



Continuing Medical Education Post-Test

Based on the information presented in this monograph, please choose one correct response for each of the following questions or statements. **Record your answers on the answer sheet on page 99.** To receive Category I credit, complete the post-test and record your responses on the answer sheet. Mail in the return envelope no later than February 1, 2009. A passing grade of 80% is needed to receive credit. A certificate will be sent to you upon your successful completion of this post-test.

Diagnosis of TIA and Stroke in the ED: How Can This Be Made More Consistent?

- 1) Which of the following symptoms is the least supportive of a diagnosis of TIA/Stroke?
 - a. Left arm weakness
 - b. Difficulty speaking
 - c. Visual Flashing lights
 - d. Left arm numbness
- 2) The 48-hour risk of stroke following TIA is approximately:
 - a. 1%
 - b. 5%
 - c. 12%
 - d. 22%
- 3) A normal MRI rules out a diagnosis of TIA.
 - a. True
 - b. False

Treatment of Stroke: Why the Controversy?

- 4) A primary criticism of the NINDS tPA trial findings was based on what potential flaw in the study?
 - a. There was an imbalance in the number of “small” strokes between the treated group and the placebo group.
 - b. There were too many patients in the trial.
 - c. The hemorrhage rate in the placebo group was too high to consider the study valid.
 - d. The time to treatment was up to 6 hours rendering the trial data unusable.
 - e. The physicians enrolling the patients were not adequately skilled in stroke management.

- 5) Why did “the Cleveland Experience” generate controversy regarding tPA treatment for ischemic stroke?
 - a. The initial results with tPA were too good to be believed.
 - b. This examination of community data demonstrated a much higher hemorrhage rate and mortality rate than the NINDS trial.
 - c. There were more patients treated in Cleveland than in the entire NINDS trial.
 - d. The physicians in Cleveland had fewer protocol violations than expected.
 - e. The Cleveland experience demonstrated that tPA therapy is easily generalizable without system changes.
- 6) The SITS-MOST registry of t-PA treated ischemic stroke patients concluded that:
 - a. t-PA therapy in over 6 thousand patients had results similar to patients in the NINDS trial.
 - b. t-PA therapy in over 6 thousand patients had a hemorrhage rate that was unacceptably high.
 - c. Ischemic stroke therapy with t-PA in the community is not warranted.
 - d. t-PA therapy caused an increase in mortality over non-treated patients.
 - e. For ischemic stroke patients, t-PA therapy is safe and effective after the 3 hour window.



Continuing Medical Education Post-Test (cont.)

- 7) Recent clinical trials treating patients with ICH using recombinant factor VII have demonstrated:
- A positive initial trial of almost 400 patients followed by a positive confirmatory trial.
 - A positive initial trial of almost 400 patients followed by a negative larger trial.
 - Recombinant factor VII is only useful in the first 3 hours.
 - Recombinant factor VII is now considered standard of care for ICH patients.
 - Recombinant factor VII is too expensive to be considered standard of care for ICH.

Hypertension Management in Acute Neurovascular Emergencies

- 8) Which of the following is the primary determinant of cerebral perfusion pressure?
- Mean arterial pressure
 - Peripheral vascular resistance
 - Serum sodium concentration
 - Head position
 - Cardiac output
- 9) Lowering of blood pressure in acute neurological emergencies with which of the following antihypertensive agents has been associated with worse clinical outcomes?
- Labetalol
 - Esmolol
 - Enalaprilat
 - Nifedipine
 - Nicardipine
- 10) Aggressive blood pressure lowering should be avoided in which of the following settings?
- Ischemic stroke prior to administration of fibrinolytic agents
 - Ischemic stroke after administration of fibrinolytic agents
 - Ischemic stroke with hemorrhagic conversion
 - Intracerebral hemorrhage
 - Subarachnoid hemorrhage

