrophy
 - b. Atherosclerosis
 - c. Impaired coronary response to increased oxygen demands
 - d. AMI
17. The most common sign that an 85-year-old patient is experiencing an acute myocardial infarction (AMI) is:
- a. Dyspnea
 - b. Chest pain
 - c. Chest pain radiating into the left arm
 - d. Chest pressure "like an elephant sitting on my chest"
18. Talking with a geriatric patient can be enhanced by:
- a. Talking extremely loud and more rapidly
 - b. Standing above and behind the patient to use their sense of hearing
 - c. Speaking slowly, distinctly, and respectfully
 - d. Talking down to the patient because his or her ability to understand words is decreased

19. Evaluating the living conditions and immediate surroundings of the geriatric patient is critical for the paramedic to:
- Provide information to the receiving physician in determining the ability for self-care after release from the hospital
 - Determine if the geriatric patient can refuse transport and treatment
 - Determine the geriatric patient's ability to pay for the emergency department visit
 - Determine the social status of the patient
20. Which of the following medications would increase your suspicion of a serious underlying head injury in the elderly fall patient?
- Coumadin
 - Tylenol
 - Metoprolol
 - Cardizem
21. The elderly make up ___% of the population?
- 1
 - 2
 - 13
 - 30
22. What possible reason may explain poor medication compliance in the elderly?
- Short-term memory loss
 - Confusion with spouse's medications
 - Financial constraints
 - All of the above
23. Which process in the elderly fall patient may make fractures more likely?
- Previous stroke
 - Diabetes
 - Osteoporosis
 - Coronary artery disease
24. A class of medications that may prevent an elderly person from being tachycardic is:
- Tylenol
 - Coumadin
 - Beta Blockers (i.e., Metoprolol)
 - Aspirin

25. Your patient is an 84-year-old male whose son called EMS because he “wouldn’t get out of his chair.” You find the patient lying on a recliner in the den. When you attempt to question him, you note his speech is incomprehensible. He appears angry as he attempts to converse with you. Examination reveals left hemiparesis. Enroute, his speech begins to clear and the paresis becomes less apparent. You suspect:
- CVA
 - AMI
 - DKA
 - TIA
26. Mrs. Jones is a 75-year-old female who called EMS because she began to experience severe dyspnea the preceding night. Physical examination reveals bilateral JVD at 45°, 4+ peripheral edema, and bilateral course crackles upon lung assessment. Which of the following findings is *least* significant?
- JVD at 45°
 - Severe dyspnea
 - Peripheral edema
 - Duration of symptoms
27. Mrs. Taylor, a normally active 89-year-old, was involved in a minor auto accident earlier in which she sustained a laceration to her upper lip and minor contusions to her chest and both arms. She was seen, treated, and released from the Emergency Department. During the night, her daughter called because Mrs. Taylor was incoherent, lethargic, and incontinent of urine. You find her lying in bed as described by the daughter. She responds to verbal stimuli but is disoriented and drifts back to sleep easily. What do you suspect?
- Subdural hematoma due to the accident which has slowly developed since her release from the hospital.
 - Myocardial contusion with possible cardiogenic shock because she had bruises on her chest.
 - Cerebrovascular accident that is unrelated to the automobile accident.
 - Nothing. This is not an uncommon side effect of a minor head injury in an elderly patient.
28. Which of the following statements about the aging process is *not* true?
- The left ventricle hypertrophies up to 45%.
 - The maximum breathing capacity decreases by 60%.
 - There is a 15% reduction in nerve conduction velocity.
 - There is a decrease in the total body fat of 15 to 30%.
29. Your patient is an 88-year-old female. Physical examination of both ankles reveals puffiness. There is no neck vein distention or liver engorgement. She is not acutely distressed and denies chest pain or dyspnea. The clinical picture is most likely due to:
- Dependent edema
 - Right-sided ventricular failure
 - Pulmonary edema
 - Congestive heart failure

30. Mr. Fleming is a 73-year-old male complaining of nausea, photophobia, and paraesthesia. His pulse is 80 and regular, respirations are 26 and shallow, and BP is 220/160. He is not currently taking any medications. The past medical history is negative. Other signs associated with his condition could include all of the following *except*:
- a. Hemiparesis
 - b. Disorientation
 - c. Staggered gait
 - d. Quadriplegia

**Review Questions
Geriatric Emergencies
ANSWER KEY**

1. D
2. D
3. D
4. D
5. D
6. D
7. D
8. C
9. B
10. A
11. B
12. D
13. C
14. D
15. D
16. C
17. A
18. C
19. A
20. A
21. C
22. D
23. C
24. C
25. D
26. C
27. A
28. A
29. A
30. D