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TO: ALL LUCAS COUNTY PARAMEDICS

FROM: Jonathon Ziehr, NREMT-P  
Lucas County EMS Continuing Education Program Administrator

DATE: April 18, 2013

SUBJECT: **Continuing Education – May 2013**

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During the month of May Dr. Lindstrom will be present at each Continuing Education class for Case Review and a Question/Answer session. I would encourage all of you to begin thinking of questions or topics you would like to address with our Medical Director. Also during May, we will introduce the CAT tourniquet and take time for a short pharmacology review using the gaming device. Please review **Tab 400: EMS Drug Formulary** prior to your May CE attendance.

Lastly, in an effort to audit the effectiveness of our continuing education program, I have attached a Pre-test covering the lecture material presented to you in April. Please take time to complete this and bring your answers to class with you.

I look forward to seeing you in the coming month. If you have any questions or comments please feel free to contact me.

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Endocrine / Neurovascular Emergencies  
Review Questions

1. The typical causes of diabetes are defects in insulin production and:
  - a. Accelerated atherosclerosis
  - b. Insulin resistance
  - c. Gluconeogenesis
  - d. Abnormal ketogenic pathways
2. The primary factor behind the rise of diabetes mellitus worldwide is:
  - a. Hypoglycemia
  - b. Hypothyroidism
  - c. Aging population
  - d. Obesity
3. Insulin is necessary to:
  - a. Facilitate transport of glucose into the cells
  - b. Produce glucose from muscle tissue
  - c. Enhance glycogen formation in the liver
  - d. Promote gluconeogenesis
4. Insulin shock is a direct result of:
  - a. Insufficient insulin levels
  - b. Insufficient blood glucose levels
  - c. Hyperglycemia
  - d. Not taking enough insulin
5. The electronic capabilities of an insulin pump allow it to deliver a steady amount of basal insulin as well as boluses. Boluses require which type(s) of insulin?
  - a. Very long acting
  - b. Long acting
  - c. Intermediate acting
  - d. Rapid or short acting
6. Which of the following would be the best source of glucose for a diabetic who is awake and able to swallow?
  - a. Cheesecake
  - b. Chocolate candy
  - c. Orange juice
  - d. Ice cream

7. According to LCEMS Protocol, the Dextrose concentration and dosing for a 1-year-old should be:
- 1-2mL/Kg 12.5% Dextrose
  - 1-2mL/Kg 25% Dextrose
  - 1-2mL/Kg 50% Dextrose
  - 50mL 50% Dextrose regardless of age or weight
8. First-line therapy for Type 2 Diabetes, as recommended from the American Diabetes Association is:
- Oral anti-hyperglycemics
  - Insulin
  - Diet and exercise
  - Insulin pump
9. A 42-year-old Type 2 diabetic with altered mentation has been treated for hypoglycemia with IV Dextrose. He is now alert and oriented and wants to remain at home. Patient interview reveals home prescribed Metformin and Insulin. You should:
- Contact MC and request an AMA
  - Contact MC and request a Treat and Release
  - Have patient sign AMA, MC contact is not required
  - Have patient sign Treat and Release, MC contact is not required
10. In the absence of an IV, Glucagon is used in the diabetic patient to promote:
- Insulin production from the beta cells in the pancreas
  - Gluconeogenesis
  - Glycogenolysis in the liver
  - Reduce insulin production from the beta cells in the pancreas
11. This structure is strong and unyielding to increased intracranial pressure and is also known as the "vault" for the brain:
- Foramen Magnum
  - Cerebrum
  - Cranium
  - Sphenoid

12. \_\_\_\_\_ is a clear, colorless fluid comprised of water, protein and salts that help cushion the CNS:
- CSF
  - Blood
  - Saliva
  - Plasma
13. The Central Nervous System consists of the:
- Meninges and Ethmoid
  - Nerves and ganglia
  - Somatic and autonomic nervous system
  - Brain and spinal cord
14. Brain tissue, cerebrospinal fluid, and blood vessels are moved or pressed away from their usual position inside the skull by the process of:
- Cheyne-Stokes
  - Herniation
  - Cerebral vasoconstriction
  - Posturing
15. \_\_\_\_\_ is associated with fracture of auditory canals and lower areas of the skull:
- Raccoon eyes
  - Lefort fracture
  - Battle's Sign
  - None of the above
16. Risk factors for a stroke include:
- Hypertension; cigarette smoking
  - History of TIA; heart disease
  - Diabetes; A-Fib
  - All of the above
17. \_\_\_\_\_ occurs when an artery in the brain is blocked:
- Ischemic stroke
  - Hemorrhagic stroke
  - Decrease in cranial pressure
  - Increase in cranial pressure

18. \_\_\_\_\_ singularly drives positive clinical outcomes in stroke patients:

- a. Aspirin
- b. Time to reperfusion
- c. 12-Lead ECG
- d. Oxygen

19. Grand Mal seizures are also known as \_\_\_\_\_ seizures:

- a. Tonic clonic
- b. Petit Mal
- c. Absence
- d. Complex partial

20. During the postictal state, a post-seizure patient will return to baseline. Respirations will normalize and pupils will react. This postictal state generally lasts:

- a. < 5 minutes
- b. < 10 minutes
- c. < 15 minutes
- d. < 30 minutes