- 11) Which of the following antihypertensive agents is contraindicated for patients with severe bradycardia?
- Nicardipine
 - Labetalol
 - Enalaprilat
 - Nitroglycerin paste
 - Sodium nitroprusside
- 12) Which of the following supportive measures is most likely to improve blood pressure in a patient with acute subarachnoid hemorrhage?
- Lying flat in a quiet room
 - Pain control and sedation
 - Stool softeners
 - Lumbar puncture
 - Intravenous fluids

Management of Hypertensive Emergencies in the Emergency Department

- 13) At which of the following diastolic blood pressures should you administer parenteral antihypertensive medications in an asymptomatic patient?
- 70 mm Hg
 - 90 mm Hg
 - 100 mm Hg
 - 110 mm Hg
 - None of the above
- 14) The most common end organ affected by hypertensive emergencies is
- Brain
 - Heart
 - Kidney
 - Liver
- 15) The initial anti-hypertensive medication for treatment of aortic dissection is preferentially
- A beta antagonist
 - A thiazide diuretic
 - An angiotensin converting enzyme inhibitor
 - Nitroglycerin



Continuing Medical Education Post-Test (cont.)

- 16) Which of the following is contraindicated in an acutely cocaine intoxicated patient with chest pain and hypertension?
- A beta antagonist
 - A thiazide diuretic
 - An angiotensin converting enzyme inhibitor
 - Nitroglycerin
 - A benzodiazepine
- 17) For a patient with a blood pressure of 170/105, ACEP Practice Guidelines recommend initiation of anti-hypertensive medications in the ED only when there are signs of acute end organ damage, or the patient is known to already carry the diagnosis of hypertension.
- True
 - False

Sick or Not Sick? Evolving Biomarkers for Severe Bacterial Infection

- 18) Potential new biomarkers for the diagnosis or risk stratification of SBI in the ED include all of the following, except:
- Inflammatory cytokines
 - PCT
 - NADPH oxidase
 - Lactate
 - IL-6
- 19) Which of the following regarding procalcitonin (PCT) is NOT true:
- PCT is a prohormone of calcitonin.
 - PCT is normally secreted by the thyroid gland.
 - High PCT levels may indicate and systemic inflammatory response.
 - High PCT levels always indicate a severe infection.
 - PCT levels may be used to risk stratify patients with potential SBI.

- 20) According to the presentation, the markers with the most diagnostic and therapeutic potential for ED patients with SBI include:
- CRP
 - IL-6
 - IL-8
 - PCT
 - All of the above are potentially useful markers

Treatment of Sepsis: How to Make Goal Directed Therapy a Consistent Approach in Your ED

- 21) Which of the following are true, early goal-directed therapy decreases:
- Mortality
 - Components of the inflammatory response
 - Need for vasopressor therapy
 - Length of hospital stay
 - Need for mechanical ventilation
 - All of the above
- 22) Which of the following are false? High risk patients who benefit most from early goal-directed therapy have or are:
- Lactate level greater than 4 mM/Liter
 - Vasopressor dependent after 20-40 cc/kg volume challenge
 - Single organ dysfunction
 - Severe sepsis and septic shock
- 23) Early goal-directed therapy consistently decreases relative mortality (baseline mortality after EGDT/ baseline mortality) in severe sepsis and septic shock by:
- 5%
 - 10%
 - 16%
 - 30%



Continuing Medical Education Post-Test (cont.)

Risk Stratification for Patients with Non-ST-Segment Elevation Acute Coronary Syndromes in the Emergency Department

- 24) What percent of Medicare patients with unstable angina can present with typical symptoms?
- 0%
 - 10%
 - 25%
 - 50%
- 25) The initial ED 12-lead ECG, has an approximate sensitivity of ____ for AMI?
- 0%
 - 20%
 - 50%
 - 75%
 - 90%
- 26) Which of the following is true regarding cardiac troponins - troponin I or troponin T?
- Release kinetics similar to CK-MB
 - Can be elevated up to 10 to 14 days
 - Is useful for risk stratification of patients who would benefit from aggressive medical management
 - A, B and C
- 27) The addition of a negative resting sestimibi scan in low risk chest pain patients, along with the history, physical examination and cardiac biomarker testing, helps to further identify patients at very low risk for ACS.
- True
 - False
- 28) Which of the following are true regarding CT coronary angiography?
- Newer 64-slice scanners demonstrate higher diagnostic accuracy than older 16-slice scanners.
 - The performance of CT coronary angiography has been demonstrated to be at least as good as that of stress myocardial perfusion imaging for detection or exclusion of acute coronary syndromes in low-risk chest pain patients.
 - CT coronary angiography is an attractive alternative from a cost perspective to traditional standard evaluation in a chest pain observation unit.
 - The negative CT coronary angiogram is defined as no stenosis, or stenosis <50% with a calcium score of <100.
 - All of the above
- 29) In the setting of an invasive pathway for the treatment of NSTEMI ACS, which of the following patient characteristics is associated with high risk for adverse outcomes, necessitating dual antiplatelet therapy with clopidigrel plus GP IIb/IIIa inhibitors?
- Elevated Troponin
 - Recurrent ischemia
 - Delay to cardiac catheterization
 - All of the above
- 30) Which of the following antithrombins is indicated as a Class IA recommendation for use in the invasive pathway for NSTEMI ACS?
- Fondaparinux
 - Bivalirudin
 - Enoxaparin
 - Coumadin

Optimal Management of Non-ST-Segment Elevation ACS: The Role of Antithrombotic Therapy in the ED Based on the New ACC/AHA Guidelines



Continuing Medical Education Post-Test (cont.)

- 31) Which of the following antiplatelet agents is indicated as a Class IA recommendation in both the invasive and conservative pathways for treatment of NSTEMI ACS?
- aspirin
 - clopidogrel
 - GP IIb/IIIa inhibitors
 - a and b

Optimal Anti-Platelet Therapy for NSTEMI ACS: The 2007 ACC/AHA Guidelines

- 32) Which of the following statements is NOT TRUE about anti-platelet therapy for NSTEMI ACS?
- Anti-platelet therapy may be targeted at either activation or aggregation of platelets.
 - Optimal, evidence-based use of anti-platelet therapy is best directed by an assessment of the individual patient's risk.
 - Both oral and parenteral anti-platelet therapy are pharmacologically irreversible.
 - Anti-platelet therapy may be appropriate in the ED, in the medical cardiologic, and the interventional cardiologic management of ACS.
- 33) Which of the following statements is TRUE about clopidogrel in NSTEMI ACS management?
- Clopidogrel may be given orally or intravenously.
 - Clopidogrel is optimally administered at 75 mg per dose starting with the ED dose.
 - The labeled loading dose of clopidogrel is 600 mg.
 - Clopidogrel has been shown to benefit patients with NSTEMI ACS whether they are managed medically or undergo percutaneous coronary intervention.

- 34) Which of the following statements is TRUE about platelet glycoprotein IIb/IIIa inhibitors (GPIs) in NSTEMI ACS management?
- Abciximab has been shown to afford benefit in the medical management of NSTEMI ACS.
 - Small-molecule GPIs are most likely to benefit patients prior to intervention if the troponin level is elevated.
 - GPIs are used only in the cardiac catheterization laboratory in managing ACS.
 - If GPIs are used in ACS management, then clopidogrel is not necessary.

Best Treatment for STEMI: PCI and Fibrinolytics

- 35) Which of the following is not an absolute contraindication to fibrinolysis for a patient with STEMI as defined by the 2004 AHA/ACC Guidelines?
- Appendectomy 10 weeks previously
 - Bleeding peptic ulcer 2 weeks previously
 - Current therapeutic oral anticoagulation with coumadin
 - Ischemic stroke 8 weeks previously
 - Previous intracranial hemorrhage
- 36) Which of the following is the preferred reperfusion strategy for a patient with an acute STEMI presenting in cardiogenic shock?
- Emergency coronary artery bypass graft
 - Facilitated PCI
 - Intravenous fibrinolysis
 - Primary PCI
 - Risk of ICH intracerebral hemorrhage
- 37) Which of the following characteristics of Primary PCI is true when compared to fibrinolysis in STEMI management?
- Do not require adjunctive therapies with PCI
 - Greater number of patient exclusions/contraindications with PCI
 - Higher rate of non-fatal reinfarction with PCI
 - Lower risk of intracranial bleeding with PCI
 - Significantly lower initial reperfusion rates with PCI



Continuing Medical Education Post-Test (cont.)

Acute Heart Failure Syndromes: Redefining Heart Failure in the ED

- 38) Both the incidence and prevalence of heart failure is decreasing in developed countries.
- True
 - False
- 39) Acute Heart Failure Syndrome has been defined as a gradual or rapid change in heart failure signs and symptoms resulting in a need for urgent therapy.
- True
 - False
- 40) The following describe natriuretic peptide testing for heart failure:
- National organizations have recognized an intermediate zone for interpreting values
 - Levels can be affected by renal function
 - Elevated levels can be found after pulmonary embolism
 - a and c
 - a, b, and c
- 41) Unlike acute myocardial infarction, acute heart failure syndrome has clearly defined therapeutic targets that lower 60-day mortality.
- True
 - False
- 42) Preliminary AHFS risk models have identified factors such as BUN, serum creatinine, and systolic blood pressure as predictors of mortality in hospitalized patients with heart failure.
- True
 - False

Pulmonary Embolism and Deep Venous Thrombosis: Evaluation and Treatment in the Emergency Department

- 43) The mortality rate in untreated pulmonary embolism is approximately:
- 5%
 - 10%
 - 30%
 - 50%
- 44) The primary consideration in the assessment of a patient with suspected venous thromboembolism is:
- Cost of diagnostic procedures
 - Risks of ionizing radiation
 - Clinical probability of pulmonary embolism
 - Chest x-ray appearance
- 45) Fondaparinux selectively inhibits which coagulation factor:
- Factor XII
 - Factor Xa
 - Factor IX
 - Factor IIa
- 46) The appropriate dose of enoxaparin in patients with severe renal insufficiency, defined as creatinine clearance < 30 mL/min is:
- 1 mg/kg SC twice a day
 - 1 mg/kg SC once a day
 - 30 mg SC once a day
 - 40 mg SC once a day
- 47) Which of the following radiological studies results in the highest radiation exposure to the developing fetus:
- CT angiography
 - CT venography
 - Ventilation/perfusion scan
 - Perfusion scan



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Continuing Medical Education Post-Test Answer Form and Evaluation

After you have read the monograph, carefully record your answers by circling the appropriate letter for each question and complete the evaluation questionnaire.

Mail the answer sheet to:

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OR FAX TO: 513-558-1708

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1. a b c d	25. a b c d e
2. a b c d	26. a b c d
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12. a b c d e	36. a b c d e
13. a b c d e	37. a b c d e
14. a b c d	38. a b
15. a b c d	39. a b
16. a b c d e	40. a b c d e
17. a b	41. a b
18. a b c d e	42. a b
19. a b c d e	43. a b c d
20. a b c d e	44. a b c d
21. a b c d e f	45. a b c d
22. a b c d	46. a b c d
23. a b c d	47. a b c d
24. a b c d	

EVALUATION QUESTIONNAIRE

On a scale of 1 to 5, with 1 being highly satisfied and 5 being highly dissatisfied, please rate this program with respect to:

	Highly satisfied				Highly dissatisfied
Overall quality of material:	1	2	3	4	5
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What topics would be of interest to you for future CME programs?

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